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January

2018

System Development Charge Update

Final Report

Prepared for:

CITY OF SUBLIMITY

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City of Sublimity
2018 SDC Methodology Update

Table of Contents

Introduction/History of the Project

The City of Sublimity conducts periodic updates to its Comprehensive Plan and its various Public Facility Plans to provide orderly and sustainable growth of municipal infrastructure. 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 numeric overview of the calculations presented in subsequent sections of this report for water, wastewater, stormwater, transportation, and parks SDCs.

The city's current schedule of SDCs were last reviewed in December, 1997. In October, 2017, the City hired Donovan Enterprises, Inc. to review and update the SDC methodologies. With this review and update, the City has stated a number of objectives:

- Review the basis for charges to ensure a consistent methodology;
- Address specific policy, administrative, and technical issues which had arisen from application of the existing 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 SDC updates comply with Sublimity Ordinance No. 344 dated September 18, 1991 (i.e. The SDC enabling ordinance).

Table 1 gives a component breakdown for the current and proposed residential equivalent SDCs for water, wastewater, stormwater, and transportation.

Table 1 - Component Breakdown of the Proposed Residential Equivalent SDCs

Line Item Description	Service Unit	Proposed	Current	Difference
Water:	per 3/4" water meter			
Reimbursement fee		$696	-	$696
Improvement fee		3,712	2,370	1,342
Administration fee @ 5%		220	-	220
Total		$ 4,628	$ 2,370	$ 2,258
Wastewater:	per 3/4" water meter			
Reimbursement fee		$970	$2,635	$ (1,665)
Improvement fee		3,257	735	2,522
Administration fee @ 5%		211	-	211
Total		$ 4,438	$ 3,370	$ 1,068
Stormwater:	per Equivalent Residential Unit			
Reimbursement fee		-	-	-
Improvement fee		556	1,880	(1,324)
Administration fee @ 5%		28	-	28
Total		$ 584	$ 1,880	$ (1,296)
Transportation:	per detached SF residence			
Reimbursement fee		$61	-	$61
Improvement fee		1,942	1,810	132
Administration fee		100	-	100
Total		$ 2,103	$ 1,810	$ 293
Parks:	per detached SF residence			
Reimbursement fee		-	-	-
Improvement fee		2,679	1,200	1,479
Administration fee @ 5%		134	-	134
Total		$ 2,813	$ 1,200	$ 1,613
Total SDCs:				
Reimbursement fee		$1,727	$2,635	$ (908)
Improvement fee		12,146	7,995	4,151
Administration fee @ 5%		693	-	693
Total		$ 14,566	$ 10,630	$ 3,936

Analytical Process for the Methodology Updates

The essential ingredient in the development of an SDC methodology 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 newly formulated and adopted capital improvement plans for water, wastewater, stormwater, transportation, and parks. 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 SDCs

Service	Master Plan Document and/or Corroborating Source Documentation
Water	• City of Sublimity water system twenty year capital improvement plan, December, 2017; City of Sublimity Public Works Department • City of Sublimity Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2016 • City of Sublimity Water System Fixed Asset Schedule; June 30, 2016; City Records • City of Sublimity Water System Construction Work in Progress Balances Work Papers; June 30, 2016; City Records • City of Sublimity Utility Billing records for fiscal 2017-18 • Water meters in service per City Staff; effective November 30, 2017 • City of Sublimity Ordinance No. 391; an ordinance establishing a water SDC; December 30, 1997
Wastewater	• City of Sublimity wastewater system twenty year capital improvement plan, December, 2017; City of Sublimity Public Works Department • City of Sublimity Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2016 • 2016 and 2017 Discharge Monitoring Reports; City of Sublimity • Sublimity wastewater system fixed asset schedule; June 30, 2016; City records • City of Sublimity Utility Billing System – wastewater system active accounts and Equivalent Dwelling Units in service report; November 30, 2017 • Portland State University, College of Urban Affairs, Population Research Center; Certified census for Sublimity, Oregon; June 30, 2017 • Intergovernmental Agreement between the City of Stayton and Sublimity for the provision of wastewater treatment services; July 9, 2007 • City of Sublimity Ordinance No. 390; establishing a wastewater SDC; December 30, 1997
Stormwater	• City of Sublimity stormwater system twenty year capital improvement plan, December, 2017; City of Sublimity Public Works Department • City of Sublimity Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2016 • City of Sublimity Comprehensive Plan; land inventory by land use designations; December, 2017; Mid-Willamette Valley Council of Governments • Sublimity stormwater system fixed asset schedule; June 30, 2016; City records • City of Sublimity Ordinance No. 395; establishing a stormwater SDC; August 13, 2001

Table 2 – Data Sources for the Calculation of SDCs Continued

Service	Master Plan Document and/or Corroborating Source Documentation
Transportation	• City of Sublimity transportation system twenty year capital improvement plan, December, 2017; City of Sublimity Public Works Department • City of Sublimity transportation system fixed asset schedule; June 30, 2016; City records • U.S. Bureau of the Census; American Community Survey: ✓ City of Sublimity dwelling units; 2015 estimated ✓ City of Sublimity number of employees; 2015 estimated • Trip Generation Manual; Institute of Transportation Engineers; 9th Edition • City of Sublimity Comprehensive Plan; land inventory by land use designations; December, 2017; Mid-Willamette Valley Council of Governments • City of Sublimity Ordinance No. 392; establishing a streets SDC; December 30, 1997
Parks	• City of Sublimity Parks Master Plan, adopted November, 2017 • City of Sublimity parks system fixed asset schedule; June 30, 2016; City records • U.S. Bureau of the Census; American Community Survey: ✓ City of Sublimity population; 2015 estimated ✓ City of Sublimity dwelling units; 2015 estimated ✓ City of Sublimity number of employees; 2015 estimated • Oregon Department of Parks and Recreation; A guide to Community Park and Recreation Planning for Oregon Communities; April, 2013 • City of Sublimity Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2016 • City of Sublimity Ordinance No. 393; establishing a parks SDC; December 30, 1997

The data sources shown in Table 2 were used to formulate the two (2) components of the SDCs. These components are the reimbursement and improvement fees. The City has been constructing the SDCs with these two components for over twenty years, and our analysis does not propose to change that methodology. A brief definition of the two components are:

- *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. In developing an analysis of the improvement portion of the fee, each project in the respective service's capital improvement plan is evaluated to exclude costs related to correcting existing system deficiencies or upgrading for historical lack of capacity. An example is a facility which improves system capacity to better serve current customers. The costs for this type of project

must be eliminated from the improvement fee calculation. 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 additional equivalent residential units to be served by the City's facilities over the planning period. Such a fee represents the greatest potential for future SDC changes. The improvement fee must also provide a credit for construction of a qualified public improvement.

SDC Legal Authorization and Background

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.

Finally, two cost basis adjustments are potentially applicable to both reimbursement and improvement fees: fund balance and compliance costs. In this study, the project team as paid attention to this detail to align future infrastructure costs to those responsible for paying those costs. The reasons for this attention is as follows:

- *Fund Balances* - 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 wastewater improvement fees that it has collected but not spent, then those unspent improvement fees should be deducted from the wastewater 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.

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 local facilities, 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. In the absence of a detailed asset by asset analysis, it is appropriate to allocate the cost of existing facilities between used and available capacity proportionally based on the forecasted population growth as converted to equivalent dwelling units over the planning period. This approach reflects the philosophy, consistent with the City's Updated Master Plans, 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 have 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 past, the City has utilized the "improvements-driven" approach for the calculation of water, wastewater, stormwater, and transportation SDCs. The City has used the LOS standards approach for parks. This study continues to use this method, and has relied on the capital improvement plans that are incorporated in the master plans, and plan updates for the water, wastewater, stormwater, transportation, and parks systems.

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 newly adopted capital improvement plans established by the City for the five (5) municipal 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 wastewater collection line that exclusively serves a newly 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 a water 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 respective system's 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 Sublimity

Steps Toward Evaluating

Capital Improvement Lists for SDC Eligibility

ORS 223

1. Capital improvements mean the facilities or assets used for :
    a. Water supply, transmission, storage and distribution
    b. Wastewater collection, transmission, treatment, and disposal
    c. Stormwater, conveyance, detention, treatment, and disposal
    d. Transportation – intersection improvements, street reconstruction and widening, roadway enhancement, and bike/ped expansion
    e. Parks & Trails – Pocket parks, urban plaza parks, neighborhood parks, community parks, nature parks, regional parks, trails, and bike/ped expansion

    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 Equivalent Residential Units for water, wastewater, and stormwater over the planning horizon. We measure demand for transportation facilities in average daily vehicle trips (ADVTs). ADVT, is the average number of vehicles two-way passing a specific point in a 24-hour period, normally measured throughout a year. We measure

demand for parks and trails facilities in acres per 1,000 people. Once the future costs to serve growth have been segregated (i.e., the numerator), they can be divided into the total number of new EDUs (and ADVT's) that will use the capacity derived from those investments (i.e., the denominator).

Methodology for the Granting of Credits, Discounts, and Exemptions

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 Sublimity Ordinance No. 344, Section 13 (SO344§13). The adopted SDC credit policy consists of five (5) items as follows:

SO344§12

A. As used in this section and in the definition of "Qualified public improvements" in Section 3 the word "contiguous" means: in a public way which abuts.

B. When development occurs that must pay a system development charge under Section 4 of this ordinance, the system development charge for the existing use shall be calculated and if it is less than the system development charge for the proposed use, the different between the system development charge for the existing use and the system development charge for the proposed use shall be the system development charge required under Section 4. If the change in use results in the system development charge for the proposed use being less than the system development charge for the existing use, no system development charge shall be required; however, no refund or credit shall be given;

C. A credit shall be given for the cost of a qualified public improvement associated with a development. If a qualified public improvement is located partially on and partially off of the parcel of land that is the subject of the development approval, the credit shall be given only for the cost of the portion of the improvement not located on or wholly contiguous to the parcel of land. The credit provided for by this subsection shall be only for the public improvement charge charged for the type of improvement being constructed and shall not exceed the public improvement charge even if the cost of the capital improvement exceeds the applicable public improvement charge.

D. In situations where the amount of credit exceeds the amount of the system development charge, the excess credit is not transferable to another development. It may be transferred to another phase of the original development.

E. Credit shall not be transferable from one type of capital improvement to another.

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 to 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(s).

Partial and Full SDC Exemption

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 SO344§12, and is as follows:

A. A developer whose structures and uses were established and existing on or before the effective date of this ordinance is exempt from a system development charge, except water and sewer charges, to the extent of the structure or use then existing and to the extent of the parcel of land as it is constituted on that date. Developers affected by this subsection shall pay the water or sewer charges pursuant to the terms of this ordinance upon the receipt of a permit to connect to the water or sewer system.

B. A developer constructing additions to single-family dwellings that do not constitute the addition of a dwelling unit, as defined by the State Uniform Building Code is exempt from all portions of the system development charge.

C. A developer whose development consists of an alteration, addition, replacement or change in use that does not increase the parcel's or structure's use of the public improvement facility is exempt from all portions of the system development charge.

D. A developer whose project is finance by City revenues is exempt from all portions of the system development charge.

Water SDCs

Water Capital Improvement Plan

The principal source document for the water capital improvement plan (CIP) was the 2017 twenty (20) year Water System Capital Improvement Plan. For this water SDC methodology update, the 2017 water CIP was reviewed for accuracy with City Staff and where appropriate amended. This amendment process consisted of two steps. The first step was to eliminate master plan projects that City Staff deemed unnecessary at the current time due to the very long lead times anticipated for their development. The second step in the CIP amendment process was to eliminate the cost of planned projects (or portions of projects) that have been funded and constructed since the adoption of the last water master plan in 2006. In this case, the planned future costs are deducted from the CIP. The actual costs spent on these projects were capitalized by the City, and now reside in the water system fixed asset inventory (i.e., balance sheet assets). These historical costs will be included in the reimbursement fee calculations.

The amended water system CIP now consists of future projects that remain a 20 year priority for the City, and only consists of projects yet to be completed. The resulting CIP that was used for this SDC methodology update is shown in summary form in Table 3.

Table 3 – Adopted 2016 Water System Capital Improvement Plan

Description	2017 Dollars	% SDC Eligible	SDC Eligible $	Developer %	Developer Cost	Ratepayer Cost
WATER SYSTEM						
1 Rehabilitate Well #3 and enlarge well pump	$100,000	0%	$0	0%	$0	$100,000
2 Install 150 KW genset and auto transfer switch at Church Street PS	$100,000	0%	$0	0%	$0	$100,000
3 Install new SCADA System	$200,000	0%	$0	0%	$0	$200,000
4 Add second booster pump at Church Street PS	$120,000	0%	$0	0%	$0	$120,000
5 Add 2,400' of 10" waterline on the east side from Church Street to Pineview	$500,000	33%	$166,667	0%	$0	$333,333
6 Replace 1,320 L.F. of pipeline along Center St. with new 12-inch pipeline	$300,000	0%	$0	0%	$0	$300,000
7 Replace 660' of pipeline along East Main Street with new 8" pipe	$100,000	0%	$0	0%	$0	$100,000
8 Replace 510' of pipeline along Crest Street with new 8" pipeline	$80,000	0%	$0	0%	$0	$80,000
9 Extend pipeline on Hendricks Road with 1060'of 8" Pipe	$100,000	0%	$0	100%	$100,000	$0
10 Extend pipeline on west end of system (5000' of 12") to tie Sublimity Blvd into W Sta	$1,000,000	0%	$0	67%	$670,000	$330,000
11 Add new 8" tie-in line on South end of system	$140,000	50%	$70,000	0%	$0	$70,000
12 Install second 500K gallon reservoir at Well #4	$750,000	50%	$375,000	0%	$0	$375,000
13 Recoat existing reservoir	$150,000	0%	$0	0%	$0	$150,000
14 Purchase Additional Water Rights	$400,000	100%	$400,000	0%	$0	$0
15 New PW Shop ($600,000 x 35%)	$210,000	50%	$105,000	0%	$0	$105,000
16 New Water Master Plan	$250,000	50%	$125,000	0%	$0	$125,000
Subtotal	**$4,500,000**		**$1,241,667**		**$770,000**	**$2,488,333**

Water Customers Current and Future Demographics

Existing Water Demand and Population Growth

Current Sublimity water demands are based on historical customer billing records, and actual water meters in service as of November 30, 2017. Projected demands are estimated based on an approximate population growth rate of 0.84 percent per year within the City's existing urban growth boundary. This annual population growth factor is based on population forecasts for the City prepared by the Population Research Center at Portland State University from 2017 through 2037.

Estimated Demand per Equivalent ¾" Water Meter

The City serves single-family residential customers and a smaller number of multifamily housing developments and commercial 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 dwelling units (EDUs)". In the case of Sublimity, the standard residential unit of demand is the rated capacity (in gallons per minute) of the ¾" water meter. As of November 30, 2017, the City had 1,030 active water meters in service, 929 of which were ¾" meters serving single family residential customers. In other words, roughly 90% of all active water services were assigned to the single family residential customer class. The process for calculating equivalent ¾" meters is shown below in Table 4.

Table 4 – Estimated ¾" Equivalent Meters in Service as of November 30, 2017

Meter Size	Total Meters In Service	AWWA Rated Flow (GPM)*	Flow Factor Equivalence	3/4" Meter Equivalents
0.75"x 0.75" - Displacement Multi-jet	929	30	1.00	929
1.00 inch - Displacement Multi-jet	60	50	1.67	100
1.50 inch - Displacement Class I Turbine	17	100	3.33	57
2.00 inch - Displacement or Class I & II Turbine	22	160	5.33	117
3.00 inch - Displacement	-	300	10.00	-
4.00 inch - Displacement or Compound	2	500	16.67	33
6.00 inch - Displacement or Compound	-	1,000	33.33	-
8.00 inch - Compound	-	1,600	53.33	-
Total	1,030			1,236

* - AWWA Manual of Practice M3; Safety Practices for Water Utilities; Table 2-2 Total Quantities

Projected Demands

The planning horizon for the master plan is approximately 20 years, through the year 2037. That is the forecast horizon that is used for the water SDC methodology update. In the 2006 master plan, an estimated number of EDUs per acre for each land use type was established based on (then) current water demands by customer class and total developed land area by land use type. Land use type is analogous to customer class, which is to say the land use or zoning of a particular property reflects the type of water service, such as residential or commercial, provided to that property. The estimated number of potential EDUs per acre was applied to developable land within the existing water service area to estimate water demand.

For this SDC methodology update, the project team did not use the old master plan strategy to forecast future water demand based on land use. With the benefit of actual meters in service, and a population growth forecast that is predicated on existing growth trends for the City a forecast of future equivalent ¾" meters was developed. Based upon these decision rules, the forecast of equivalent meters in use for this water SDC methodology update are shown below in Table 5

Table 5 – Forecast of Equivalent ¾" Meters for the 2017 Water SDC Methodology Update Study

	Forecasted	Meter Equivalents		
Fiscal Year	Growth Rate	Beginning of Year[1]	Additions	End of Year
2017				1,236
2018	0.84%	1,236	10	1,247
2019	0.84%	1,247	10	1,257
2020	0.84%	1,257	10	1,268
2021	0.84%	1,268	11	1,278
2022	0.84%	1,278	11	1,289
2023	0.84%	1,289	11	1,300
2024	0.84%	1,300	11	1,310
2025	0.84%	1,310	11	1,321
2026	0.84%	1,321	11	1,332
2027	0.84%	1,332	11	1,344
2028	0.84%	1,344	11	1,355
2029	0.84%	1,355	11	1,366
2030	0.84%	1,366	11	1,377
2031	0.84%	1,377	12	1,389
2032	0.84%	1,389	12	1,401
2033	0.84%	1,401	12	1,412
2034	0.84%	1,412	12	1,424
2035	0.84%	1,424	12	1,436
2036	0.84%	1,436	12	1,448
2037	0.84%	1,448	12	1,460
			224	

1 Source - Sublimity utility billing records

Reimbursement Fee Calculations

As discussed earlier in this report, the reimbursement fee represents a buy-in to the cost, or value, of infrastructure capacity within the existing system. In theory, this should be a simple calculation. Simply go to the Utility's balance sheet, find the book value of assets in service, and divide that cost by the number of forecasted new connections to the water system. That is a simple calculation, and it is wrong. In order to determine an equitable reimbursement we have to account for some key issues of rate equity;

- First, the cost of the system to the City's existing 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.
- 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.
- Third, the accounting treatment of asset costs generally has no relationship to the capacity of an asset to serve growth. In the absence of a detailed asset by asset analysis detailed in the balance sheet (or fixed asset schedule), a method has to be used to allocate cost to existing and future users of the asset. Generally, it is industry practice to allocate the cost of existing facilities between used and available capacity proportionally based on the forecasted population growth as converted to equivalent dwelling units (i.e., equivalent ¾" meters) over the planning period.
- Fourth, the Oregon SDC statute has strict limitations on what type of assets can be included in the basis of the reimbursement fee. ORS 223.299 specifically states that a "capital improvement" does not include costs of the operation or routine maintenance of capital improvements. This means the assets on the balance sheet such as certain vehicles and equipment used for heavy repair and maintenance of infrastructure cannot be included in the basis of the reimbursement fee.

For this water SDC methodology update, the following discrete calculation steps were followed to arrive at the recommended water reimbursement fee.

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 EDUs 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 6.

Table 6 - Calculation of the Water Reimbursement Fee

Utility Plant-in-Service (original cost):[1]		
Land, Easements & Right of Way	$	-
Land improvements		-
Construction		2,608,441
Infrastructure		-
Machinery and equipment		-
Licensed Vehicles		-
Construction Work-in-Progress		-
Total Utility Plant-in-Service		2,608,441
Accumulated depreciation[1]		
Land, Easements & Right of Way		-
Land improvements		-
Construction		1,418,990
Infrastructure		-
Machinery and equipment		-
Licensed Vehicles		-
Construction Work-in-Progress		-
Total accumulated depreciation		1,418,990
Book value of water utility plant-in-service @ June 30, 2016		1,189,451
Eliminating entries:		
Principal outstanding on bonds, notes, and loans payable		
1998 Water Revenue Bonds		130,000
Mid-Willamette Valley COG water loan		43,538
Developer Contributions		-
Grants, net of amortization		-
		173,538
Net basis in utility plant-in-service available to serve future customers	$	1,015,913
Estimated existing and future 3/4" Meter Equivalents (MEs)		1,460
Calculated reimbursement fee - $ per 3/4"ME	$	696

[1] Source: Sublimity Accounting Summary Report - Capitalized Assets as of June 30, 2016

Improvement Fee Calculations

The calculation of the water improvement fee is more streamlined than the process used to calculate the water reimbursement fee. This study continues to use the improvements-driven method, and has relied on the 2017 water system capital improvement plan. 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 equivalent ¾" meters 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 7.

Table 7 - Calculation of the Water Improvement Fee

Project Description	Estimated Cost of Improvement in 2017 Dollars	Funding Source: Rates	Funding Source: SDCs	Funding Source: Developer Contributions
Water Supply & Treatment:				
Rehabilitate Well #3 and enlarge well pump	$100,000	$100,000	$0	$0
Purchase Additional Water Rights	400,000	-	400,000	-
Install new SCADA System	200,000	200,000	-	-
Transmission and Pumping:				
Install 150 KW genset and auto transfer switch at Church Street PS	100,000	100,000	-	-
Add second booster pump at Church Street PS	120,000	120,000	-	-
Distribution:				
Add 2,400' of 10" waterline on the east side from Church Street to Pineview	500,000	333,333	166,667	-
Replace 1,320 L.F. of pipeline along Center St. with new 12-inch pipeline	300,000	300,000	-	-
Replace 660' of pipeline along East Main Street with new 8" pipe	100,000	100,000	-	-
Replace 510' of pipeline along Crest Street with new 8" pipeline	80,000	80,000	-	-
Extend pipeline on Hendricks Road with 1060'of 8" Pipe	100,000	-	-	100,000
Extend pipeline on west end of system (5000' of 12") to tie Sublimity Blvd into W Star	1,000,000	330,000	-	670,000
Add new 8" tie-in line on South end of system	140,000	70,000	70,000	-
Storage:				
Install second 500K gallon reservoir at Well #4	750,000	375,000	375,000	-
Recoat existing reservoir	150,000	150,000	-	-
Facilities and Structures:				
New PW Shop ($600,000 x 35%)	210,000	105,000	105,000	-
Studies & Plans:				
New Water Master Plan	250,000	125,000	125,000	-
Totals	$4,500,000	$2,488,333	$1,241,667	$770,000

Total Improvement Fee Eligible Costs for Future System Improvements	$1,241,667
less: Water SDC Fund balance as of June 30, 2016	411,195
Adjusted Improvement Fee Eligible Costs for Future System Improvements	$830,472
Total Growth in 3/4" Meter Equivalents (20 year forecast)	224
Calculated Water Improvement Fee SDC per Meter Equivalent	$3,712

Water SDC Model Summary

The 2018 water SDC methodology update was done in accordance with Sublimity Ordinance No. 344, and with the benefit of adopted plan updates for water services. We recommend the City update the SDC charge and methodology to reflect the current capital improvement program. Our analysis indicates the City can charge a maximum of $4,628 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 8.

Table 8 - Proposed and Current Water SDCs for a 3/4" Meter

Line Item Description		City-Wide
Proposed SDC components:		
Reimbursement fee	$	696
Improvement fee		3,712
Administration fee at 5%		220
Total proposed water SDC	$	4,628
Current SDC components:		
Reimbursement fee	$	-
Improvement fee		2,370
Administration fee at 5%		-
Total current water SDC	$	2,370

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 Sublimity water service area. This criteria 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 9.

Table 9 - Proposed Schedule of Water SDCs by Potential Water Meter Size

Meter Size	AWWA Rated Flow (GPM)*	Flow Factor Equivalence	Proposed Schedule of Water SDCs			
			Reimbursement	Improvement	Administration	Total
0.75"x 0.75" - Displacement Multi-jet	30	1.00	$ 696	$ 3,712	$ 220	$ 4,628
1.00 inch - Displacement Multi-jet	50	1.67	1,160	6,187	367	7,714
1.50 inch - Displacement Class I Turbine	100	3.33	2,319	12,373	735	15,427
2.00 inch - Displacement or Class I & II Turbine	160	5.33	3,711	19,797	1,175	24,684
3.00 inch - Displacement	300	10.00	6,958	37,120	2,204	46,282
4.00 inch - Displacement or Compound	500	16.67	11,597	61,867	3,673	77,137
6.00 inch - Displacement or Compound	1000	33.33	23,193	123,734	7,346	154,273
8.00 inch - Compound	1600	53.33	37,109	197,974	11,754	246,837

* - 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

Wastewater SDCs

Wastewater Capital Improvement Plan

As in the case of the water SDCs, the principal sources of data for the wastewater system CIP are the 2017 capital improvement plans for wastewater treatment, pumping stations, and collection systems. City Staff have periodically updated these plans for current development conditions. With the assistance of City Staff, the project team has summarized the 2017 wastewater system CIPs for this SDC methodology update. The 2017 wastewater system CIP is shown in Table 10.

Table 10 - 2016 Wastewater System CIP

Description	2017 Dollars	% SDC Eligible	SDC Eligible $	Developer %	Developer Cost	Ratepayer Cost
SANITARY SYSTEM						
1 Collection System Upgrades						
Upsize trunk sewer from 9th and Center to Santiam Highway (3,000' of 10" grav	$500,000	25%	$125,000	0%	$0	$375,000
Upsize trunk sewer from Broadway to Heather Avenue (2,100' of 10" gravity)	$600,000	25%	$150,000	0%	$0	$450,000
2 WWTP Upgrades						
Upsize intake flume (20% of $150,000)	$30,000	0%	$0	0%	$0	$30,000
Replace PD blower with turbo (20% of $230,000)	$46,000	0%	$0	0%	$0	$46,000
Enclose cooling tower for odor control (20% of $364,000)	$72,800	0%	$0	0%	$0	$72,800
Dust control/loading system for dried solids (20% of $250,000)	$500,000	0%	$0	0%	$0	$500,000
Class A equipment-Dryer Replacement (20% of $1,500,000)	$300,000	0%	$0	0%	$0	$300,000
Odor Control for dryer building (20% of $1,000,000)	$200,000	0%	$0	0%	$0	$200,000
3 Upgrade Upsize Berry Lift Station	$500,000	20%	$100,000	0%	$0	$400,000
4 10 Year I/I Program	$200,000	100%	$200,000	0%	$0	$0
5 New PW Shop ($600,000 x 35%)	$210,000	50%	$105,000	0%	$0	$105,000
6 New Waste Water Facilities Plan	$280,000	80%	$224,000	0%	$0	$56,000
Subtotal	**$3,438,800**		**$904,000**		**$0**	**$2,534,800**

Wastewater Customers Current and Future Demographics

Existing Wastewater Demand and Population Growth

There are two recognized approaches for measuring wastewater demand. The first is based on actual connections to the sewer system and the second is based on observed Average Annual Dry Weather Flows (AADWF) to the headworks of the wastewater treatment plant. As we showed in the water analysis, the City has accurate billing records for known sewer customer counts and connections by meter size. The City also has very accurate data of observed dry weather flows to the Stayton wastewater treatment plant via a Parshall flume metering station. All Sublimity wastewater flows pass through the flume prior to entering the headworks of the Stayton Plant. For this analysis, the project team has estimated current and future wastewater demand by both methods.

Forecasted EDUs based on AADWF

AADWF flow data is expressed in million gallons per day (MGD) figures. For the purpose of this wastewater SDC methodology update, the project team had to translate these MGD figures into standard billing units used for charging out SDCs. In this case, those standard billing figures are expressed in EDUs. In the wastewater industry, an EDU is typically defined as the amount of wastewater a single family residential customer contributes to the wastewater system during an average month in the winter, where winter is defined as November through April. Fortunately, the City's utility billing system tracks the winter average water consumption for the single family residential customer class. When a new single family residential customer connects to the wastewater system, that customer is assigned the "system average winter monthly water consumption" for the basis of the sewer usage charge. Once that customer established his/her own winter water usage history, that actual average number overwrites the system average. For the winter period November, 2015 through April, 2016, the average single family residential customer contributes 5 hundred cubic feet (CCF) of water to the wastewater system in the average winter month. This hundred cubic feet figure translates to 127 gallons per day.

With this historical consumption data in hand, the project team was able to calculate the number of EDUs relative to the AADWF data from the wastewater treatment plant monitoring data that gets reported to the Oregon Department of Environmental Quality on a monthly basis. The EDU calculation methodology is shown in Table 11.

Table 11 - Forecast of Current and Future Wastewater EDUs based on AADWF

	2016	2036	Growth	CAGR[1]
Average Dry Weather Flow (ADWF) MGD	0.1490	0.1760	0.0270	0.84%
Observed Sublimity EDU (November 2015 - April, 2016)				
Ccf per month - Single Family Residential	5.00	5.00		
Gallons per month - SFR	3,741	3,741		
Gallons per day - SFR	123	123		
Estimated EDUs based on ADWF and observed Sublimity SFR winter ave. metered water consumption	1,212	1,431	219	0.83%

1 CAGR - Compounded Annual Growth Rate

Forecasted EDUs based on Metered Connections

Using the same methodology for calculating water EDUs, we know that as of November 30, 2017, the City had 1,025 active water meters in service that also had active sewer service, 925 of which were ¾" meters serving single family residential customers. Using the same methodology for calculating water ESUs, the resulting sewer EDUs can be calculated. The process for calculating equivalent ¾" sewer meters is shown below in Table 4.

Table 12 - Forecast of Current and Future Wastewater EDUs based on Actual Connections

Fiscal Year	Forecasted Growth Rate	Meter Equivalents		
		Beginning of Year[1]	Additions	End of Year
2017				1,231
2018	0.84%	1,231	10	1,242
2019	0.84%	1,242	10	1,252
2020	0.84%	1,252	10	1,262
2021	0.84%	1,262	11	1,273
2022	0.84%	1,273	11	1,284
2023	0.84%	1,284	11	1,294
2024	0.84%	1,294	11	1,305
2025	0.84%	1,305	11	1,316
2026	0.84%	1,316	11	1,327
2027	0.84%	1,327	11	1,338
2028	0.84%	1,338	11	1,349
2029	0.84%	1,349	11	1,361
2030	0.84%	1,361	11	1,372
2031	0.84%	1,372	11	1,383
2032	0.84%	1,383	12	1,395
2033	0.84%	1,395	12	1,407
2034	0.84%	1,407	12	1,418
2035	0.84%	1,418	12	1,430
2036	0.84%	1,430	12	1,442
2037	0.84%	1,442	12	1,454
			223	

1 Source - Sublimity utility billing records

Conclusions on Forecasted EDUs

As the data in Tables 11 and 12 show, both methods of estimating and forecasting future wastewater demand produce very similar results. Under the AADWF methodology, we estimate Sublimity currently serves 1,212 EDUs. Based on actual connections to the sewer system, that figure is 1,231 EDUs. These remarkably similar results make sense in that the Sublimity wastewater customer base is homogenous and monolithic. Roughly 90% of all flows originate from single family residential homes, with very similar water consumption characteristics.

For SDC calculation purposes, the project team has chosen to use the higher 1,231 EDU count based upon actual sewer connections to the system. The data used for this approach is known and replicable, and is based on actual billing system records as of November 30, 2017.

Reimbursement Fee Calculations

The wastewater reimbursement fee methodology mirrors that used for the water reimbursement fee. The methodological steps in its construction are restated here.

Step 1: Calculate the original cost of wastewater 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 wastewater fixed assets**.

Step 2: Subtract from the adjusted original cost of wastewater fixed assets in service the accumulated depreciation of those fixed assets. This arrives at the **modified book value of wastewater fixed assets in service**.

Step 3: Subtract from the modified book value of wastewater assets in service any grant funding or contributed capital. This arrives at the **modified book value of wastewater fixed assets in service net of grants and contributed capital**.

Step 4: Subtract from the modified book value of wastewater 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 wastewater reimbursement fee basis**.

Step 5: Subtract from the gross wastewater reimbursement fee basis the fund balance held in the Wastewater Reimbursement SDC fund (if available). This arrives at the **net wastewater reimbursement fee basis**.

Step 6: Divide the net wastewater reimbursement fee basis by the sum of existing and future EDUs to arrive at the **unit net reimbursement fee**.

The actual data that was used to calculate the total wastewater reimbursement fee is shown below in Table 13.

Table 13 - Calculation of the Wastewater Reimbursement Fee

Utility Plant-in-Service (original cost):[1]		
Land, Easements & Right of Way	$	528,512
Land improvements		-
Construction		2,056,577
Infrastructure		-
Machinery and equipment		-
Licensed Vehicles		-
Construction Work-in-Progress		-
Total Utility Plant-in-Service		2,585,089
Accumulated depreciation[1]		
Land, Easements & Right of Way		-
Land improvements		-
Construction		1,174,300
Infrastructure		-
Machinery and equipment		-
Licensed Vehicles		-
Construction Work-in-Progress		-
Total accumulated depreciation		1,174,300
Book value of water utility plant-in-service @ June 30, 2016		1,410,789
Eliminating entries:		
Principal outstanding on bonds, notes, and loans payable		-
Developer Contributions		-
Grants, net of amortization		-
		-
Net basis in utility plant-in-service available to serve future customers	$	1,410,789
Estimated existing and future wastewater treatment EDUs		1,454
Calculated reimbursement fee - $ per treatment EDU	$	970

[1] Source: Sublimity Accounting Summary Report - Capitalized Assets as of June 30, 2016

Improvement Fee Calculations

The calculation of the wastewater improvement fee also follows the logic that was used to calculate the water improvement fee. As in the case of water, this study continues to use the improvements-driven method, and has relied on the capital improvement plans, and plan updates for the wastewater treatment, pump stations, and collection systems. 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 Wastewater Improvement SDC Fund. This arrives at **the net wastewater improvement fee basis**.

Step 3: Divide the net wastewater improvement fee basis by the forecasted number of growth EDUs over the planning period. This arrives at **the total wastewater improvement fee**.

The actual data that was used to calculate the total wastewater improvement fee is shown below in Table 14.

Table 14 - Calculation of the Wastewater Improvement Fee

Project Description	Estimated Cost of Improvement in 2017 Dollars	Funding Source: Rates	Funding Source: SDCs	Funding Source: Developer Contributions
Collection System Improvements:				
Upsize trunk sewer from 9th and Center to Santiam Highway	$500,000	$375,000	$125,000	$0
Upsize trunk sewer from Broadway to Heather Avenue (2,100' of	600,000	450,000	150,000	-
Pump Station Improvements:				
Upgrade Upsize Berry Lift Station	500,000	400,000	100,000	-
Wastewater Treatment Plant Projects:				
Upsize intake flume (20% of $150,000)	30,000	30,000	-	-
Replace PD blower with turbo (20% of $230,000)	46,000	46,000	-	-
Enclose cooling tower for odor control (20% of $364,000)	72,800	72,800	-	-
Dust control/loading system for dried solids (20% of $250,000)	500,000	500,000	-	-
Class A equipment-Dryer Replacement (20% of $1,500,000)	300,000	300,000	-	-
Odor Control for dryer building (20% of $1,000,000)	200,000	200,000	-	-
Facilities and Structures:				
New PW Shop ($600,000 x 35%)	210000	105000	105000	0
Studies, Plans, and I&I Abatement:				
10 Year I/I Program	200,000	-	200,000	-
New Waste Water Facilities Plan	280,000	56,000	224,000	-
Totals	$3,438,800	$2,534,800	$904,000	$0

Total Improvement Fee Eligible Costs for Future System Improvements	$904,000
less: Wastewater SDC Fund balance as of June 30, 2016	178,322
Adjusted Improvement Fee Eligible Costs for Future System Improvements	$725,678
Total Growth in 3/4" Meter Equivalents (20 year forecast)	223
Calculated Water Improvement Fee SDC per Meter Equivalent	$3,257

Wastewater SDC Model Summary

The 2018 wastewater SDC methodology update was done in accordance with Sublimity Ordinance No. 344, and with the benefit of adopted capital improvement plans and plan updates for wastewater services. We recommend the City update the SDC charge and methodology to reflect the current capital improvement program. Our analysis indicates the City can charge a maximum of $4,438 for the standard ¾" residential water meter. A comparison of the proposed and current wastewater SDCs for the average single family residential customer is shown below in Table 15.

Table 15 - Proposed and Current Wastewater SDCs for a 3/4" Meter

Line Item Description		City-Wide
Proposed SDC components:		
Reimbursement fee	$	970
Improvement fee		3,257
Administration fee at 5%		211
Total proposed wastewater SDC	$	4,438
Current SDC components:		
Reimbursement fee	$	2,635
Improvement fee		735
Administration fee at 5%		-
Total current wastewater SDC	$	3,370

For water meters larger than ¾", the schedule of wastewater SDC uses the same flow factors that were developed for the water SDCs (i.e., AWWA standards for displacement and compound meters). The complete proposed schedule of wastewater SDCs by potential meter size are shown in Table 16.

Table 16 - Proposed Schedule of Wastewater SDCs by Potential Water Meter Size

Meter Size	AWWA Rated Flow (GPM)*	Flow Factor Equivalence	Proposed Schedule of Wastewater SDCs			
			Reimbursement	Improvement	Administration	Total
0.75"x 0.75" - Displacement Multi-jet	30	1.00	$ 970	$ 3,257	$ 211	$ 4,438
1.00 inch - Displacement Multi-jet	50	1.67	1,617	5,428	352	7,397
1.50 inch - Displacement Class I Turbine	100	3.33	3,234	10,856	704	14,794
2.00 inch - Displacement or Class I & II Turbine	160	5.33	5,174	17,369	1,127	23,671
3.00 inch - Displacement	300	10.00	9,702	32,568	2,113	44,383
4.00 inch - Displacement or Compound	500	16.67	16,170	54,280	3,522	73,972
6.00 inch - Displacement or Compound	1000	33.33	32,339	108,559	7,045	147,943
8.00 inch - Compound	1600	53.33	51,743	173,695	11,272	236,710

* - 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

Stormwater SDCs

Stormwater Capital Improvement Plan

As in the case of the water and wastewater SDCs, the principal sources of data for the stormwater system CIP are the 2017 capital improvement plans for stormwater collection, detention, treatment, and disposal systems. City Staff have periodically updated these plans for current development conditions. With the assistance of City Staff, the project team has summarized the 2017 stormwater system CIPs for this SDC methodology update. The 2017 stormwater system CIP is shown in Table 17.

Table 17 - 2016 Stormwater System CIP

Description	2017 Dollars	% SDC Eligible	SDC Eligible $	Developer %	Developer Cost	Ratepayer Cost
STORM SYSTEM						
1 Upsize Storm Drain from Sublimity Mobile Village north to Heather (3000' of 27" pip	500,000	100%	500,000	0%	-	-
2 Construct 3000' of 48" pipe from Santiam Highway to Center Street	750,000	0%	-	100%	750,000	-
3 Construct 1500' of 18" pipe from Santiam Highway to 8th Street	150,000	0%	-	100%	150,000	-
4 Construct 2000' of 18" pipe from Berry Street to Sublimity Mobile Village	150,000	0%	-	100%	150,000	-
5 Construct 1000' of 12" pipe from Starr Street to Sublimity Mobile Village	100,000	0%	-	100%	100,000	-
6 Construct 2000' of 24" pipe in Center Street from 9th Street to Church Street	400,000	0%	-	0%	-	400,000
7 New PW Shop ($600,000 x 10%)	60,000	50%	30,000	0%	-	30,000
8 New Stormwater Master Plan	200,000	80%	160,000	0%	-	40,000
Subtotal	**$2,310,000**		**$690,000**		**$1,150,000**	**$470,000**

Stormwater Customers Current and Future Demographics

Existing Stormwater Demand and Population Growth

Sublimity does not have a stormwater utility, and does not charge for storm and surface water management services. Current industry practice charges for such services base on measured impervious surface on parcels. For this SDC analysis, the project team has assumed the average amount of impervious area on a single family residential developed lot within the City is set at 2,984 square feet. This equates to one "equivalent service unit" or ESU. SDCs are calculated as a function of ESUs meaning that each property's fee is calculated as follows:

$$Estimated\ Impervious\ Surface\ \div 2{,}984\ square\ feet\ = Number\ of\ ESUs$$

The number of ESUs is then multiplied by the unit rate to determine the service charge or SDC amount. The number of ESUs currently connected to the City's system is estimated to be 1,513 based on dwelling unit and employment data from the U.S. Census. In order to determine the future capacity requirements of the City's stormwater system, each basin plan and facility plan forecasts the amount of additional impervious surface through the planning period. This forecast is based on future land use conditions and the corresponding runoff coefficients assigned to these various land uses. The future growth in ESUs within each of the City's existing basins and planning areas is based on these specific land use and impervious surface projections.

Forecasted EDUs

With current stormwater demand estimated at 1,513 ESUs, the project team was able to calculate the number of ESUs at buildout using the City's Comprehensive Plan land use inventories. These inventories are predicted on the currently approved urban growth boundary (UGB) of the City. As discussed above, the forecast is based on the future land use conditions and the corresponding runoff coefficients assigned to the Comprehensive Plan land use designations. The key assumptions concerning runoff coefficients for this analysis are:

- *Residential lands* – Based on current Comprehensive Plan lands inventories, the planning standard used to calculate future residential land needs for the City is 4.4 dwelling units per acre. For the calculation of build out impervious surface contributions from residential lands, the project team has also used this planning standard.
- *Commercial lands* – In consultation with the City's engineering staff, the project team has applied a uniform runoff coefficient of .90 (i.e., 90%) to all commercial lands within the UGB. This average value was used based on analysis of general commercial land uses over a range of soils. The data sources for this analysis included the National Resource Conservation Service's Hydrologic manual, Oregon Department of Transportation Department's design standards for stormwater facilities, and the CalTrans Storm Water Quality Handbook SWPPP/WPCP Preparation Manual.
- *Industrial lands* – Also in consultation with City engineering staff, a uniform runoff value of .85 (i.e., 85%) was applied to all industrial lands in the UGB. The same data sources used to arrive at the commercial runoff coefficient was used for the derivation of the industrial value.

The buildout ESU forecast methodology is shown in Table 18.

Table 18 - Forecast of Current and Future Stormwater ESUs

Comprehensive Plan Land Use Designations		Comp. Plan Acreage Gross	Comp. Plan Acreage Net	Dwelling Units per Net Acre	Impervious Surface Coverage	Impervious Surface Acres	Impervious Surface Square Feet	ESUs
Residential:								
R-1	Single Family Residential	371.18	296.94	4.36				
R-2	Multi-Family Residential	37.88	30.31	4.84				
RRFF5	Rural Residential Farm Forest 5 Acre	-	-	-				
	Subtotal residential	409.06	327.25	4.40	2,984 sq. ft.	99	4,297,433	1,440.16
Commercial:								
C-1	General Commercial							
C-2	Central Commercial							
	Subtotal commercial	52.67	42.13		90%	38	1,651,846	553.57
Industrial:								
M-1	Light Industrial							
M-2	Heavy Industrial							
RI	Rural Industrial							
	Subtotal industrial	10.83	8.67		85%	7	320,865	107.53
Public Lands:								
PSP	Public and Semi Public	34.68	34.68					
Farm Forest:								
EFU	Exclusive Farm Use							
Totals		507.24	412.73			144	6,270,144	2,101

Analysis of Equivalent Service Units (ESUs):

Estimated ESUs as of July 1, 2017 (per City records and US Census data estimates))	1,513
Estimated ESUs from growth	588
Estimated ESUs at buildout (assuming 1 ESU = 2,984 sq. ft. of impervious surface)	2,101

Reimbursement Fee Calculations

An analysis of the City's fixed assets inventory indicates the City has not capitalized any of the trunk drainage system within the urban growth boundary. In other words, there are zero stormwater fixed assets on the City's balance sheet. With no stormwater assets in service, by definition, there can be no reimbursement fee charged to new customers who connect to the system

Improvement Fee Calculations

The calculation of the stormwater improvement fee also follows the logic that was used to calculate the water improvement fee. As in the case of water, this study continues to use the improvements-driven method, and has relied on the capital improvement plans, and plan updates for the stormwater systems. 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 Stormwater Improvement SDC Fund. This arrives at **the net stormwater improvement fee basis**.

Step 3: Divide the net stormwater improvement fee basis by the forecasted number of growth EDUs over the planning period. This arrives at **the total stormwater improvement fee**.

The actual data that was used to calculate the total stormwater improvement fee is shown below in Table 19.

Table 19 - Calculation of the Stormwater Improvement Fee

Project Description	Estimated Cost of Improvement in 2017 Dollars	Funding Source: Rates	Funding Source: SDCs	Funding Source: Developer Contributions
Collection System Projects:				
Upsize Storm Drain from Sublimity Mobile Village north to Heather (3000' of 27" pipe)	$500,000	$0	$500,000	$0
Construct 3000' of 48" pipe from Santiam Highway to Center Street	750,000	-	-	750,000
Construct 1500' of 18" pipe from Santiam Highway to 8th Street	150,000	-	-	150,000
Construct 2000' of 18" pipe from Berry Street to Sublimity Mobile Village	150,000	-	-	150,000
Construct 1000' of 12" pipe from Starr Street to Sublimity Mobile Village	100,000	-	-	100,000
Construct 2000' of 24" pipe in Center Street from 9th Street	400,000	400,000	-	-
Stormwater Detention /Retention Projects:				
Structures and Facilities:				
New PW Shop ($600,000 x 10%)	60,000	30,000	30,000	-
Plans, Studies, & Policies:				
New Stormwater Master Plan	200,000	40,000	160,000	-
Totals	$2,310,000	$470,000	$690,000	$1,150,000

Total Improvement Fee Eligible Costs for Future System Improvements	$690,000
less: Stormwater SDC Fund balance as of June 30, 2016	362,800
Adjusted Improvement Fee Eligible Costs for Future System Improvements	$327,200
Total growth ESUs	588
Calculated stormwater Improvement Fee SDC per ESU	$556
Calculated stormwater Improvement Fee SDC per square foot of Impervious surface	$0.1865

Stormwater SDC Model Summary

The 2018 stormwater SDC methodology update was done in accordance with Sublimity Ordinance No. 344, and with the benefit of adopted capital improvement plans and plan updates for stormwater services. We recommend the City update the SDC charge and methodology to reflect the current capital improvement program. Our analysis indicates the City can charge a maximum of $584 per ESU. The reader should note this value is significantly lower than the current fee of $1,880 per ESU. This change is due to a change in strategy concerning the future buildout of the trunk drainage system. In the 1997 analysis, the City assumed it would build out the system and when new customers connect to the system they would be charged an SDC to reimburse the City for the capacity that has/will be built to serve growth. Under the new strategy, the City is assuming the trunk drainage system will be built by developers as a condition of land use approval, and dedicated to the City. This strategy assumes new customers will not be charged SDCs since the City never invested public funds for the development of the storm drainage system.

A comparison of the proposed and current stormwater SDCs for the average single family residential customer is shown below in Table 20.

Table 20 - Proposed and Current Stormwater SDCs for a 3/4" Meter

Line Item Description	Per ESU	Per Sq. Foot
Proposed SDC components:		
Reimbursement fee	$ -	$ -
Improvement fee	556	0.1865
Administration fee at 5%	28	0.0093
Total proposed stormwater SDC	$ 584	$ 0.1958

	Per SFR	Per Sq. Foot
Current SDC components:		
Reimbursement fee	$ -	N/A
Improvement fee	1,880	N/A
Administration fee at 5%	-	N/A
Total current stormwater SDC	$ 1,880	N/A

Transportation SDCs

Transportation Capital Improvement Plan

The principal sources of data for the transportation system CIP are the 2017 capital improvement plans for transportation. The primary categories of transportation system improvements are:

- Intersection improvement projects
- Street reconstruction projects
- Roadway widening projects

City Staff have periodically updated these plans for current development conditions. With the assistance of City Staff, the project team has summarized the 2017 transportation system CIPs for this SDC methodology update. The 2017 transportation system CIP is shown in Table 21.

Table 21 - 2017 Transportation System CIP

Description	2017 Dollars	% SDC Eligible	SDC Eligible $	Developer %	Developer Cost	Ratepayer Cost
STREET SYSTEM						
1 Signal at Starr and Center Street Includes Left Turn Lanes	1,000,000	50%	500,000	0%	-	500,000
2 Extend Sublimity Blvd 5000' North to Sublimity Road	4,000,000	0%	-	100%	4,000,000	-
3 Improve Division Street from Center Street west 1000'	750,000	50%	375,000	0%	-	375,000
4 Extend Division Street from its westerly terminus to Sublimity Blvd extension (1200'	900,000	0%	-	100%	900,000	-
5 New PW Shop ($600,000 x 10%)	60,000	50%	30,000	0%	-	30,000
6 New Transportation System Plan	250,000	50%	125,000	0%	-	125,000
Subtotal	**$6,960,000**		**$1,030,000**		**$4,900,000**	**$1,030,000**

Transportation System Current and Future Demand

Existing Transportation Demand

Demand for transportation facilities is measured in average daily vehicle trips (ADVT). One ADVT represents one person beginning or ending a number of vehicular trips at a certain property over the course of a weekday. Based on data from both the U. S. Census Bureau and existing Sublimity Transportation System Plan Update (1998), we estimate that the transportation system is currently serving 14,107 ADVTs. The statistical process that was used to arrive at the current demand value is shown in Table 22.

Table 22 - Existing Transportation System Demand

	Dwewlling Units	Employees	ITE Code[3]	Weekday daily vehicle trips per unit	Total weekday vehicle trips
Number of dwelling units:[1]					
Detached single family	756		210	9.52	7,197
Attached single family	64		230	5.81	372
Duplex	47		210	9.52	447
Three or Fourplex	43		210	9.52	409
Multifamily:					
5 to 9 units	30		220	6.65	200
10 to 19 units	20		220	6.65	133
20 to 49 units	82		220	6.65	545
50 or more units	137		220	6.65	911
Mobil home	117		240	4.99	584
Boat, RV, van, ect.	5		254	2.74	14
Number of employees:[2]					
Manufacturing		-	140	2.13	-
Wholesale trade		-	110	3.02	-
Retail trade		52	826	22.36	1,163
Transportation and warehousing		-	130	3.34	-
Admin, support, and waste management (PM peak hour)		25	170	0.76	19
Finance and insurance		-	750	3.50	-
Real estate, rental, and leasing		24	750	3.50	84
Professional, scientific, and technical services		-	760	2.77	-
Health care and social assistance		205	720	8.91	1,827
Arts, entertainment, and recreation		-	495	27.25	-
Accommodation and food service		42	932	4.83	203
Other services (except public administration)		-	710	3.32	-
Totals	1,301	348			14,107

[1] Source: U.S. Bureau of the Census; American Community Survey; Table B25024 2011-2015 ACS 5-year estimate

[2] Source: U.S. Bureau of the Census; American Community Survey; Table EC1200A1 All Sectors: Geographic Area Series: Economy-Wide Statistics: 2012

[3] Trip Generation Manual; Institute of Transportation Engineers; 9th Edition

Forecasted EDUs

We are estimating the City's transportation system will serve 16,660 ADVTs in 2037. These estimates imply growth of 2,553 ADVTs over the planning period, as shown in Table 23. The principal sources for the forecast are:

- City of Sublimity Comprehensive Plan lands inventory per the Mid-Willamette Valley Council of Governments; November, 2017
- U.S. Census Bureau, 2015 American Community Survey 5-year summary, City of Sublimity

The growth forecast in ADVTs is shown in Table 23.

Table 23 - Forecast of Future Transportation ADVTs

	2015	2017	2037	Analysis of Growth	
	Census - ACS	Estimated	Projected	Units	CAGR*
1 Population	2,702	2,857	3,374	517	0.835%
Single family residential	2,222	2,349	2,774	425	
Multi-family residential	480	508	600	92	
2 Total Housing Units	1,301	1,376	1,625	249	
Single family residential	942	996	1,176	180	
Multi-family residential	359	380	448	69	
Number of persons per Housing Unit	2.08	2.08			
Single family residential	2.36	2.36			
Multi-family residential	1.34	1.34			
3 Employment	1,149	1,215	1,435	220	
Employment to population ratio	42.52%	42.52%			
Annual Average Daily Traffice (trips)		14,107	16,660	2,553	0.835%

Data Sources and Notes:

1 Current population source: U.S. Census Bureau, 2015 American Community Survey 5-year summary, Table DP05; 2017 and 2037 projections per Sublimity Parks Master Plan, November, 2017

2 Current Housing units source: U.S. Census Bureau, 2015 American Community Survey 5-year summary, Table DP04, Table B25024, B25033; 2030 projection based on 2015 number of persons per occupied housing unit

3 Current employment source: U.S. Census Bureau, 2015 American Community Survey 5-year summary, Table DP03; 2030 projection based on 2015 employment to population ratio

* CAGR - Compound Annual Growth Rate

Reimbursement Fee Calculations

The transportation reimbursement fee methodology mirrors that used for the water and wastewater reimbursement fee. The methodological steps in its construction are restated here.

Step 1: Calculate the original cost of transportation 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 transportation fixed assets**.

Step 2: Subtract from the adjusted original cost of transportation fixed assets in service the accumulated depreciation of those fixed assets. This arrives at the **modified book value of transportation fixed assets in service**.

Step 3: Subtract from the modified book value of transportation assets in service any grant funding or contributed capital. This arrives at the **modified book value of transportation fixed assets in service net of grants and contributed capital**.

Step 4: Subtract from the modified book value of transportation 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 transportation reimbursement fee basis**.

Step 5: Subtract from the gross transportation reimbursement fee basis the fund balance held in the Transportation Reimbursement SDC fund (if available). This arrives at the **net transportation reimbursement fee basis**.

Step 6: Divide the net transportation reimbursement fee basis by the sum of existing and future ADVTs to arrive at the **unit net reimbursement fee**.

The actual data that was used to calculate the total transportation reimbursement fee is shown below in Table 24.

Table 24 - Calculation of the Transportation Reimbursement Fee

Utility Plant-in-Service (original cost):[1]		
Land, Easements & Right of Way	$	10,815
Land improvements		11,500
Construction		-
Infrastructure		80,346
Machinery and equipment		50,561
Licensed Vehicles		-
Construction Work-in-Progress		-
Total Utility Plant-in-Service		153,222
Accumulated depreciation[1]		
Land, Easements & Right of Way		-
Land improvements		8,740
Construction		-
Infrastructure		1,674
Machinery and equipment		35,887
Licensed Vehicles		-
Construction Work-in-Progress		-
Total accumulated depreciation		46,301
Book value of streets plant-in-service @ June 30, 2016		106,921
Eliminating entries:		
Principal outstanding on bonds, notes, and loans payable		-
Developer Contributions		-
Grants, net of amortization		-
		-
Net basis in utility plant-in-service available to serve future customers	$	106,921
Estimated existing and future daily vehicle trips		16,660
Transportation reimbursement fee per daily vehicle trip		$6

[1] Source: Sublimity Accounting Summary Report - Capitalized Assets as of June 30, 2016

Improvement Fee Calculations

The calculation of the transportation improvement fee also follows the logic that was used to calculate the water improvement fee. As in the case of water, this study continues to use the improvements-driven method, and has relied on the capital improvement plans, and plan updates for the transportation 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 Transportation Improvement SDC Fund. This arrives at **the net transportation improvement fee basis**.

Step 3: Divide the net transportation improvement fee basis by the forecasted number of growth ADVTs over the planning period. This arrives at **the total transportation improvement fee**.

The actual data that was used to calculate the total transportation improvement fee is shown below in Table 25.

Table 25 - Calculation of the Transportation Improvement Fee

Project Description	Estimated Cost of Improvements in 2017 Dollars	Funding Source: General Fund	Funding Source: SDCs	Funding Source: Developer Contributions
Intersection Improvements:				
Signal at Starr and Center Street Includes Left Turn Lanes	$ 1,000,000	$ 500,000	$ 500,000	$ -
Street Extension Projects:				
Extend Sublimity Blvd 5000' North to Sublimity Road	4,000,000	-	-	4,000,000
Extend Division Street from its westerly terminus to Sublimity Blvd extension (1200')	900,000	-	-	900,000
Roadway Widening Projects:				
Improve Division Street from Center Street west 1000'	750,000	375,000	375,000	-
Structures and Facilities:				
New PW Shop ($600,000 x 10%)	60,000	30,000	30,000	-
Plans, Studies, & Policies:				
New Transportation System Plan	250,000	125,000	125,000	-
Total	$ 6,960,000	$ 1,030,000	$ 1,030,000	$ 4,900,000

Total Improvement Fee Eligible Costs for Future System Improvements	$ 1,030,000
less: Transportation SDC Fund balance as of June 30, 2016	508,355
Adjusted Improvement Fee Eligible Costs for Future System Improvements	$ 521,645
Future daily vehicle trips created by growth	2,553
Transportation improvement fee per daily vehicle trip	$ 204

Transportation SDC Model Summary

The 2018 transportation SDC methodology update was done in accordance with Sublimity Ordinance No. 344, and with the benefit of adopted capital improvement plans and plan updates for transportation services. We recommend the City update the SDC charge and methodology to reflect the current capital improvement program. Our analysis indicates the City can charge a maximum of $2,103 per ADVT. Adding the reimbursement fee of $61 to the improvement fee of $1,942 results in a total SDC of $2,003 per ADVT before the cost of administration. Adding 5% for administration, brings the total SDC to $2,103 per ADVT.

To charge the appropriate SDC, the City must estimate how many ADVTs will be generated by the development in question. That number can then be multiplied by $2,103 to determine the amount of SDC owed by new development projects.

The number of ADVTs that a property will generate is a function of the increase in scope and scale of activities that will occur on that property. By "scope of activities," we mean land use. For example, a new single-family residence will generate trip-ends differently from a new retail store of the same size. By "scale of activities," we mean some measure of quantity. For residential land uses, the number of dwelling units is an appropriate measure of scale. For many commercial and industrial land uses, building floor area is the best measure. For example, a 20,000-square-foot store is likely to generate twice the number of trip-ends as a 10,000-square-foot store of the same type. Table 26 presents proposed transportation SDCs per unit of scale for several land uses in the 9th edition of Trip Generation Manual, published by the Institute of Transportation Engineers (ITE):

Table 26 - Proposed Transportation SDCs by ITE Code

ITE Code	Land Use	Total Trip Ends	Percent of Diverted/Linked Trips	Percent of Pass-by Trips	Diverted/Linked and pass-by Trip Adjustment	Primary Trip Ends	Total Unit SDC	Basis for Calculating a Customer's SDC
110	General light industrial	6.97	0.00%	0.00%	-	6.97	1,540	1,000 square feet of gross floor area
130	Industrial park	6.83	0.00%	0.00%	-	6.83	1,509	1,000 square feet of gross floor area
140	Manufacturing	3.82	0.00%	0.00%	-	3.82	844	1,000 square feet of gross floor area
151	Mini-warehouse	2.50	0.00%	0.00%	-	2.50	552	1,000 square feet of gross floor area
160	Data center	0.99	0.00%	0.00%	-	0.99	219	1,000 square feet of gross floor area
210	Single family detached housing	9.52	0.00%	0.00%	-	9.52	2,103	Dwelling unit
220	Apartment	6.65	0.00%	0.00%	-	6.65	1,469	Dwelling unit
230	Residential condominium/townhouse	5.81	0.00%	0.00%	-	5.81	1,284	Dwelling unit
240	Mobile home park	4.99	0.00%	0.00%	-	4.99	1,102	Occupied dwelling unit
254	Assisted living	2.74	0.00%	0.00%	-	2.74	605	Bed
310	Hotel	8.92	0.00%	0.00%	-	8.92	1,971	Room
320	Motel	9.11	0.00%	0.00%	-	9.11	2,013	Room
417	Regional park	4.57	0.00%	0.00%	-	4.57	1,010	Acre
430	Golf course	5.04	0.00%	0.00%	-	5.04	1,114	Acre
444	Movie theater with matinee - Friday pm peak hour	45.91	0.00%	0.00%	-	45.91	10,143	Movie screen
492	Health/fitness club	32.93	0.00%	0.00%	-	32.93	7,276	1,000 square feet of gross floor area
495	Recreational community center	27.25	0.00%	0.00%	-	27.25	6,021	1,000 square feet of gross floor area
520	Elementary school	15.43	0.00%	0.00%	-	15.43	3,409	1,000 square feet of gross floor area
522	Middle school/junior high school	13.78	0.00%	0.00%	-	13.78	3,045	1,000 square feet of gross floor area
530	High school	12.89	0.00%	0.00%	-	12.89	2,848	1,000 square feet of gross floor area
540	Junior/community college	27.49	0.00%	0.00%	-	27.49	6,074	1,000 square feet of gross floor area
560	Church	9.11	0.00%	0.00%	-	9.11	2,013	1,000 square feet of gross floor area
565	Day care center	74.06	0.00%	0.00%	-	74.06	16,363	1,000 square feet of gross floor area
590	Library	56.24	0.00%	0.00%	-	56.24	12,426	1,000 square feet of gross floor area
610	Hospital	13.22	0.00%	0.00%	-	13.22	2,921	1,000 square feet of gross floor area
620	Nursing home	7.60	0.00%	0.00%	-	7.60	1,679	1,000 square feet of gross floor area
710	General office building	11.03	0.00%	0.00%	-	11.03	2,437	1,000 square feet of gross floor area
720	Medical-dental office building	36.13	0.00%	0.00%	-	36.13	7,983	1,000 square feet of gross floor area
750	Office park - pm peak hour	11.42	0.00%	0.00%	-	11.42	2,523	1,000 square feet of gross floor area
760	Research and development center - pm peak hour	8.11	0.00%	0.00%	-	8.11	1,792	1,000 square feet of gross floor area
770	Business park - pm peak hour	12.44	0.00%	0.00%	-	12.44	2,748	1,000 square feet of gross floor area
812	Building materials and lumber store	45.16	0.00%	0.00%	-	45.16	9,978	1,000 square feet of gross floor area
813	Free standing discount superstore	50.75	0.00%	28.00%	14.21	36.54	8,073	1,000 square feet of gross floor area
815	Free standing discount store	57.24	35.25%	17.00%	29.91	27.33	6,039	1,000 square feet of gross floor area
816	Hardware/paint store	51.29	29.50%	26.00%	28.47	22.82	5,043	1,000 square feet of gross floor area
817	Nursery (garden center)	68.10	0.00%	0.00%	-	68.10	15,046	1,000 square feet of gross floor area
820	Shopping center	42.70	15.86%	34.00%	21.29	21.41	4,730	1,000 square feet of gross leasable area
826	Specialty retail center	44.32	0.00%	0.00%	-	44.32	9,792	1,000 square feet of gross leasable area
841	Automobile sales	32.30	0.00%	0.00%	-	32.30	7,136	1,000 square feet of gross floor area
843	Automobile parts sales	61.91	13.00%	43.00%	34.67	27.24	6,018	1,000 square feet of gross floor area
848	Tire store	24.87	3.33%	28.00%	7.79	17.08	3,773	1,000 square feet of gross floor area
850	Supermarket	102.24	25.25%	36.00%	62.62	39.62	8,753	1,000 square feet of gross floor area
851	Convenience market (open 24 hours)	737.99	6.47%	61.00%	497.95	240.04	53,034	1,000 square feet of gross floor area
853	Convenience market with gasoline pumps	845.60	17.80%	66.00%	708.61	136.99	30,266	1,000 square feet of gross floor area
854	Discount supermarket	90.86	23.20%	23.00%	41.98	48.88	10,800	1,000 square feet of gross floor area
857	Discount club	41.80	0.00%	0.00%	-	41.80	9,235	1,000 square feet of gross floor area
862	Home improvement superstore	30.74	8.00%	48.00%	17.21	13.53	2,988	1,000 square feet of gross floor area
880	Pharmacy/drugstore without drive-through	90.06	4.67%	53.00%	51.93	38.13	8,423	1,000 square feet of gross floor area
881	Pharmacy/drugstore with drive-through	96.91	13.00%	49.00%	60.08	36.83	8,136	1,000 square feet of gross floor area
890	Furniture store	5.06	10.33%	53.00%	3.20	1.86	410	1,000 square feet of gross floor area
911	Walk-in bank	121.30	0.00%	0.00%	-	121.30	26,800	1,000 square feet of gross floor area
912	Drive-in bank	148.15	25.67%	47.00%	107.66	40.49	8,947	1,000 square feet of gross floor area
925	Drinking place	113.40	0.00%	0.00%	-	113.40	25,054	1,000 square feet of gross floor area
931	Quality restaurant	89.95	13.50%	44.00%	51.72	38.23	8,446	1,000 square feet of gross floor area
932	High-turnover (sit down) restaurant	127.15	17.25%	43.00%	76.61	50.54	11,167	1,000 square feet of gross floor area
933	Fast-food restaurant without drive-through	716.00	17.25%	43.00%	431.39	284.61	62,881	1,000 square feet of gross floor area
934	Fast-food restaurant with drive-through	496.12	9.06%	50.00%	292.99	203.13	44,880	1,000 square feet of gross floor area
936	Coffee/donut shop without drive-through	407.50	17.25%	43.00%	245.52	161.98	35,788	1,000 square feet of gross floor area
937	Coffee/donut shop with drive-through	818.58	9.06%	50.00%	483.42	335.16	74,050	1,000 square feet of gross floor area
938	Coffee/donut kiosk	1,800.00	9.06%	50.00%	1,063.00	737.00	162,832	1,000 square feet of gross floor area
944	Gasoline/service station	168.56	23.00%	42.00%	109.56	59.00	13,034	Vehicle fueling position
945	Gasoline/service station with convenience market	162.78	31.22%	56.00%	141.98	20.80	4,595	Vehicle fueling position
946	Gasoline/service station with car wash	152.84	27.11%	49.00%	116.33	36.51	8,067	Vehicle fueling position

Source: ITE, Trip Generation Manual, 9th edition
Average vehicle trip ends on a weekday, unless otherwise noted

Parks SDCs

The 2017 Parks Master Plan Levels of Service

In 2017, the City completed preparation of a new parks master plan (the plan) addressing parks needs through the year 2037. The plan relies on levels of service (LOS) to determine the adequacy/needs for current and future parks and recreation infrastructure. To determine adequacy, park and recreation providers typically measure existing parklands and facilities and compare them against established standards, typically LOS Standards. LOS standards are measures of the amount of public recreation parklands and facilities being provided to meet that jurisdiction's basic needs and expectations. For example, the amount of parkland currently needed in a particular jurisdiction may be determined by comparing the ratio of existing developed park acres per 1,000 residents (by all providers within the jurisdiction) to the jurisdiction's desired level of parks relative to population. The gap between the two ratios is the currently needed park acreage. As the population grows, the objective is to provide enough additional acreage to maintain the jurisdiction's desired ratio of park acres to 1,000 residents. These ratios can provide insight and act as tools to determine the amount of parkland or trails needed to meet current and future recreation needs.

In Chapter 4, (Recommended Park LOS), the Plan established recommended parks LOS (by parks classification) for the City based on the 2013-2017 Statewide Comprehensive Outdoor Recreation Plan (SCORP). The SCORP recommended Oregon LOS guidelines were developed after reviewing the National Recreation and Parks Association (NRPA) guidelines and the results from the 2014 statewide average guidelines survey. The recommended Plan parks LOS by parks category are shown below in Table 27.

Table 27 - 2017 Parks Master Plan LOS Standards for Sublimity

Parkland Type	Average Planning LOS Guidelines in Oregon (Acres /1,000 population)	NRPA Standard LOS Guidelines (Acres /1,000 population)	Recommended Oregon LOS Guidelines (Acres /1,000 population)
Pocket Parks	0.16	0.25 to 0.5	0.25 to 0.5
Urban Plaza Parks	0.18	None	0.1 to 0.2
Neighborhood Parks	1.27	1.0 to 2.0	1.0 to 2.0
Community Parks	2.76	5.0 to 8.0	2.0 to 6.0
Regional Parks	8.99	5.0 to 10.0	5.0 to 10.0
Nature Parks	2.74	None	2.0 to 6.0
Special Use Parks	0.38	None	None
Totals	-	6.25 to 10.5 developed	6.25 to 12.5

Having established the LOS standards for park lands, the next step is to compare the City's current parks inventory to the standard, and analyzes the surpluses/deficiencies by parks category. That data is shown below in Table 28.

Table 28 - Existing Parks and Trails LOS Surplus/Deficiency

Classification and Park Name	Acreage	Linear Miles	Current Level of Service[1]	2017 Parks Master Plan Recommended LOS[1] Low	2017 Parks Master Plan Recommended LOS[1] High	LOS Surplus or (Deficiency)	Percent of Capacity Remaining	
Pocket Parks:	-		0.000	0.250	0.500	(0.250)	0%	✓
Urban Plaza Parks:	-		0.000	0.100	0.200	(0.100)	0	✓
Neighborhood Parks:								
Early Settler's park	2.20							
Church park	5.90							
Subtotal neighborhood parks	8.10		2.835	1.000	2.000	1.835	184%	✓
Community Parks:	-		0.000	2.000	6.000	(2.000)	0	✓
Nature Parks:	-		0.000	2.000	6.000	(2.000)	0	✓
Regional Parks:	-		0.000	5.000	10.000	(5.000)	0%	✓
Subtotal Parks	8.10		2.835	10.350	24.700	(7.515)	0%	✓
Regional Trail Systems (linear miles):								
Park Trails		-						
Multi-use Trails and Paths		-						
		-	0.000	0.500	1.500	(0.500)	0	✓

Notes:

[1] Portland State University Population Research Center 2017 population estimate 2,857

Level of Service expressed in units per 1,000 residents

As the data in Table 28 shows, currently, the City is "park deficient" in all parks categories except Neighborhood Parks. This will impact the calculation of the parks SDC reimbursement fee in that the current LOS implies 100% of the City's current parks and trails capacity is being absorbed by the City's current population. That mean 0% of the system's built capacity is available to serve growth.

Existing and Projected Future Demand for Parks and Trails

Growth should be measured in units that most directly reflect the source of demand. In the case of parks, the most applicable units of growth are population and, where appropriate, employees (or new jobs). However, the units in which demand is expressed may not be the same as the units in which SDC rates are charged. Many SDCs, for example, are charged on the basis of new dwelling units. Therefore, conversion is often necessary from units of demand to units of payment. For example, using an average number of residents per household, the number of new residents can be converted to the number of new dwelling units.

Parks and recreation facilities benefit City residents, businesses, non-resident employees, and visitors. The methodology used to update the City's Parks and Recreation SDCs establishes the required connection between the demands of growth and the SDC by identifying specific types of park and recreation facilities and analyzing the proportionate need of residents and employees for each type of facility. The SDCs to be paid by a development meet statutory requirements because they are based on

the nature of the development and the extent of the impact of that development on the types of park and recreation facilities for which they are charged.

The Parks and Recreation SDCs are calculated based on the specific impact a development is expected to have on the City's population and employment. For facilities that are not generally used by employees (e.g., neighborhood parks), only a residential SDC may be charged. For facilities that benefit both residents and employees (e.g., community parks), an SDC may be charged for both residential and non-residential development.

Table 29 contains existing and projected population, housing units, and employment for the City. The data in this table establishes the units of demand and the units of payment for the reimbursement and improvement parks SDCs.

Table 29 - Existing and Projected Population, Housing Units, and Employment

	2015	2017	2037	Analysis of Growth	
	Census - ACS	Estimated	Projected	Units	CAGR*
1 Population	2,702	2,857	3,374	517	0.835%
Single family residential	2,222	2,349	2,774	425	
Multi-family residential	480	508	600	92	
2 Total Housing Units	1,301	1,376	1,625	249	
Single family residential	942	996	1,176	180	
Multi-family residential	359	380	448	69	
Number of persons per Housing Unit	2.08	2.08			
Single family residential	2.36	2.36			
Multi-family residential	1.34	1.34			
3 Employment	1,149	1,215	1,435	220	
Employment to population ratio	42.52%	42.52%			

Data Sources and Notes:

1 Current population source: U.S. Census Bureau, 2015 American Community Survey 5-year summary, Table DP05; 2017 and 2037 projections per Sublimity Parks Master Plan, November, 2017

2 Current Housing units source: U.S. Census Bureau, 2015 American Community Survey 5-year summary, Table DP04, Table B25024, B25033; 2030 projection based on 2015 number of persons per occupied housing unit

3 Current employment source: U.S. Census Bureau, 2015 American Community Survey 5-year summary, Table DP03; 2030 projection based on 2015 employment to population ratio

* CAGR - Compound Annual Growth Rate

Reimbursement Fee Calculations

As we discussed above, the City is park deficient on a whole. This has adversely impacted the calculation of the parks SDC reimbursement fee in that the current LOS implies 100% of the City's current parks and trails capacity is being absorbed by the City's current population. That mean only 0% of the system's built

capacity is available to serve growth. Therefore, we are not including a reimbursement fee for the parks SDC calculations.

Parks Master Plan CIP

The Plan lays out a very specific and prioritized capital improvement plan for the City through 2037. The CIP identifies future costs for new parks and trails, and the future costs for improvements to the City's existing parks inventory. The total CIP from the Plan is shown below in Table 30.

Table 30 - 2017 Parks Master Plan CIP

	New Parks		Existing Parks			
	Land[2]	Development	1 - 2 Yrs.	2 -4 Yrs.	4 - 10 Yrs.	Total
Pocket Parks						
New pocket park - land	$ 16,156					$ 16,156
New pocket park - improvements		32,313				32,313
Subtotal Pocket Parks	16,156	32,313	-	-	-	48,469
Urban Plaza Parks						
New urban plaza park - land	6,463					6,463
New urban plaza park - improvements		12,925				12,925
Subtotal Urban Plaza Parks	6,463	12,925	-	-	-	19,388
Neighborhood Parks						
New neighborhood park - land	-					-
New neighborhood park - improvements		-				-
Early Settlers' Park			160,000		-	160,000
Church Park			35,000		265,000	300,000
Hassler Dog Park			750	5,000	-	5,750
Subtotal Neighborhood Parks	-	-	195,750	5,000	265,000	465,750
Community Parks						
Schumacher Park - Proposed	350,000	663,000				1,013,000
Subtotal Community Parks	350,000	663,000	-	-	-	1,013,000
Nature Parks						
New nature park - land	129,250					129,250
New nature park - improvements		258,500				258,500
Subtotal Nature Parks	129,250	258,500	-	-	-	387,750
Regional Parks						
New regional park - land	323,125					323,125
New regional park - improvements		646,250				646,250
Subtotal Regional Parks	323,125	646,250	-	-	-	969,375
Support Facilities and Structures						
New public works shop			60,000			60,000
Total Parks Improvements Costs	**$ 824,994**	**$ 1,612,988**	**$ 255,750**	**$ 5,000**	**$ 265,000**	**$ 2,963,731**

[1] Source: Parks Master Plan 2017; Chapter 6

[2] Estimated land acquisition cost - $/Acre $ 125,000

SDC Eligibility of Master Plan CIP

For purposes of this SDC methodology, each of the City's park facilities falls into one of the following seven categories:

- Pocket parks
- Urban plaza parks
- Neighborhood parks
- Community parks
- Nature parks
- Regional parks
- Tails

Table 31 compares the current inventory of facilities in each category with that category's adopted level of service. That comparison leads to a determination of surplus or deficiency for each category. Projects are eligible for improvement fee funding only to the extent that the projects will benefit future users. Therefore, only the categories with no deficiency (neighborhood parks) are 100 percent eligible for improvement fee funding. The eligibility percentages of the remaining parks categories are reduced to reflect the level of deficiency.

Table 31 - Calculation of Master Plan CIP SDC Eligibility

Classification	LOS (units/1,000 population) [1, 2]	Inventory Units	Parks Inventory at Current [2]	Planned Additions [3]	Planned 2037	Level of Service Analysis Current need	Surplus / (Deficiency)	Parks SDC Eligibility Growth Need	Growth %
Pocket Parks	0.25	Acres	-	0.84	0.84	0.71	(0.71)	0.13	15.32%
Urban Plaza Parks	0.10	Acres	-	0.34	0.34	0.29	(0.29)	0.05	15.32%
Neighborhood Parks	1.00	Acres	8.10	zero	3.37	2.86	5.24	-	100.00%
Community Parks	2.00	Acres	-	6.75	6.75	5.71	(5.71)	1.03	15.32%
Nature Parks	2.00	Acres	-	6.75	6.75	5.71	(5.71)	1.03	15.32%
Regional Parks	5.00	Acres	-	16.87	16.87	14.29	(14.29)	2.59	15.32%
	10.35		8.10	31.55	34.92	29.57	(21.47)		
Support Facilities	-	Structure				50%			50.00%

[1] Portland State University Population Research Center 2017 population estimate 2,857

Level of Service expressed in units per 1,000 residents 2.857

Estimated 2037 service population (2017 Parks Master Plan) 3,374

Level of Service expressed in units per 1,000 residents 3.374

[2] 2017 Parks Master Plan Baseline Level of Service; and Recommended Oregon LOS Guidelines; Oregon Parks Department

[3] 2017 Parks Master Plan Chapter 4; Parkland Level of Service; page 4-5

Improvement Fee Calculations

The improvement fee is the cost of capacity-increasing capital projects per unit of growth that those projects will serve. The unit of growth, whether number of new residents or number of new employees, is the basis of the fee. In reality, the capacity added by many projects serves a dual purpose of both meeting existing demand and serving future growth. To compute a compliant SDC rate, growth-related costs must be isolated and costs related to current demand must be excluded. We have used the "capacity approach" to allocate costs to the improvement fee basis. Under this approach, the cost of a given project is allocated to growth in proportion to the growth-related capacity that projects of a similar type will create. The capacity analysis of the Plan CIP is shown numerically in Table 32. Table 32 lays out the capacity approach to deriving the parks improvement fee.

Table 32 - Calculation of the Parks Improvement Fee

			<---------- Funding Sources for Parks Master Plan CIP ---------->			
Classification	Total MP CIP	SDC Eligible %	Existing Users	Total SDC	Residential	Non-Residential
Pocket Parks	$ 48,469	15%	$ 41,042	$ 7,427	$ 7,427	$ -
Urban Plaza Parks	19,388	15%	16,417	2,971	2,971	-
Neighborhood Parks	465,750	100%	-	465,750	465,750	-
Community Parks	1,013,000	15%	857,777	155,223	155,223	-
Nature Parks	387,750	15%	328,335	59,415	59,415	-
Regional Parks	969,375	15%	820,837	148,538	148,538	-
Support Facilities and Structures	60,000	50%	30,000	30,000	30,000	-
Total	$ 2,963,731		$ 2,094,408	$ 869,323	$ 869,323	$ -

	Total SDC	Residential	Non-Residential
Future parks master plan capacity-expanding costs	$ 869,323	$ 869,323	$ -
Adjustments to improvement fee basis:			
Parks SDC fund balance	(282,170)	(282,170)	-
Principal outstanding on Parks GO bond	-	-	-
Subtotal adjustments to improvement fee basis	(282,170)	(282,170)	-
Adjusted future parks master plan capacity-expanding costs	$ 587,153	$ 587,153	$ -
Future Demand Units:			
Growth in population (People)		517	
Growth in occupied housing units:			
Single family residential		180	
Multi-family residential		69	
Growth in employment (Employees)			220
Unit improvement fee Parks SDCs:			
Per person		$ 1,136	
Per occupied housing unit:			
Single family residential		$ 2,679	
Multi-family residential (per unit)		$ 1,518	
Per employee			$ -

Parks SDC Model Summary

The 2018 parks SDC methodology update was done in accordance with Sublimity Ordinance No. 344, and with the benefit of adopted 2017 Parks Master Plan. We recommend the City update the SDC charge and methodology to reflect the current capital improvement program. Our analysis indicates the City can charge a maximum of $2,813 per detached single family residence. The complete proposed schedule of parks SDCs is shown below in Table 33. Table 34 give a comparison of the proposed and current parks SDC for a new single family detached residence.

Table 33 - Proposed Transportation SDCs by ITE Code

Customer Classification	Number of Dwelling Units	Proposed Schedule of Parks SDCs			
		Reimbursement	Improvement	Administration	Total
Detached single family	1	$ -	$ 2,679	$ 134	$ 2,813
Mobil/manufactured home	1	-	2,679	134	2,813
Multifamily - $/dwelling unit		-	1,518	76	1,594
Duplex	2	-	3,037	152	3,189
Tri-plex	3	-	4,555	228	4,783
Four-plex	4	-	6,074	304	6,378
Apartment complex	*	*	*		*
Condominium complex	*	*	*		*
Retirement/Assisted Living complex	*	*	*		*
Business - $/FTE Employee		$ -	$ -	$ -	$ -

* - multiply the number of dwelling units by the corresponding detached multi-family per dwelling unit fee component

Table 34 - Proposed and Current Parks SDCs for a Detached Single Family Residence

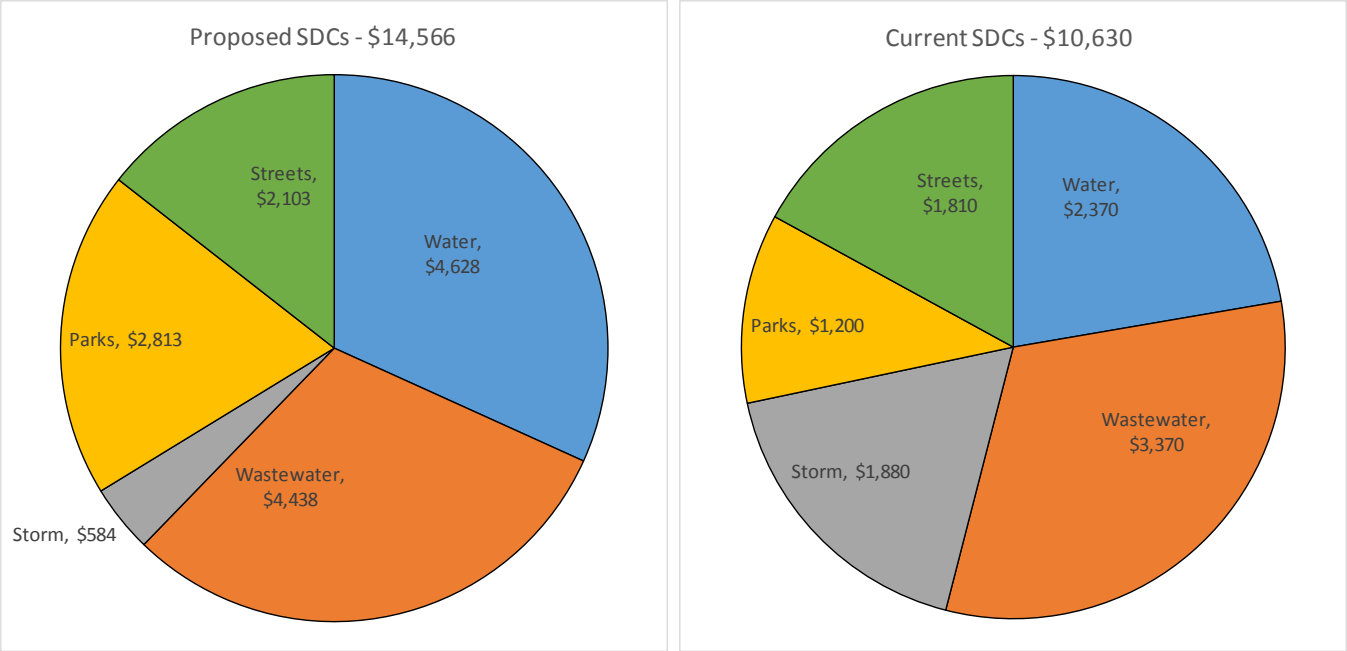
Parks SDC Components	Proposed	Current	Difference
Reimbursement fee	$ -	$ -	$ -
Improvement fee	2,679	1,200	1,479
Administration fee	134	-	134
Total wastewater SDC	$ 2,813	$ 1,200	$ 1,613

Conclusions and Recommendations

Our analysis indicates the City can charge a maximum of $4,628 for water, $4,438 for wastewater, $584 for stormwater, $2,103 for transportation, and $2,813 for parks. These figures are on a per equivalent single family residential unit basis. The sum of these maximum fees amounts to $14,566 per unit; $3,936 more than the sum of the current SDCs of $10,630.

A graphic side by side comparison of the proposed and current schedule of SDCs is shown blow in figure 2.

Figure 2 - Proposed and Current Schedule of SDCs



Finally, we recommend the City adopt a policy of reviewing its suite of SDCs every five years. Between the review dates, the city should apply a cost adjustment index to the SDC rates annually to reflect changes in costs for land and construction. This policy should be codified in the Sublimity Municipal Code. We suggest the City consider the following language for that code change:

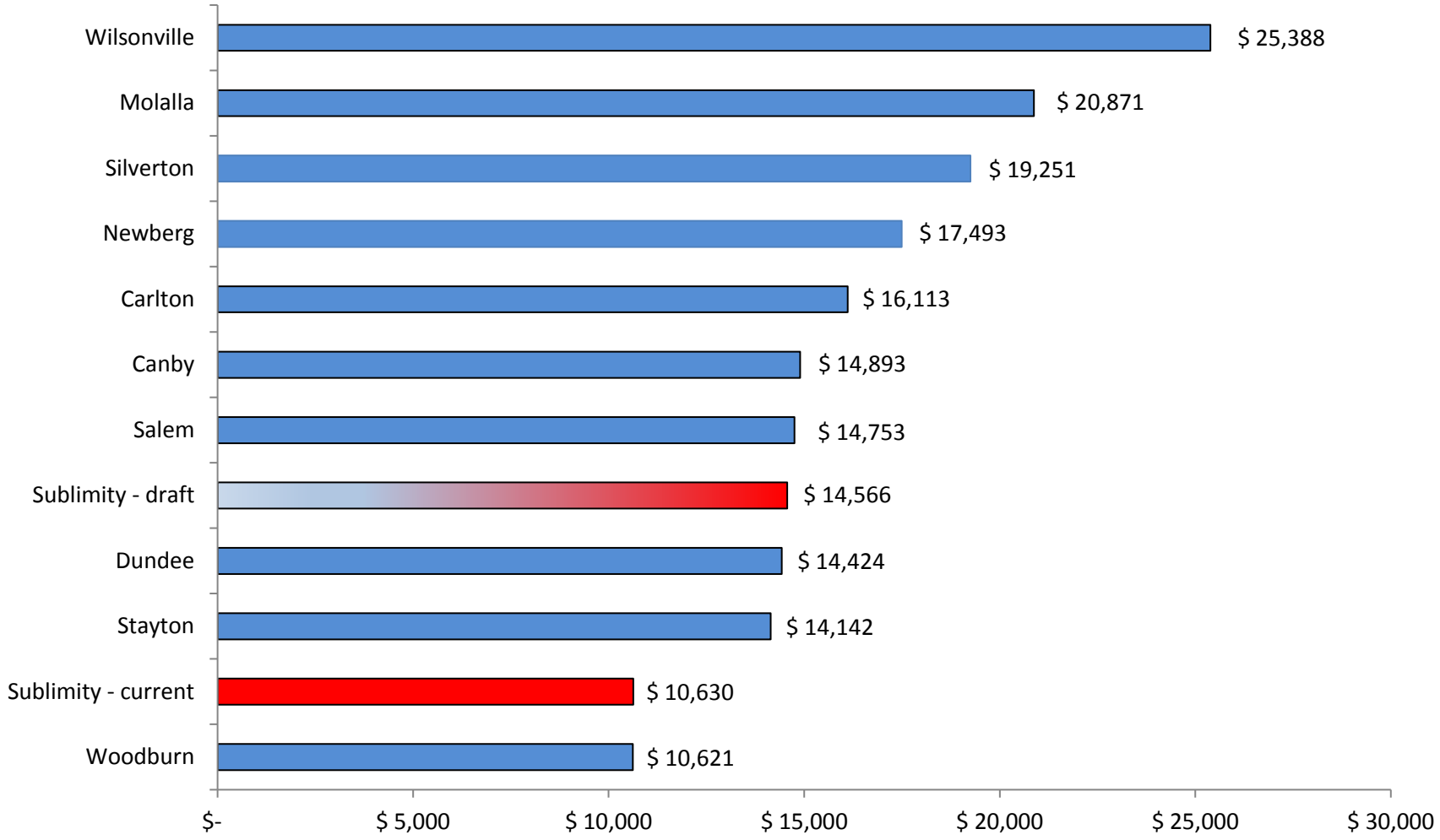
1. Notwithstanding any other provision, the dollar amounts of the SDC set forth in the SDC methodology report shall on January 1st of each year be adjusted to account for changes in the costs of acquiring and constructing facilities. The adjustment factor shall be based on:

    a. The change in construction costs according to the Engineering News Record (ENR) Northwest (Seattle, Washington) Construction Cost Index (CCI).

    b. The system development charges adjustment factor shall be used to adjust the system development charges, unless they are otherwise adjusted by the city based on a change in the costs of materials, labor, or real property; or adoption of an updated methodology.

Neighboring Communities' SDCs

Figure 3 - Comparison of Neighboring Communities' SDCs (Single Family Residential)



Appendix A – 2017 CIP Resolution No. 1718-6

City of Sublimity

RESOLUTION NO. 1718-6

A RESOLUTION ADOPTING CAPITAL IMPROVEMENT PLANS FOR THE CITY OF SUBLIMITY'S WATER, WASTEWATER, STORMWATER, STREETS, AND PARKS SYSTEMS

WHEREAS, the City of Sublimity Systems Development Charge Ordinance, Ordinance No. 344, provides for the setting of systems development charges (SDCs) upon completion of an analysis of projected capital improvements to be constructed and adoption of a methodology explaining how the systems development fees were calculated; and,

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

WHEREAS, ORS 223.309 (1) states that prior to the establishment of a SDC by ordinance or resolution, a local government shall prepare a capital improvement plan, public facilities plan, master plan or comparable plan that includes a list of the capital improvements that the local government intends to fund, in whole or in part, with revenues from an improvement fee and the estimated cost, timing and percentage of costs eligible to be funded with revenues from the improvement fee for each improvement; and,

WHEREAS, City Staff have prepared 20 year capital improvement plans for water, wastewater, stormwater, streets, and parks services that include projected total costs by project, and the percentages of project costs that can be funded from an improvement fee ; and,

WHEREAS, the Sublimity City Council has determined the proposed 20 year capital improvement plans for water, wastewater, stormwater, streets, and parks hereinafter specified and established are just, reasonable, and necessary.

NOW, THEREFORE BE IT RESOLVED,

Section 1: Amendment and updating of water, wastewater, stormwater, streets, and parks capital improvement plans. In accordance with the City of Sublimity Ordinance No. 344, this Resolution establishes the updated 20 year capital improvement plans for water, wastewater, stormwater, streets, and parks services as attached to this Resolution as Exhibit A.

Section 2: Effective Date. This Resolution shall become effective upon its adoption by the Sublimity City Council.

Section 3: Review. This Resolution may be reviewed at the pleasure of the City Council, and the projects and cost of projects for water, wastewater, stormwater, streets, and parks services may be amended as appropriate.

PASSED AND ADOPTED by the Sublimity City Council this 11st day of December, 2017 and signed by the Mayor and City Recorder in authentication of its passage.

CITY OF SUBLIMITY, OREGON

_____

Raymond Heuberger, Mayor

Attest: _____

Katie Scott, City Recorder

EXHIBIT “A”

Adopted Capital Improvement Plans for Water, Wastewater, Stormwater, Streets, and Parks

December 11, 2017

CITY OF SUBLIMITY

CAPITAL IMPROVEMENTS PROJECTS

Cost Estimate

Description	2017 Dollars	% SDC Eligible	SDC Eligible $	Developer %	Developer Cost	Ratepayer Cost
WATER SYSTEM						
1 Rehabilitate Well #3 and enlarge well pump	$100,000	0%	$0	0%	$0	$100,000
2 Install 150 KW genset and auto transfer switch at Church Street PS	$100,000	0%	$0	0%	$0	$100,000
3 Install new SCADA System	$200,000	0%	$0	0%	$0	$200,000
4 Add second booster pump at Church Street PS	$120,000	0%	$0	0%	$0	$120,000
5 Add 2,400' of 10" waterline on the east side from Church Street to Pineview	$500,000	33%	$166,667	0%	$0	$333,333
6 Replace 1,320 L.F. of pipeline along Center St. with new 12-inch pipeline	$300,000	0%	$0	0%	$0	$300,000
7 Replace 660' of pipeline along East Main Street with new 8" pipe	$100,000	0%	$0	0%	$0	$100,000
8 Replace 510' of pipeline along Crest Street with new 8" pipeline	$80,000	0%	$0	0%	$0	$80,000
9 Extend pipeline on Hendricks Road with 1060'of 8" Pipe	$100,000	0%	$0	100%	$100,000	$0
10 Extend pipeline on west end of system (5000' of 12") to tie Sublimity Blvd into W Sta	$1,000,000	0%	$0	67%	$670,000	$330,000
11 Add new 8" tie-in line on South end of system	$140,000	50%	$70,000	0%	$0	$70,000
12 Install second 500K gallon reservoir at Well #4	$750,000	50%	$375,000	0%	$0	$375,000
13 Recoat existing reservoir	$150,000	0%	$0	0%	$0	$150,000
14 Purchase Additional Water Rights	$400,000	100%	$400,000	0%	$0	$0
15 New PW Shop ($600,000 x 35%)	$210,000	50%	$105,000	0%	$0	$105,000
16 New Water Master Plan	$250,000	50%	$125,000	0%	$0	$125,000
Subtotal	**$4,500,000**		**$1,241,667**		**$770,000**	**$2,488,333**
SANITARY SYSTEM						
1 Collection System Upgrades						
Upsize trunk sewer from 9th and Center to Santiam Highway (3,000' of 10" grav	$500,000	25%	$125,000	0%	$0	$375,000
Upsize trunk sewer from Broadway to Heather Avenue (2,100' of 10" gravity)	$600,000	25%	$150,000	0%	$0	$450,000
2 WWTP Upgrades						
Upsize intake flume (20% of $150,000)	$30,000	0%	$0	0%	$0	$30,000
Replace PD blower with turbo (20% of $230,000)	$46,000	0%	$0	0%	$0	$46,000
Enclose cooling tower for odor control (20% of $364,000)	$72,800	0%	$0	0%	$0	$72,800
Dust control/loading system for dried solids (20% of $250,000)	$500,000	0%	$0	0%	$0	$500,000
Class A equipment-Dryer Replacement (20% of $1,500,000)	$300,000	0%	$0	0%	$0	$300,000
Odor Control for dryer building (20% of $1,000,000)	$200,000	0%	$0	0%	$0	$200,000
3 Upgrade Upsize Berry Lift Station	$500,000	20%	$100,000	0%	$0	$400,000
4 10 Year I/I Program	$200,000	100%	$200,000	0%	$0	$0
5 New PW Shop ($600,000 x 35%)	$210,000	50%	$105,000	0%	$0	$105,000
6 New Waste Water Facilities Plan	$280,000	80%	$224,000	0%	$0	$56,000
Subtotal	**$3,438,800**		**$904,000**		**$0**	**$2,534,800**

CITY OF SUBLIMITY

CAPITAL IMPROVEMENTS PROJECTS

Cost Estimate

Description	2017 Dollars	% SDC Eligible	SDC Eligible $	Developer %	Developer Cost	Ratepayer Cost
STORM SYSTEM						
1 Upsize Storm Drain from Sublimity Mobile Village north to Heather (3000' of 27" pip	500,000	1	500,000	-	-	-
2 Construct 3000' of 48" pipe from Santiam Highway to Center Street	750,000	-	-	1	750,000	-
3 Construct 1500' of 18" pipe from Santiam Highway to 8th Street	150,000	-	-	1	150,000	-
4 Construct 2000' of 18" pipe from Berry Street to Sublimity Mobile Village	150,000	-	-	1	150,000	-
5 Construct 1000' of 12" pipe from Starr Street to Sublimity Mobile Village	100,000	-	-	1	100,000	-
6 Construct 2000' of 24" pipe in Center Street from 9th Street to Church Street	400,000	-	-	-	-	400,000
7 New PW Shop ($600,000 x 10%)	60,000	1	30,000	-	-	30,000
8 New Stormwater Master Plan	200,000	1	160,000	-	-	40,000
Subtotal	**$2,310,000**		**$690,000**		**$1,150,000**	**$470,000**
STREET SYSTEM						
1 Signal at Starr and Center Street Includes Left Turn Lanes	1,000,000	1	500,000	-	-	500,000
2 Extend Sublimity Blvd 5000' North to Sublimity Road	4,000,000	-	-	1	4,000,000	-
3 Improve Division Street from Center Street west 1000'	750,000	1	375,000	-	-	375,000
4 Extend Division Street from its westerly terminus to Sublimity Blvd extension (1200'	900,000	-	-	1	900,000	-
5 New PW Shop ($600,000 x 10%)	60,000	1	30,000	-	-	30,000
6 New Transportation System Plan	250,000	1	125,000	-	-	125,000
Subtotal	**$6,960,000**		**$1,030,000**		**$4,900,000**	**$1,030,000**

CITY OF SUBLIMITY
CAPITAL IMPROVEMENTS PROJECTS
Cost Estimate

Description	2017 Dollars	% SDC Eligible	SDC Eligible $	Developer %	Developer Cost	Ratepayer Cost
PARKS						
1 Early Settlers Park ADA Paths and Restrooms						
ADA Restrooms	120,000	1	120,000	-	-	-
ADA Walking Paths	40,000	1	40,000	-	-	-
2 Church Park Property Acquisition, Irrigation and ADA Paths						
Purchase Property	250,000	1	250,000	-	-	-
Sprinkler System	15,000	1	15,000	-	-	-
ADA Walking Paths	35,000	1	35,000	-	-	-
3 Future Schumacher Park Property Acquisition and Park Development						
Land Acquisition	350,000	1	350,000	-	-	-
Restroom Facilities	120,000	1	120,000	-	-	-
Parking Area	70,000	1	70,000	-	-	-
Drinking Fountain	3,000	1	3,000	-	-	-
Sprinkler System	15,000	1	15,000	-	-	-
Park Shelter	90,000	1	90,000	-	-	-
Benches/Picnic Tables	15,000	1	15,000	-	-	-
Splash Pad	150,000	1	150,000	-	-	-
Play Structure	75,000	1	75,000	-	-	-
Amphitheater	125,000	1	125,000	-	-	-
4 Hassler Dog Park Benches and Pet Waste Stations						
Benches/Picnic Tables	5,000	1	5,000	-	-	-
Pet Waste Stations	750	1	750	-	-	-
5 New PW Shop ($600,000 x 10%)	60,000	1	30,000	-	-	30,000
6 Future Park Land Acquisitions and Improvements						
Pocket Parks	48,469	0	7,427	-	-	41,042
Urban Plaza Parks	19,388	0	2,971	-	-	16,417
Community Parks	1,013,000	0	155,223	-	-	857,777
Nature Parks	387,750	0	59,415	-	-	328,335
Regional Parks	969,375	0	148,538	-	-	820,837
Subtotal	**$3,976,731**		**$1,882,323**		**$0**	**$2,094,408**
Grand Totals	**$21,185,531**		**$5,747,990**		**$6,820,000**	**$8,617,541**