

Silverton, Oregon



Methodology Report for
SYSTEM DEVELOPMENT
CHARGES

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TABLE OF CONTENTS

SECTION 1: INTRODUCTION	1
Policy	1
Project	1
Calculation Overview	2
Reimbursement Fee	2
Improvement Fee	2
Adjustments	2
Fund Balance	2
Compliance Costs	2
SECTION 2: WATER	3
Growth	3
Reimbursement Fee	3
Improvement Fee	4
Total SDC	7
SECTION 3: WASTEWATER	8
Growth	8
Reimbursement Fee	8
Improvement Fee	9
Total SDC for Residential Development	11
Total SDC for Non-Residential Development	11
SECTION 4: STORMWATER	13
Growth	13
Reimbursement Fee	13
Improvement Fee	14
Total SDC	15
SECTION 5: TRANSPORTATION	16
Growth	16
Reimbursement Fee	16
Improvement Fee	17
Total SDC	19
SECTION 6: CONCLUSION	21
Recommended SDCs	21
Annual Adjustment	21

SECTION 1: INTRODUCTION

The City of Silverton conducts periodic updates to its Comprehensive Plan and its various Public Facility Plans to provide orderly and sustainable growth of local roads, water, sewer, stormwater, and parks. A key component to funding these public facilities is the system development charge (SDC) program. SDCs are one-time charges for new development—designed to recover the costs of infrastructure capacity needed to serve new development.

This section describes the policy context and project scope upon which the body of this report is based. It concludes with a non-numeric overview of the calculations presented in subsequent sections of this report.

POLICY

Oregon Revised Statutes (ORS) 223.297 to 223.314 authorize local governments to establish system development charges (SDCs). These are one-time fees on new development, and they are paid at the time of development. SDCs are intended to recover a fair share of the cost of existing and planned facilities that provide capacity to serve future growth.

ORS 223.299 defines two types of SDC:

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

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

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

PROJECT

In 2012, the City contracted with Donovan Enterprises and FCS GROUP to update the City’s SDC methodology and recommend fees for four of the five facility types listed in ORS 223.299(1)(a): water, wastewater, stormwater, and transportation.

We approached this project as a series of three steps:

- **Framework for Charges.** In this step, we worked with City staff to identify and agree on the approach to be used and the components to be included in the analysis.
- **Technical Analysis.** In this step, we worked with City staff to isolate the recoverable portion of facility costs and calculate draft SDC rates.
- **Draft Methodology Report Preparation.** In this step, we documented the calculation of the draft SDC rates included in this report.

CALCULATION OVERVIEW

In general, SDC rates are calculated by adding a reimbursement fee component (if applicable) and an improvement fee component—both with potential adjustments. Each component is calculated by dividing the eligible cost by the growth in units of demand to be served. The unit of demand becomes the basis of the charge. Below are details on the components and how they may be adjusted.

Reimbursement Fee

The reimbursement fee is the cost of available capacity per unit of growth that such available capacity will serve. In order for a reimbursement fee to be calculated, unused capacity must be available to serve future growth. For facility types that do not have excess capacity, no reimbursement fee may be charged.

Improvement Fee

The improvement fee is the cost of planned capacity-increasing capital projects per unit of growth that those projects will serve. The unit of growth becomes 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.

Adjustments

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

Fund Balance

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

Compliance Costs

ORS 223.307(5) authorizes the expenditure of SDCs on “the costs of complying with the provisions of ORS 223.297 to 223.314, including the costs of developing system development charge methodologies and providing an annual accounting of system development charge expenditures.” To avoid spending monies for compliance that might otherwise have been spent on growth-related projects, this report includes an estimate of compliance costs in its SDCs. All estimates of compliance costs in this report are based on historical transfers from the appropriate SDC fund to the General Fund.

SECTION 2: WATER

This section provides detailed calculations of our recommended SDC for water facilities.

GROWTH

We often measure potential demand for water facilities in meter equivalents. One meter equivalent is the hydraulic capacity of a ¾" water meter, which is the standard meter size for a single-family residence in Silverton. In 2010, the customer base of the City's water utility was 3,740 meter equivalents, which were distributed as shown in **Exhibit 1**:

Customer Base in 2010			Exhibit 1
Meter Size	Flow Factor	Accounts	Meter Equivalents
≤ ¾"	1.00	2,921	2,921.00
1"	1.67	209	348.33
1½"	3.33	48	160.00
2"	5.33	30	160.00
3"	10.67	11	117.33
4"	16.67	2	33.33
			3,740.00

Source: Silverton Water Master Plan, Appendix H (September, 2010)

The Master Plan estimates that the customer base will grow to 6,053 meter equivalents by 2035. At this rate, the customer base will add 2,091 meter equivalents between 2013 and 2035, as shown in **Exhibit 2**:

Growth in Customer Base, Water		Exhibit 2	
Row	Description	Source or Calculation	Value
a	Meter equivalents in 2010	Master Plan, Appendix H	3,740
b	Meter equivalents in 2035	Master Plan, Appendix H	6,053
c	Projected annual growth rate	$((b/a)^{(1/(2035-2010))})-1$	1.94%
d	Meter equivalents in 2013	$a * ((1+c)^{(2013-2010)})$	3,962
f	Growth from 2013 to 2035	b-d	2,091

Source: See sources cited above.

REIMBURSEMENT FEE

The current assets of the City's water utility are distributed among four functions:

- Source of supply
- Treatment
- Storage
- Distribution

According to the Silverton Water Master Plan, some excess capacity exists in all four functions, which can serve future users. **Exhibit 3** quantifies this excess capacity:

Unused Capacity, Water			Exhibit 3			
Row	Description	Source or Calculation	Source of			
			Supply	Treatment	Storage	Distribution
a	Total capacity in MGD	Master Plan, Appendix H	7.10	5.64	2.94	9.00
b	Current peak-day usage in MGD	Master Plan, Appendix H	2.92	2.92	2.92	6.13
c	Current unused capacity in MGD	a-b	4.18	2.72	0.02	2.87
d	Portion of capacity unused	c/a	58.87%	48.23%	0.68%	31.89%
e	Additional usage during planning period in MGD	Master Plan, Appendix H	2.10	2.10	2.10	4.41
f	Peak day demand in 2035 in MGD	b+e	5.02	5.02	5.02	10.54
g	Planning period portion of unused capacity	min(1,f/c)	50.24%	77.21%	100.00%	100.00%
h	Unused capacity for growth during planning period	d*g	29.58%	37.23%	0.68%	31.89%

Source: See sources cited above.

The existence of excess capacity means that a reimbursement fee may be charged for water.

Calculation of the reimbursement fee begins with the historical cost of assets or recently completed projects that have unused capacity to serve future users. For each asset or project, the historical cost is adjusted by that portion of the asset or project that is available to serve future users. To avoid double-charging growth, the reimbursement fee cost basis must be reduced by any grants or contributions used to fund the assets or projects included in the cost basis. Furthermore, unless a reimbursement fee will be specifically used to pay debt service, the reimbursement fee cost basis should be reduced by any outstanding debt related to the assets or projects included in the cost basis. These reductions result in the gross reimbursable cost.

Determining the net reimbursable cost requires two adjustments. First, any fund balance of reimbursement fees that have been previously collected are deducted from the cost basis. Second, any compliance costs that are to be attributed to the reimbursement fee should be added to the cost basis. Once the net reimbursable cost is computed, we divide by the growth in meter equivalents to determine the reimbursement fee per meter equivalent.

Exhibit 4 shows these calculations for the City's water utility. The resulting water reimbursement fee is \$1,475 per meter equivalent.

Reimbursement Fee, Water		Exhibit 4	
Component	Historical Cost	Unused Capacity	Reimbursable Cost
Assets by function			
Source of supply	\$ -	29.58%	\$ -
Treatment	565,733	37.23%	210,645
Storage	517,311	0.68%	3,519
Distribution	5,944,000	31.89%	1,895,476
Other	6,742,846	30.02%	2,024,319
Total assets by function	<u>\$ 13,769,890</u>	30.02%	<u>\$ 4,133,959</u>
Reductions in cost basis			
Outstanding principal on water-related debt	\$ 1,701,478	30.02%	\$ 510,813
Grants and contributions	2,293,152	30.02%	688,444
Total reductions in cost basis	<u>\$ 3,994,630</u>		<u>\$ 1,199,257</u>
Gross reimbursable cost			\$ 2,934,702
Less water reimbursement fee fund balance			(106,284)
Cost of compliance			255,970
Net reimbursable cost			<u>\$ 3,084,388</u>
Meter equivalents to be added			2,091
Water reimbursement fee per meter equivalent			\$ 1,475

Source: Silverton Water Master Plan, Appendix H (August, 2011); 2010-11 CAFR; SDC Annual Report

IMPROVEMENT FEE

Calculation of the improvement fee begins with the estimated costs of capacity-increasing projects. We then utilize City estimates of the portion of each project that is available to serve new users and include only that portion of project costs in the improvement fee cost basis. Project costs that will be funded by a source other than City are also excluded. **Exhibits 5-7** summarize the SDC-eligible portion of the City's water projects by priority:

Water Projects, High Priority

Exhibit 5

Project		Priority	Cost		
ID	Name		SDC-Eligible	SDC-Ineligible	Total
1A-SC	Silver Creek Water Supply and Pump Station	High	\$ 1,048,925	\$ 824,155	\$ 1,873,080
1A.1	New 2 MG Storage Tank and Booster Pump	High	2,357,163	589,291	2,946,454
1A.2	2nd Supply to Anderson PRV Zone	High	44,106	71,963	116,069
1A.3	Transmission to West Plateau Service Area	High	180,493	421,150	601,643
1A.4	WTP Facility Planning Study	High	42,594	42,594	85,188
1B	Water Treatment Plant Upgrades	High	-	843,365	843,365
1C	Silver Creek Plaza Area Improvements	High	-	526,038	526,038
1D	Western Avenue Improvements	High	-	218,295	218,295
1E	Breyonna Way Loop	High	-	37,270	37,270
1F	N 3rd Street Improvements	High	-	169,312	169,312
1G	Washington and Lincoln Street Improvements	High	-	390,802	390,802
1H	Kent Street and Sweden Circle	High	-	39,400	39,400
1I	Woodland Drive NE and Oregon Garden/Relocate BF Valve on Oregon Garden	High	-	223,620	223,620
1J	Hobart Road Improvements	High	68,087	227,943	296,030
1K	New High Level Pumphouse	High	424,238	282,825	707,064
			\$4,165,606	\$ 4,908,023	\$ 9,073,629

Source: City staff

Water Projects, Medium Priority

Exhibit 6

Project		Priority	Cost		
ID	Name		SDC-Eligible	SDC-Ineligible	Total
2A	N. 2nd Street Improvements	Medium	\$ 42,775	\$ 286,265	\$ 329,040
2B	Barger, Madison, & Cowing Improvements	Medium	-	449,369	449,369
2C	Fiske Street Improvements	Medium	-	218,295	218,295
2D	Industry Way Improvements	Medium	-	272,603	272,603
2E	Pioneer and Evans Valley Improvements	Medium	22,703	64,615	87,318
2F	Oak Street Improvements	Medium	175,914	263,871	439,785
2G	Industrial Area Improvements	Medium	85,721	286,978	372,699
2H	Main, 5th, Kent, and Rock Improvements	Medium	-	494,093	494,093
2I	Well and Orchard Improvements	Medium	-	224,684	224,684
2J	Extend Service to Future Park	Medium	-	29,816	29,816
2K	Future 2 MG Tank	Medium	1,453,847	1,776,924	3,230,770
2L	Lewis Street Improvements	Medium	-	302,419	302,419
2M	Water Street Improvements	Medium	122,245	750,936	873,181
2N	Pine Street Improvements	Medium	20,445	115,856	136,301
2O	Keene, Ash, and Edgwood Improvements	Medium	-	390,802	390,802
2P	High Level Tank Improvements	Medium	-	271,538	271,538
2Q	Water Treatment Plant Upgrades	Medium	958,274	9,689,211	10,647,485
			\$2,881,924	\$15,888,276	\$18,770,199

Source: City staff

Water Projects, Low Priority			Exhibit 7		
Project		Priority	Cost		
ID	Name		SDC-Eligible	SDC-Ineligible	Total
3A	Setness St, Quarry Ave, and Lanham Lane	Low	\$ 77,000	\$ 1,022,996	\$ 1,099,995
3B	Meridian Rd NE	Low	4,259	-	4,259
3C	Commerce Court and Industrial Way	Low	-	-	-
3D	N. 1st Street	Low	35,332	217,039	252,371
3E	Northwest 12" Loop	Low	158,663	-	158,663
3F	Pine Street	Low	86,094	487,863	573,957
3G	West 12"	Low	74,540	-	74,540
3H	Clearwell Pressure Zone Loop	Low	64,956	-	64,956
3I	10" Connection	Low	7,454	45,789	53,243
3J	Transmission	Low	207,966	1,277,507	1,485,473
3K	Cherry Street	Low	-	57,502	57,502
3L	James Street	Low	44,575	298,308	342,883
3M	Loop Line around Schlador Campus	Low	-	-	-
3N	N. 2nd Street	Low	23,640	449,156	472,796
3O	N. 1st Street & Front Street	Low	-	151,209	151,209
3P	N. 2nd Street	Low	-	227,879	227,879
3Q	Water Street & Brown	Low	232,905	1,222,752	1,455,657
3R	Anderson PRV Zone Loop	Low	81,994	-	81,994
3S	Pioneer Drive	Low	74,540	-	74,540
3T	Pioneer Drive	Low	57,502	-	57,502
3U	Eastview Lane	Low	-	292,835	292,835
3V	Booster and extension	Low	95,837	-	95,837
3W	Hawk Dr and Ike Mooney Rd	Low	11,713	-	11,713
3X	Extension to Silverton Mobile Estates	Low	-	244,917	244,917
3Y	Sunset Lane	Low	-	-	-
3Z	Mobile Home Loop	Low	-	163,988	163,988
3AA	Robinson Street & Church Street	Low	-	179,960	179,960
3BB	Norway St	Low	-	113,939	113,939
3CC	Kent Street	Low	-	97,967	97,967
3DD	Maple Street	Low	-	130,977	130,977
			\$1,338,970	\$ 6,682,583	\$ 8,021,553

Source: City staff

As with the reimbursement fee, we make two adjustments to the improvement fee cost basis. First, any fund balance of improvement fees that have been previously collected are deducted from the cost basis. Second, any compliance costs that are to be attributed to the improvement fee should be added to the cost basis. Making these adjustments results in the net improvement fee cost basis. We then divide by the growth in meter equivalents to determine the improvement fee per meter equivalent.

Exhibit 8 shows these calculations for the City's water utility. The resulting water improvement fee is \$3,703 per meter equivalent:

Improvement Fee, Water		Exhibit 8		
Description		Cost		Total
		SDC-Eligible	SDC-Ineligible	
High-priority projects		\$ 4,165,606	\$ 4,908,023	\$ 9,073,629
Medium-priority projects		2,881,924	15,888,276	18,770,199
Low-priority projects		1,338,970	6,682,583	8,021,553
Total costs		<u>8,386,500</u>	<u>\$ 27,478,881</u>	<u>\$ 35,865,381</u>
Less water improvement fee fund balance		(901,306)		
Cost of compliance		255,970		
Net improvement fee cost basis		<u>\$ 7,741,164</u>		
Meter equivalents to be added		2,091		
Water improvement fee per meter equivalent		\$ 3,703		

Source: City staff and previous exhibits

This improvement fee includes the cost of projects at all priority levels. **Exhibit 9** shows how each priority level contributes to the overall improvement fee:

Improvement Fee, Water, by Priority		Exhibit 9
Priority		Improvement Fee
High	\$	1,993
Medium		1,379
Low		640
Adjustments		(309)
	\$	3,703

Source: Previous exhibit

TOTAL SDC

Adding the reimbursement fee of \$1,475 to the improvement fee of \$3,703 results in a total SDC of \$5,178 per meter equivalent. **Exhibit 10** presents the schedule of proposed water SDCs by meter size:

Proposed Water SDCs					Exhibit 10
Meter Size	Flow Factor	Reimbursement Fee	Improvement Fee	Improvement Fee	Total SDC
≤ ¾"	1.00	\$ 1,475	\$ 3,703	\$ 5,178	\$ 5,178
1"	1.67	\$ 2,459	\$ 6,172	\$ 8,631	\$ 8,631
1½"	3.33	\$ 4,918	\$ 12,343	\$ 17,261	\$ 17,261
2"	5.33	\$ 7,869	\$ 19,749	\$ 27,618	\$ 27,618
3"	10.67	\$ 15,738	\$ 39,498	\$ 55,235	\$ 55,235
4"	16.67	\$ 24,590	\$ 61,715	\$ 86,305	\$ 86,305
6"	33.33	\$ 49,180	\$ 123,431	\$ 172,611	\$ 172,611

Source: Previous exhibits and FCS GROUP

SECTION 3: WASTEWATER

This section provides detailed calculations of our recommended SDC for wastewater facilities.

GROWTH

We measure demand for wastewater facilities in equivalent residential units (ERUs). An ERU represents the wastewater demand of a typical single-family residence. Currently, the customer base of the City's wastewater utility is 4,543 ERUs. The Master Plan estimates that average dry weather flow will grow from 910,000 gallons per day in 2005 to 1,710,000 gallons per day in 2030. At this rate, the customer base will add 2,433 ERUs between 2013 and 2035, as shown in **Exhibit 11**:

Growth in Equivalent Residential Units			Exhibit 11
Row	Description	Source or Calculation	Value
a	2010 population living in single-family residences	American Community Survey, Table B25033	7,203
b	2010 inventory of single-family residences	American Community Survey, Table B25024	2,892
c	Residents per single-family residence	a/b	2.49
d	Average residential dry weather flow in 2005 in gpd	2007 Master Plan	810,000
e	Population in 2005	PSU Population Research Center	8,230
f	Average residential dry weather flow per capita in 2005 in gpd	d/e	98
g	Average dry weather flow per single-family residence in 2005 in gpd	c*f	245
h	Average dry weather flow in 2005 in gpd	2007 Master Plan, Table 4-4	910,000
i	Equivalent residential units in 2005	h/g	3,712
j	Average dry weather flow in 2030 in gpd	2007 Master Plan, Table 4-10	1,710,000
k	Annual growth rate from 2005 to 2030	$((j/h)^{(1/(2030-2005))})-1$	2.56%
l	Equivalent residential units in 2013	$i*((1+k)^{(2013-2005)})$	4,543
m	Equivalent residential units in 2030	$(i/h)^j$	6,976
n	Growth in equivalent residential units	m-l	2,433

Source: See sources cited above.

REIMBURSEMENT FEE

The current assets of the City's wastewater utility are distributed among the following categories:

- Land & improvements
- Buildings & improvements
- Plant & equipment
- Sewer lines
- Construction in progress

According to the 2007 wastewater SDC methodology, the excess capacity of these assets that was able to serve growth was, in aggregate, about 48 percent of the assets' original cost. Based on the assumed growth rate of one percent per year, excess capacity is now, in aggregate, about 43 percent. The existence of excess capacity means that a reimbursement fee may be charged for wastewater.

Calculation of the reimbursement fee begins with the historical cost of assets or recently completed projects that have unused capacity to serve future users. For each asset or project, the historical cost is multiplied by that portion of the asset or project that is available to serve future users. To avoid double-charging growth, the reimbursement fee cost basis must be reduced by any grants or contributions used to fund the assets or projects included in the cost basis. Furthermore, unless a

reimbursement fee will be specifically used to pay debt service, the reimbursement fee cost basis should be reduced by any outstanding debt related to the assets or projects included in the cost basis. These reductions result in the gross reimbursable cost.

Determining the net reimbursable cost requires two adjustments. First, any fund balance of reimbursement fees that have been previously collected are deducted from the cost basis. Second, any compliance costs that are to be attributed to the reimbursement fee should be added to the cost basis. Once the net reimbursable cost is computed, we divide by the growth in ERUs to determine the reimbursement fee per ERU.

Exhibit 12 shows these calculations for the City’s wastewater utility. The resulting wastewater reimbursement fee is \$2,031 per ERU.

Reimbursement Fee, Wastewater		Exhibit 12	
Component	Percentage Available	Cost	
		Original	Reimbursable
Assets by function			
Land & Improvements	44.11%	\$ 2,219,929	\$ 979,244
Buildings & Improvements	44.11%	1,349,488	595,279
Plant & equipment	44.11%	15,984,011	7,050,784
Sewer lines	31.68%	5,558,189	1,760,694
Construction in progress	44.11%	98,485	43,443
Total assets by function	41.37%	\$25,210,102	\$ 10,429,444
Reductions in cost basis			
Outstanding principal on sewer-related debt		\$ 7,620,000	\$ 3,152,401
Grants and contributions		6,198,188	2,564,196
Total reductions in cost basis		\$13,818,188	\$ 5,716,598
Gross reimbursable cost			\$ 4,712,846
Less sewer SDCr fund balance			(28,136)
Cost of compliance			255,970
Net reimbursable cost			\$ 4,940,680
ERUs to be added			2,433
Wastewater reimbursement fee			\$ 2,031

Source: Previous sewer SDC methodology; 2010-11 CAFR; SDC Annual Report

IMPROVEMENT FEE

Calculation of the improvement fee begins with the estimated costs of capacity-increasing projects. We then utilize City estimates of the portion of each project that will be available to serve new users and include only that portion of project costs in the improvement fee cost basis. Project costs that will be funded by a source other than City are also excluded. **Exhibits 13-16** summarize the SDC-eligible portion of the City’s wastewater projects by priority:

Wastewater Projects, High Priority					Exhibit 13	
Project			Priority	Cost		
ID	Name			SDC-Eligible	SDC-Ineligible	Total
IMP-1	Westfield Street Capacity (Revised)		High	\$ 106,793	\$ 26,698	\$ 133,491
IMP-2	Oregon Garden Lift Station Capacity (current est. 83% capacity)		High	-	20,920	20,920
IMP-2	Oregon Garden Lift Station Capacity		High	164,210	41,052	205,262
IMP-6	Schlador Street Condition		High	-	78,731	78,731
IMP-7	Lone Oaks Street Condition		High	-	44,989	44,989
IMP-8	3rd Street Condition		High	-	95,602	95,602
IMP-9	Meat Packers/High School Condition		High	-	51,737	51,737
CA-01	Condition Assessment Program		High	-	6,668	6,668
SR-01	Rehab Projects		High	-	338,709	338,709
PMP-2	Pine Street		High	138,090	34,523	172,613
ST-1	Phase 1 Study - Thermodynamic Model Update		High	7,873	31,492	39,365
ST-2	Phase 1 Study - Wetland Optimization Study		High	5,624	22,495	28,118
WWD-1	Laboratory/Admin Facility Schematic Design		High	-	33,742	33,742
WWTP-1	Phase 1a - Thickened Sludge Blend Tanks		High	273,421	147,227	420,647
WWTP-1	Phase 1a - Dewatering and Lime Stabilization Facility		High	1,744,337	939,259	2,683,596
WWTP-1	Phase 1a - Covered Lined Biosolids Storage		High	250,027	134,630	384,656
WWTP-1	Phase 1a - 3-stage Chemical Scrubber Odor Control		High	456,189	245,640	701,829
WWTP-1	Phase 1a - Engr. Admin, & Legal (30%)		High	817,192	440,026	1,257,219
WWTP-2	Phase 2a - Primary Sludge Pump Station		High	-	472,385	472,385
WWTP-2	Phase 2a - Engr. Admin, & Legal (30%)		High	-	141,715	141,715
WWTP-2	Phase 2b - Aeration System Upgrade		High	224,945	56,236	281,181
				\$ 4,188,701	\$ 3,404,476	\$ 7,593,177

Source: City staff

Wastewater Projects, Medium Priority					Exhibit 14	
Project			Priority	Cost		
ID	Name			SDC-Eligible	SDC-Ineligible	Total
WWTP-3	New Laboratory/Locker Rooms		Medium	\$ -	\$ 337,418	\$ 337,418
				\$ -	\$ 337,418	\$ 337,418

Source: City staff

Wastewater Projects, Low Priority					Exhibit 15	
Project			Priority	Cost		
ID	Name			SDC-Eligible	SDC-Ineligible	Total
IMP-3	S James Street Capacity		Low	\$ 193,093	\$ 48,273	\$ 241,366
IMP-4	Sherman Street Capacity		Low	62,985	15,746	78,731
IMP-5	Adams Street Capacity		Low	-	319,310	319,310
PMP-3	Setness Lane		Low	884,256	221,064	1,105,319
				\$ 1,140,333	\$ 604,393	\$ 1,744,726

Source: City staff

Wastewater Projects, Other					Exhibit 16	
Project			Priority	Cost		
ID	Name			SDC-Eligible	SDC-Ineligible	Total
DMS-01	WWTP Improvements		N/A	\$ -	\$ 3,312	\$ 3,312
DMS-02	WWTP Improvements		N/A	-	3,312	3,312
DMS-03	WWTP Improvements		N/A	-	12,228	12,228
DMS-04	WWTP Improvements		N/A	-	25,475	25,475
DMS-05	WWTP Improvements		N/A	-	76,425	76,425
DMS-06	WWTP Improvements		N/A	-	30,570	30,570
DMS-07	WWTP Improvements		N/A	-	15,285	15,285
DMS-08	Silver Ave Lift Station		N/A	-	35,665	35,665
DMS-09	Main St Lift Station		N/A	-	12,228	12,228
DMS-10	WWTP Improvements		N/A	509,500	-	509,500
DMS-11	WWTP Improvements		N/A	-	40,760	40,760
DMS-12	WWTP Improvements		N/A	679,333	1,358,667	2,038,000
				\$ 1,188,833	\$ 1,613,926	\$ 2,802,760

Source: City staff

As with the reimbursement fee, we make two adjustments to the improvement fee cost basis. First, any fund balance of improvement fees that have been previously collected should be deducted from the cost basis. Second, any compliance costs that are to be attributed to the improvement fee should be added to the cost basis. Making these adjustments results in the net improvement fee cost basis. We then divide by the growth in ERUs to determine the improvement fee per ERU.

Exhibit 17 shows these calculations for the City’s wastewater utility. The resulting wastewater improvement fee is \$2,742 per ERU:

Description	Cost		
	SDC-Eligible	SDC-Ineligible	Total
High-priority projects	\$ 4,188,701	\$ 3,404,476	\$ 7,593,177
Medium-priority projects	-	337,418	337,418
Low-priority projects	1,140,333	604,393	1,744,726
Other projects	1,188,833	1,613,926	2,802,760
Total costs	6,517,867	\$ 5,960,213	\$ 12,478,081
Less sewer SDCi fund balance	(102,465)		
Cost of compliance	255,970		
Net improvement fee cost basis	\$ 6,671,372		
ERUs to be added	2,433		
Wastewater improvement fee per ERU	\$ 2,742		

Source: City staff and previous exhibits

This improvement fee includes the cost of projects at all priority levels. **Exhibit 18** shows how each priority level contributes to the overall improvement fee:

Priority	Improvement Fee
High	\$ 1,721
Medium	-
Low	469
Other	489
Adjustments	63
	\$ 2,742

Source: Previous exhibit

TOTAL SDC FOR RESIDENTIAL DEVELOPMENT

Adding the reimbursement fee of \$2,031 to the improvement fee of \$2,742 results in a total SDC of \$4,772 per ERU. For residential customers, one ERU is equal to one meter equivalent. **Exhibit 19** presents the schedule of proposed residential wastewater SDCs by meter size:

Meter Size	Flow Factor	Reimbursement Fee	Improvement Fee	Total SDC
≤ ¾"	1.00	\$ 2,031	\$ 2,742	\$ 4,772
1"	1.67	\$ 3,384	\$ 4,570	\$ 7,954
1½"	3.33	\$ 6,768	\$ 9,139	\$ 15,908
2"	5.33	\$ 10,829	\$ 14,623	\$ 25,452
3"	10.67	\$ 21,659	\$ 29,246	\$ 50,905
4"	16.67	\$ 33,842	\$ 45,697	\$ 79,539
6"	33.33	\$ 67,684	\$ 91,393	\$ 159,077

Source: Previous exhibits and FCS GROUP

TOTAL SDC FOR NON-RESIDENTIAL DEVELOPMENT

The residential wastewater SDCs are based on the assumption that wastewater strength for residential customers is uniformly domestic. This assumption is not appropriate for non-residential customers. Instead, we organize commercial customers into three strength-based categories, and we charge industrial customers based on expected flow and strength.

Exhibit 20 shows the characteristics of the three categories of commercial customer:

Class Assumptions		Exhibit 20	
Class	BOD (mg/l)	TSS (mg/l)	Load Factor
Residential	200	200	1
Commercial I	200	200	1
Commercial II	600	600	3
Commercial III	1000	1000	5

Source: Previous sewer SDC methodology

Here, the “load factor” is a multiple of domestic (residential) strength.

Making strength-based distinctions among customers require the allocation of wastewater utility costs to both flow and strength. Moreover, the industry standard is to allocate strength-related costs between biochemical oxygen demand (BOD) and total suspended solids (TSS). **Exhibit 21** shows how this cost allocation results in (1) SDCs per ERU for the three categories of commercial customer and (2) unit costs for industrial (Commercial IV) customers:

Cost Allocation				Exhibit 21	
Description	Flow	BOD	TSS	Total	
Reimbursement fee					
Assets by function					
Land & Improvements	\$ 652,829	\$ 163,207	\$ 163,207	\$ 979,244	
Buildings & Improvements	396,853	99,213	99,213	595,279	
Plant & equipment	2,939,301	2,404,726	1,706,757	7,050,784	
Sewer lines	1,760,694	-	-	1,760,694	
Construction in progress	28,962	7,241	7,241	43,443	
Total assets by function	<u>\$5,778,639</u>	<u>\$2,674,387</u>	<u>\$1,976,418</u>	<u>\$10,429,444</u>	
Weighted average allocations	55.41%	25.64%	18.95%	100.00%	
Net reimbursable cost	\$2,737,481	\$1,266,922	\$ 936,277	\$ 4,940,680	
ERUs to be added	2,433	2,433	2,433	2,433	
Reimbursement fee per ERU	\$ 1,125	\$ 521	\$ 385	\$ 2,031	
Improvement fee					
Projects by function					
Collection System Improvements	\$ 527,081	\$ -	\$ -	\$ 527,081	
Additional Pump Station Improvements	1,022,346	-	-	1,022,346	
Wastewater treatment plant	1,555,394	1,112,106	1,112,106	3,779,607	
Deferred maintenance and other projects	489,232	349,801	349,801	1,188,833	
Total projects by function	<u>\$3,594,053</u>	<u>\$1,461,907</u>	<u>\$1,461,907</u>	<u>\$ 6,517,867</u>	
Weighted average allocations	55.14%	22.43%	22.43%	100.00%	
Net improvement fee cost basis	\$3,678,698	\$1,496,337	\$1,496,337	\$ 6,671,372	
ERUs to be added	2,433	2,433	2,433	2,433	
Improvement fee per ERU	\$ 1,512	\$ 615	\$ 615	\$ 2,742	
Total SDC per ERU					
Residential	\$ 2,637	\$ 1,136	\$ 1,000	\$ 4,772	
Commercial I	\$ 2,637	\$ 1,136	\$ 1,000	\$ 4,772	
Commercial II	\$ 2,637	\$ 3,407	\$ 2,999	\$ 9,043	
Commercial III	\$ 2,637	\$ 5,678	\$ 4,999	\$ 13,314	
Unit costs applicable to Commercial IV and Industrial					
Reimbursement fee	\$ 4.59	\$ 1,310.64	\$ 968.59		
Improvement fee	6.17	1,547.97	1,547.97		
Total SDC	<u>\$ 10.76</u>	<u>\$ 2,858.61</u>	<u>\$ 2,516.56</u>		
Per	gallon per	pound per	pound per		
	day	day	day		

Source: Previous exhibits and previous sewer SDC methodology

For commercial customers, the SDCs shown in **Exhibit 21** can be translated into multiples of the residential SDC. **Exhibit 22** shows the commercial SDCs as multiples of the residential SDC per ERU (where the number of ERUs is determined by meter size):

Commercial Multipliers		Exhibit 22	
Class	Multiple of Residential SDC		
Commercial I	1.000		
Commercial II	1.895		
Commercial III	2.790		

Source: Previous exhibits

SECTION 4: STORMWATER

This section provides detailed calculations of our recommended SDC for stormwater facilities.

GROWTH

As with wastewater, we measure demand for stormwater facilities in ERUs. For calculation of stormwater SDCs, one ERU represents the average impervious surface area of a lot with a single-family residence built upon it. Based on data provided by the City, one ERU in Silverton is 3,121 square feet of impervious surface area. Moreover, the current stormwater customer base is 4,417 ERUs. **Exhibit 23** summarizes these data:

Class	Number of Developed Lots	Total Impervious Surface Area	Impervious Surface Area per Developed Lot	ERUs
Single-family residences				
R-1	2,503	7,811,863	3,121	2,503
R-5	167	1,343,001	8,042	430
Total single-family residences	2,670			2,933
Multi-family residences				
RM-10	8	112,627	14,078	36
RM-20	124	540,937	4,362	173
Total multi-family residences	132	653,564	4,951	209
Non-residential development				
Industrial	31	1,549,348	49,979	496
General Commercial	65	1,552,230	23,880	497
Downtown Commercial	113	596,523	5,279	191
Downtown Commercial Fringe	75	280,284	3,737	90
Total non-residential development	284	3,978,386	14,008	1,275
Grand total	3,086	4,631,950	1,501	4,417

1 ERU equals 3121 square feet of impervious surface area.

Source: City staff

The Master Plan estimates that the customer base will grow at a rate of 1.5 percent per year. At this rate, the customer base will add 1,712 ERUs between 2013 and 2035, as shown in **Exhibit 24**:

Row	Description	Source or Calculation	Value
a	Current customer base in ERUs	Previous exhibit	4,417
b	Projected annual growth rate	Stormwater Master Plan, Page 2-2	1.50%
c	ERUs in 2035	$a * ((1+b)^{(2035-2013)})$	6,129
d	Growth in ERUs	c-a	1,712

Source: See sources cited above.

REIMBURSEMENT FEE

As with the water and wastewater utilities described above, the cost basis of a reimbursement fee is often a categorized (or functionalized) inventory of assets. In other cases, such as the City's stormwater utility, no such inventory is available. However, we do know that \$608,803 in stormwater improvement fees have been expended on stormwater facilities over the past ten years. By definition, these expenditures create new capacity that will serve future users. Because only a

small amount of growth has occurred since these monies were expended, we can conclude that excess capacity exists and that a reimbursement fee may be charged for stormwater.

Calculation of the reimbursement fee begins with the historical cost of assets or recently completed projects that have unused capacity to serve future users. For each asset or project, the historical cost is multiplied by that portion of the asset or project that is available to serve future users. To avoid double-charging growth, the reimbursement fee cost basis must be reduced by any grants or contributions used to fund the assets or projects included in the cost basis. Furthermore, unless a reimbursement fee will be specifically used to pay debt service, the reimbursement fee cost basis should be reduced by any outstanding debt related to the assets or projects included in the cost basis. These reductions result in the gross reimbursable cost.

Determining the net reimbursable cost requires two adjustments. First, any fund balance of reimbursement fees that have been previously collected are deducted from the cost basis. Second, any compliance costs that are to be attributed to the reimbursement fee should be added to the cost basis. Once the net reimbursable cost is computed, we divide by the growth in ERUs to determine the reimbursement fee per ERU.

Exhibit 25 shows these calculations for the City's stormwater utility. The resulting stormwater reimbursement fee is \$331 per ERU.

Reimbursement Fee, Stormwater		Exhibit 25
Description		Amount
Stormwater improvement fee expenditures from fiscal years 2002-03 through 2011-12		\$ 608,803
Estimate of remaining capacity of recent projects		93.06%
Gross reimbursable cost		\$ 566,545
Less stormwater reimbursement fee fund balance		-
Cost of compliance		-
Net reimbursable cost		<u>\$ 566,545</u>
ERUs to be added		1,712
Stormwater reimbursement fee per ERU		\$ 331

Source: SDC Annual Report

IMPROVEMENT FEE

Calculation of the improvement fee begins with the estimated costs of capacity-increasing projects. We then utilize City estimate of the portion of each project that is available to serve new users and include only that portion of project costs in the improvement fee cost basis. Project costs that will be funded by a source other than City are also excluded. **Exhibits 26-28** summarize the SDC-eligible portion of the City's stormwater projects by priority:

Stormwater Projects, High Priority					Exhibit 26
Project		Priority	Cost		
ID	Name		SDC-Eligible	SDC-Ineligible	Total
1A	Olson Ditch Improvements	High	\$ 163,855	\$ 382,329	\$ 546,184
1B	North Second Street & Mills Addition Improvements	High	420,032	1,680,127	2,100,159
1C	W Main, Welch, and Cherry St Stormwater	High	70,413	633,716	704,129
1D	High St to E Main St Stormwater	High	51,612	980,635	1,032,247
1E	Jersey St Stormwater	High	23,080	438,527	461,607
			\$ 728,993	\$ 4,115,333	\$ 4,844,326

Source: City staff

Stormwater Projects, Medium Priority					Exhibit 27	
Project			Priority	Cost		
ID	Name			SDC-Eligible	SDC-Ineligible	Total
2	Update Stormwater Master Plan		Medium	\$ 76,425	\$ 76,425	\$ 152,850
2A	Hwy 214 Detention Facility		Medium	108,116	973,043	1,081,159
2B	N James St & Pine St Stormwater		Medium	-	242,522	242,522
2C	Sheridan St and Pine St Stormwater		Medium	29,347	264,125	293,472
2D	Rock St to S 3rd St Connection		Medium	22,214	199,928	222,142
2E	McClaine St Improvements		Medium	12,024	228,460	240,484
2F	Koons St Improvements		Medium	-	270,035	270,035
2G	James St Improvements		Medium	9,426	179,089	188,515
				\$ 257,552	\$ 2,433,627	\$ 2,691,179

Source: City staff

Stormwater Projects, Low Priority					Exhibit 28	
Project			Priority	Cost		
ID	Name			SDC-Eligible	SDC-Ineligible	Total
3A	Oak St Improvements		Low	\$ 70,260	\$ 130,483	\$ 200,743
3B	Monson Rd Improvements		Low	65,624	98,435	164,059
3C	Grant St Improvements		Low	13,043	117,389	130,432
3D	W McClaine Street Improvements		Low	-	95,786	95,786
3E	Monitor Rd Improvements		Low	34,187	27,972	62,159
				\$ 183,114	\$ 470,065	\$ 653,179

Source: City staff

As with the reimbursement fee, we make two adjustments to the improvement fee cost basis. First, any fund balance of improvement fees that have been previously collected should be deducted from the cost basis. Second, any compliance costs that are to be attributed to the improvement fee should be added to the cost basis. Making these adjustments results in the net improvement fee cost basis. We then divide by the growth in ERUs to determine the improvement fee per ERU.

Exhibit 29 shows these calculations for the City's stormwater utility. The resulting stormwater improvement fee is \$503 per ERU:

Improvement Fee, Stormwater				Exhibit 29	
Description	Cost			Total	
	SDC-Eligible	SDC-Ineligible			
High-priority projects	\$ 728,993	\$ 4,115,333		\$ 4,844,326	
Medium-priority projects	257,552	2,433,627		2,691,179	
Low-priority projects	183,114	470,065		653,179	
Total costs	1,169,659	\$ 7,019,025		\$ 8,188,684	
Less stormwater SDCi fund balance		(563,974)			
Cost of compliance		255,970			
Net improvement fee cost basis	\$ 861,656				
ERUs to be added		1,712			
Stormwater improvement fee per ERU	\$ 503				

Source: City staff and previous exhibits

This improvement fee includes the cost of projects at all priority levels. **Exhibit 30** shows how each priority level contributes to the overall improvement fee:

Improvement Fee, Stormwater, by Priority		Exhibit 30	
Priority		Improvement	Fee
High		\$	426
Medium			150
Low			107
Adjustments			(180)
		\$	503

Source: Previous exhibit

TOTAL SDC

Adding the reimbursement fee of \$331 to the improvement fee of \$503 results in a total SDC of \$834 per ERU.

SECTION 5: TRANSPORTATION

This section provides detailed calculations of our recommended SDC for transportation facilities.

GROWTH

We measure demand for transportation facilities in PM peak-hour vehicle trips (PM PHVTs). One PM PHVT represents one person beginning or ending a vehicular trip at a certain property during the afternoon rush hour. Based on data from both the U. S. Census Bureau and the Silverton Transportation System Plan Update (2008), we estimate that the transportation system is currently serving 7,363 PM PHVTs and will serve 10,578 PM PHVTs in 2030. These estimates imply growth of 3,216 PM PHVTs over the planning period, as shown in **Exhibit 31**. Note, the basis used in this calculation is vehicle trip growth, which tends to exceed population growth (due in part to declining household size factors and changing travel behavior characteristics).

Description	Households	Retail		Total
		Employees	Non-Retail Employees	
Count in 2010	3,452	344		2,916
Estimate for 2013	3,557	354		3,359
PM PHVTs per household/employee	1.0	6.0		0.5
Total PM PHVTs in 2013	3,557	2,127	1,679	7,363
Annual growth rate	2.0%	2.1%		2.7%
Total PM PHVTs in 2030	4,941	3,004	2,633	10,578
Growth in PM PHVTs from 2013 to 2030	1,385	878	953	3,216

Source: 2010 census; OnTheMap Application (2010 data); Silverton Transportation System Plan Update (January, 2008)

REIMBURSEMENT FEE

As with the water and wastewater utilities described above, the cost basis of a reimbursement fee is often a categorized (or functionalized) inventory of assets. In other cases, such as the City's transportation facilities, no such inventory is available. However, we do know that \$2,550,100 in transportation improvement fees have been expended on transportation facilities over the past ten years. By definition, these expenditures create new capacity that will serve future users. Because only a small amount of growth has occurred since these monies were expended, we can conclude that excess capacity exists and that a reimbursement fee may be charged for transportation.

Calculation of the reimbursement fee begins with the historical cost of assets or recently completed projects that have unused capacity to serve future users. For each asset or project, the historical cost is multiplied by that portion of the asset or project that is available to serve future users. To avoid double-charging growth, the reimbursement fee cost basis must be reduced by any grants or contributions used to fund the assets or projects included in the cost basis. Furthermore, unless a reimbursement fee will be specifically used to pay debt service, the reimbursement fee cost basis should be reduced by any outstanding debt related to the assets or projects included in the cost basis. These reductions result in the gross reimbursable cost.

Determining the net reimbursable cost requires two adjustments. First, any fund balance of reimbursement fees that have been previously collected are deducted from the cost basis. Second,

any compliance costs that are to be attributed to the reimbursement fee should be added to the cost basis. Once the net reimbursable cost is computed, we divide by the growth in PM PHVTs to determine the reimbursement fee per PM PHVT.

Exhibit 32 shows these calculations for the City's transportation facilities. The resulting transportation reimbursement fee is \$674 per PHVT.

Reimbursement Fee, Transportation		Exhibit 32
Description		Amount
Street improvement fee expenditures from fiscal years 2002-03 through 2011-12		\$2,550,100
Estimate of remaining capacity of recent projects		87.01%
Gross reimbursable cost		\$2,218,793
Less street reimbursement fee fund balance		(51,233)
Cost of compliance		-
Net reimbursable cost		<u>\$2,167,561</u>
PM PHVTs to be added		3,216
Transportation reimbursement fee per PM PHVT		\$ 674

Source: Previous transportation SDC methodology; SDC Annual Report

IMPROVEMENT FEE

Calculation of the improvement fee begins with the estimated costs of capacity-increasing projects. We then utilize City estimates of the portion of each project that is available to serve new users and include only that portion of project costs in the improvement fee cost basis. Project costs that will be funded by a source other than City are also excluded. **Exhibits 33-36** summarize the SDC-eligible portion of the City's transportation projects by priority:

Transportation Projects, High Priority			Exhibit 33		
Project		Priority	Cost		
ID	Name		SDC-Eligible	SDC-Ineligible	Total
I-01	James Street/C Street	High	\$ 5,557	\$ -	\$ 5,557
I-02	McClaine Street/Main Street	High	281,181	-	281,181
I-03	Main Street/Water Street	High	281,181	-	281,181
RR-17	Park Street	High	-	80,980	80,980
RR-21	Rock Street	High	-	105,724	105,724
RR-22	Brooks Street	High	-	134,967	134,967
RR-23	Short Street	High	-	105,724	105,724
RR-24	Wilson Street	High	-	177,707	177,707
RR-25	N. 3rd Street	High	-	267,685	267,685
RR-26	Hill Street	High	-	177,707	177,707
RR-28	Wall Street & Bartlett Street	High	-	177,707	177,707
BL-01	1st Street	High	22,944	53,537	76,481
BL-02	Oak Street	High	86,042	200,764	286,805
BL-03	N Water Street (Revised)	High	39,362	91,846	131,208
BL-04	S Water Street	High	168,709	393,654	562,363
BL-05	Pine Street	High	116,409	271,621	388,030
BL-06	Silverton Road	High	88,403	206,275	294,678
BL-07	2nd Street	High	1,687	3,937	5,624
PS-01	Oak Street	High	120,458	281,069	401,527
PS-02	Pine Street (Gap Infill)	High	49,600	115,734	165,335
PS-03	S Water Street	High	318,860	744,006	1,062,866
PS-04	C Street	High	52,975	123,607	176,582
PS-05	Steelhammer Road	High	130,918	305,476	436,394
PS-06	C Street	High	8,773	20,470	29,243
PS-07	James Street	High	17,883	41,727	59,610
PS-08	James Street	High	5,399	12,597	17,996
PS-09	Westfield Street	High	3,543	8,267	11,810
PS-10	Main Street	High	191,316	446,404	637,720
PC-02	Water Street/A Street	High	-	11,247	11,247
PC-03	Water Street/Lewis Street	High	-	28,118	28,118
PC-04	Water Street-Eugene Field	High	-	8,998	8,998
A-01	ADA Safety Audit and Annual Improv. Program	High	371,160	-	371,160
S-01	Master Plan Update		129,343	-	129,343
			\$ 2,491,704	\$ 4,597,554	\$ 7,089,257

Source: City staff

Transportation Projects, Medium Priority			Exhibit 34		
Project		Priority	Cost		
ID	Name		SDC-Eligible	SDC-Ineligible	Total
I-04	Oak Street/1st Street	Medium	\$ 281,181	\$ -	\$ 281,181
I-06	Main Street/1st Street	Medium	281,181	-	281,181
I-07	C Street/McClaine Street	Medium	472,385	-	472,385
BL-08	Oak Street	Medium	4,724	11,022	15,746
BL-09	Eureka Avenue	Medium	217,634	507,814	725,448
BL-10	Main Street	Medium	156,899	366,098	522,998
BL-11	Oak Street	Medium	64,784	151,163	215,947
BL-12	McClaine Street	Medium	86,042	200,764	286,805
BL-13	Monitor Road	Medium	161,961	377,908	539,868
BL-16	Evans Valley Road	Medium	91,103	212,573	303,676
BL-17	Steelhammer Road	Medium	141,715	330,669	472,385
PS-11	Oak Street	Medium	95,489	222,808	318,297
PS-12	N Water Street	Medium	17,883	41,727	59,610
PS-14	C Street	Medium	65,796	153,525	219,322
PS-15	James Street	Medium	55,337	129,119	184,455
PS-16	Westfield Street	Medium	85,029	198,402	283,431
PS-17	B Street	Medium	43,864	102,350	146,214
PS-18	1st Street	Medium	162,973	380,270	543,243
PS-19	Jefferson Street	Medium	70,858	165,335	236,192
PS-20	W Main Street	Medium	32,055	74,794	106,849
PS-21	Keene Avenue	Medium	106,287	248,002	354,289
PS-22	Ike Mooney Road	Medium	77,853	181,657	259,510
PS-23	2nd Street	Medium	162,973	380,270	543,243
PC-05	Steelhammer Road	Medium	-	11,247	11,247
PC-07	1st Street	Medium	-	13,497	13,497
PC-08	Water Street/Wesley Street	Medium	-	8,998	8,998
PC-09	1st Street/Lewis Street	Medium	-	5,624	5,624
PC-10	1st Street/B Street	Medium	-	11,247	11,247
			\$ 2,936,006	\$ 4,486,882	\$ 7,422,889

Source: City staff

Transportation Projects, Low Priority			Exhibit 35		
Project		Priority	Cost		
ID	Name		SDC-Eligible	SDC-Ineligible	Total
I-09	Oak Street/Water Street	Low	\$ 281,181	\$ -	\$ 281,181
C-01	Eastside North-South Connector #4 (Phase 1)	Low	905,629	6,641,281	7,546,910
C-02	Eastside North-South Connector #4 (Phase 2)	Low	713,976	5,235,824	5,949,800
C-03	Westside North-South Connector #1	Low	2,300,064	6,900,193	9,200,257
BL-18	2nd Street	Low	96,839	225,957	322,796
BL-20a	Hobart Road	Low	103,756	242,097	345,853
BL-20b	Hobart Road	Low	87,307	203,716	291,023
BL-21	Bicycle Route Signage	Low	8,435	19,683	28,118
BL-22	Bicycle Parking	Low	22,495	-	22,495
PS-25	Fiske Street	Low	49,476	115,444	164,920
PS-26	2nd Street (Gap Infill)	Low	20,582	48,026	68,608
PS-27a	Eureka Avenue	Low	68,732	160,375	229,107
PS-27b	Eureka Avenue	Low	108,412	252,962	361,374
PS-28	Monitor Road	Low	72,413	168,964	241,377
PS-29	Hobart Road	Low	195,027	455,064	650,092
PS-30	Hobart Road	Low	53,212	124,161	177,372
			\$ 5,087,538	\$20,793,746	\$25,881,284

Source: City staff

Transportation Projects, Other			Exhibit 36		
Project		Priority	Cost		
ID	Name		SDC-Eligible	SDC-Ineligible	Total
RR-01	Steelhammer Road		\$ -	\$ 742,313	\$ 742,313
RR-02	N. 2nd Street		-	983,674	983,674
RR-03	N. 2nd Street		-	190,948	190,948
RR-04	E. Main Street		-	1,695,331	1,695,331
RR-10	Eureka Avenue		-	1,743,769	1,743,769
RR-14	Elm Street		-	314,923	314,923
RR-15	Mead Street		-	87,054	87,054
RR-16	Ord Street		-	87,054	87,054
RR-19	Johnson Street		-	111,010	111,010
RR-20	Orchard Street		-	188,954	188,954
RR-27	Maple Street & Sherman Street		-	163,478	163,478
			-	6,308,508	6,308,508

Source: City staff

As with the reimbursement fee, we make two adjustments to the improvement fee cost basis. First, any fund balance of improvement fees that have been previously collected is deducted from the cost basis. Second, any compliance costs that are to be attributed to the improvement fee should be added to the cost basis. Making these adjustments results in the net improvement fee cost basis. We then divide by the growth in PM PHVTs to determine the improvement fee per PHVT.

Exhibit 37 shows these calculations for the City’s transportation facilities. The resulting transportation improvement fee is \$3,314 per PM PHVT:

Improvement Fee, Transportation		Exhibit 37	
Description	Cost		
	SDC-Eligible	SDC-Ineligible	Total
High-priority projects	\$ 2,491,704	\$ 4,597,554	\$ 7,089,257
Medium-priority projects	2,936,006	4,486,882	7,422,889
Low-priority projects	5,087,538	20,793,746	25,881,284
Other projects	-	6,308,508	6,308,508
Total costs	10,515,248	\$36,186,690	\$46,701,938
Less transportation improvement fee fund balance	(55,236)		
Cost of compliance	197,795		
Net improvement fee cost basis	\$10,657,807		
PM PHVTs to be added	3,216		
Transportation improvement fee per PM PHVT	\$ 3,314		

Source: City staff and previous exhibits

This improvement fee includes the cost of projects at all priority levels. **Exhibit 38** shows how each priority level contributes to the overall improvement fee:

Improvement Fee, Transportation, by Priority		Exhibit 38
Priority	Improvement Fee	
High	\$	775
Medium		913
Low		1,582
Other		-
Adjustments		44
	\$	3,314

Source: Previous exhibit

TOTAL SDC

Adding the reimbursement fee of \$674 to the improvement fee of \$3,314 results in a total SDC of \$3,989 per PM PHVT.

To charge the appropriate SDC, the City must estimate how many PM PHVTs will be generated by the development in question. That number can then be multiplied by \$3,989 to determine the amount of SDC owed by new development projects.

The number of PM PHVTs 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.

Exhibit 39 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):

SDCs by Land Use for PM PHVTs

Exhibit 39

Code	Land Use	Total Trip-Ends	Pass-By and Diverted/Linked Adjustment	Primary Trip-Ends	SDC Per
110	General Light Industrial	1.08	0.00	1.08	\$ 4,308 1,000 SFGFA
130	Industrial Park	0.84	0.00	0.84	\$ 3,350 1,000 SFGFA
140	Manufacturing	0.75	0.00	0.75	\$ 2,991 1,000 SFGFA
151	Mini-Warehouse	0.29	0.00	0.29	\$ 1,157 1,000 SFGFA
160	Data Center	0.14	0.00	0.14	\$ 558 1,000 SFGFA
210	Single-Family Detached Housing	1.02	0.00	1.02	\$ 4,068 Dwelling unit
220	Apartment	0.67	0.00	0.67	\$ 2,672 Dwelling unit
230	Residential Condominium/Townhouse	0.52	0.00	0.52	\$ 2,074 Dwelling unit
240	Mobile Home Park	0.60	0.00	0.60	\$ 2,393 ODU
254	Assisted Living	0.35	0.00	0.35	\$ 1,396 Bed
310	Hotel	0.61	0.00	0.61	\$ 2,433 Room
320	Motel	0.56	0.00	0.56	\$ 2,234 Room
417	Regional Park	0.26	0.00	0.26	\$ 1,037 Acre
430	Golf Course	0.39	0.00	0.39	\$ 1,556 Acre
444	Movie Theater with Matinee	50.84	0.00	50.84	\$202,768 Movie screen
492	Health/Fitness Club	4.06	0.00	4.06	\$ 16,193 1,000 SFGFA
495	Recreational Community Center	3.35	0.00	3.35	\$ 13,362 1,000 SFGFA
520	Elementary School	3.11	0.00	3.11	\$ 12,404 1,000 SFGFA
522	Middle School/Junior High School	2.52	0.00	2.52	\$ 10,051 1,000 SFGFA
530	High School	2.12	0.00	2.12	\$ 8,456 1,000 SFGFA
540	Junior/Community College	2.64	0.00	2.64	\$ 10,530 1,000 SFGFA
560	Church	0.94	0.00	0.94	\$ 3,749 1,000 SFGFA
565	Day Care Center	13.75	0.00	13.75	\$ 54,842 1,000 SFGFA
590	Library	7.20	0.00	7.20	\$ 28,717 1,000 SFGFA
610	Hospital	1.16	0.00	1.16	\$ 4,627 1,000 SFGFA
620	Nursing Home	1.01	0.00	1.01	\$ 4,028 1,000 SFGFA
710	General Office Building	1.49	0.00	1.49	\$ 5,943 1,000 SFGFA
720	Medical-Dental Office Building	4.27	0.00	4.27	\$ 17,031 1,000 SFGFA
750	Office Park	1.48	0.00	1.48	\$ 5,903 1,000 SFGFA
760	Research and Development Center	1.07	0.00	1.07	\$ 4,268 1,000 SFGFA
770	Business Park	1.26	0.00	1.26	\$ 5,026 1,000 SFGFA
812	Building Materials and Lumber Store	5.56	0.00	5.56	\$ 22,176 1,000 SFGFA
813	Free-Standing Discount Superstore	4.40	1.23	3.17	\$ 12,636 1,000 SFGFA
815	Free-Standing Discount Store	5.57	2.91	2.66	\$ 10,608 1,000 SFGFA
816	Hardware/Paint Store	4.74	2.63	2.11	\$ 8,413 1,000 SFGFA
817	Nursery (Garden Center)	9.04	0.00	9.04	\$ 36,056 1,000 SFGFA
820	Shopping Center	3.71	1.85	1.86	\$ 7,419 1,000 SFGFA
826	Specialty Retail Center	5.02	0.00	5.02	\$ 20,022 1,000 SFGFA
841	Automobile Sales	2.80	0.00	2.80	\$ 11,168 1,000 SFGFA
848	Tire Store	3.26	1.02	2.24	\$ 8,928 1,000 SFGFA
850	Supermarket	8.37	5.13	3.24	\$ 12,936 1,000 SFGFA
851	Convenience Market (Open 24 Hours)	53.42	36.04	17.38	\$ 69,303 1,000 SFGFA
857	Discount Club	4.63	0.00	4.63	\$ 18,467 1,000 SFGFA
862	Home Improvement Superstore	3.17	1.78	1.39	\$ 5,563 1,000 SFGFA
880	Pharmacy/Drugstore without Drive-Through	11.07	6.38	4.69	\$ 18,691 1,000 SFGFA
881	Pharmacy/Drugstore with Drive-Through	9.72	6.03	3.69	\$ 14,732 1,000 SFGFA
890	Furniture Store	0.53	0.34	0.19	\$ 775 1,000 SFGFA
911	Walk-in Bank	12.13	0.00	12.13	\$ 48,381 1,000 SFGFA
912	Drive-in Bank	26.69	19.39	7.30	\$ 29,097 1,000 SFGFA
925	Drinking Place	15.49	0.00	15.49	\$ 61,782 1,000 SFGFA
931	Quality Restaurant	9.02	5.19	3.83	\$ 15,290 1,000 SFGFA
932	High-Turnover (Sit-Down) Restaurant	18.49	11.14	7.35	\$ 29,315 1,000 SFGFA
933	Fast-Food Restaurant without Drive-Through	52.40	31.57	20.83	\$ 83,077 1,000 SFGFA
934	Fast-Food Restaurant with Drive-Through	47.30	27.93	19.37	\$ 77,245 1,000 SFGFA
936	Coffee/Donut Shop without Drive-Through	25.81	15.55	10.26	\$ 40,920 1,000 SFGFA
937	Coffee/Donut Shop with Drive-Through	36.16	21.35	14.81	\$ 59,052 1,000 SFGFA
938	Coffee/Donut Kiosk	96.00	56.69	39.31	\$ 156,775 1,000 SFGFA
944	Gasoline/Service Station	15.65	10.17	5.48	\$ 21,847 VFP
945	Gasoline/Service Station with Convenience Market	13.57	11.84	1.73	\$ 6,916 VFP
946	Gasoline/Service Station with Car Wash	14.52	11.05	3.47	\$ 13,835 VFP

Abbreviations	
ODU	occupied dwelling unit
SFGFA	square feet of gross floor area
SFGLA	square feet of gross leasable area
VFP	vehicle fueling position

Source: ITE, Trip Generation Manual, 9th edition

SECTION 6: CONCLUSION

This section summarizes the recommended SDCs and provides a recommendation for annual adjustment.

RECOMMENDED SDCS

Exhibit 40 summarizes the recommended SDCs and compares each one to its current level:

SDCs for a Single-Family Residence		Exhibit 40	
Fee	Current Amount	Proposed Amount	Change
Water SDCs			
Reimbursement fee	\$ 1,695	\$ 1,475	-12.96%
Improvement fee	3,269	3,703	13.27%
Total water SDCs	\$ 4,964	\$ 5,178	4.32%
Wastewater SDCs			
Reimbursement fee	\$ 1,837	\$ 2,031	10.53%
Improvement fee	2,826	2,742	-2.98%
Total wastewater SDCs	\$ 4,663	\$ 4,772	2.34%
Stormwater SDCs			
Reimbursement fee	\$ -	\$ 331	
Improvement fee	2,072	503	-75.71%
Total stormwater SDCs	\$ 2,072	\$ 834	-59.74%
Transportation SDCs			
Reimbursement fee	\$ 714	\$ 688	-3.70%
Improvement fee	2,421	3,381	39.64%
Total transportation SDCs	\$ 3,135	\$ 4,068	29.77%
All fees above	\$14,834	\$14,853	0.13%

Source: City of Silverton Residential System Development Charges
(April 2, 2012)

Exhibit 41 compares both the current and recommended SDCs to the SDCs of comparable jurisdictions:

Comparison of SDCs per Single-Family Detached Dwelling							Exhibit 41
Jurisdiction	Water	Wastewater	Stormwater	Transportation	Parks	Total	
Silverton (proposed)	\$ 5,178	\$ 4,772	\$ 834	\$ 4,068	\$ 4,399	\$ 19,252	
Silverton (existing)	\$ 4,964	\$ 4,663	\$ 2,072	\$ 3,135	\$ 4,399	\$ 19,233	
Canby (proposed)	\$ 3,333	\$ 2,571	\$ 161	\$ 2,955	\$ 4,987	\$ 14,007	
Canby (existing)	\$ 3,333	\$ 2,571	\$ 161	\$ 2,603	\$ 4,725	\$ 13,393	
Salem	\$ 3,500	\$ 3,500	\$ 494	\$ 1,954	\$ 3,745	\$ 13,193	
Stayton	\$ 2,670	\$ 3,528		\$ 2,562	\$ 2,305	\$ 11,065	
Woodburn	\$ 2,085	\$ 2,977	\$ 220	\$ 3,532	\$ 1,752	\$ 10,566	
Molalla	\$ 2,113	\$ 3,903	\$ 289	\$ 2,939	\$ 903	\$ 10,147	
Mt. Angel	\$ 2,338	\$ 1,250	\$ 96	\$ 1,310	\$ 55	\$ 5,049	

Source: city/agency websites and staff

ANNUAL ADJUSTMENT

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

- (A) A relevant measurement of the average change in prices or costs over an identified time period for materials, labor, real property or a combination of the three;

(B) Published by a recognized organization or agency that produces the index or data source for reasons that are independent of the system development charge methodology; and

(C) Incorporated as part of the established methodology or identified and adopted in a separate ordinance, resolution or order.

We recommend that the City index its charges to the *Engineering News Record* Construction Cost Index for the City of Seattle and adjust its charges annually. There is no comparable Oregon-specific index.