



Rates in Effect September 1, 2017

System Development Charge Methodologies

Appendix D Excerpt

(Stormwater System Details)

As adopted per Resolution No. 4900 (Effective May 7, 2007)

And as amended per

Administrative Order 58-07-08-F
(Effective August 20, 2007); and

Administrative Order 58-08-02-F
(Effective July 1, 2009); and

Resolution No. 4929
(Effective July 1, 2008); and

Resolution No. 4943
(Effective July 1, 2008); and

Administrative Order 58-09-08-F
(Effective July 1, 2009); and

Resolution Nos. 4977 & 4991
(Effective January 1, 2010); and

Resolution No. 4998
(Effective April 1, 2010); and

Administrative Order 58-11-01-F
(Effective June 1, 2011); and

Resolution No. 5031
(Effective June 1, 2011); and

Administrative Order 58-11-12-F
(Effective January 1, 2012); and

Administrative Order 58-13-08-F
(Effective July 1, 2013); and

Resolution No. 5092
(Effective July 1, 2013); and

Resolution No. 5100
(Effective March 1, 2014); and

Administrative Order 58-14-08-F
(Effective July 1, 2014); and

Administrative Order 58-15-17-F
(Effective July 1, 2015); and

Administrative Order 58-16-14-F
(Effective July 1, 2016); and

Administrative Order 58-17-02-F
(Effective March 10, 2017); and

Administrative Order 58-17-19-F
(Effective September 1, 2017)

Appendix D

Stormwater System Charge Detail

1.0 Formula

The impact analysis for the stormwater system is based on square footage of impervious surface, which creates an impact on the stormwater system by land use type. Impervious surface is defined in section 6.406 Eugene code, 1971 as “any hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from conditions pre-existing to development. Common impervious surfaces include, but are not limited to, rooftops, walkways, driveways, parking lots, or concrete or asphalt surfaces.” The estimated non-assessable cost of the system-wide capacity from future capacity-enhancing projects, as contained in the Stormwater SDC-Eligible Project List, and the estimated available capacity in the existing stormwater system projected to be used by new development is used as the basis for determining the stormwater SDC.

The stormwater SDC is comprised of an improvement fee and a reimbursement fee, as new development will require the construction of additional system capacity as well as the use of available capacity in the existing system. The per unit cost of additional capacity for the improvement fee is based on the value of the system-wide capacity of future capacity-enhancing projects (current planned projects are listed in the Stormwater SDC-Eligible Project List, Table 9) divided by the total projected impervious surface area that will be added by new development at build-out within the Urban Growth Boundary (UGB). The per unit cost of existing capacity for the reimbursement fee is based on the value of available system-wide capacity within the existing system projected to be used by new development divided by the total projected impervious surface area that will be added by new development at build-out within the UGB.

The improvement fee accounts for two components of system capacity provided to meet the demands of future development: 1) general system capacity (flood control and capital system stormwater quality) used by new development; and 2) Low Impact Development (LID) capacity in capital system infiltration and filtration facilities that is used only by certain development not constructing on-site LID facilities to treat all required impervious surface runoff. Development subject to stormwater quality development standards that does not implement on-site LID is required to provide for off-site LID function. The required off-site LID function is provided through LID facilities built with City capital projects and the cost of this capacity is included in the LID component of the improvement fee. Only development not implementing on-site LID to treat all required impervious surface runoff is charged the LID component of the improvement fee.

The value of the future stormwater system is based on the estimated costs of planned future capacity-enhancing stormwater projects contained within stormwater plans and the Capital Improvement Plan (CIP). Of that total value, the SDC-eligible component is attributable to those portions of future projects that are non-assessable and capacity-enhancing and related to the demands of future development; i.e. add new capacity for new users.

The total value of the existing system is estimated based on the replacement cost of the stormwater system components, which include both piped system and open channel system components. Assessable costs are excluded from the SDC-eligible existing system costs. Assessable costs are determined using the approach specified in the City Code. The city assesses up to and including the first 24 inches of pipe diameter or equivalent capacity. The non-assessable portion of stormwater system costs (SDC eligible costs) is based on replacement costs minus assessable costs. The portion of non-assessable existing system value allocated to new development (SDC-eligible value) is established by determining the percent of piped system and open channel system capacity projected to be used by new development. The use of capacity of the existing system is estimated with use of hydraulic modeling to identify existing available capacity (based on existing land use and flow data) and expected future conditions (based on Metro Plan designations).

The total unit cost per square foot of impervious surface area is the sum of the per unit costs of additional capacity of the improvement fee and reimbursement fees. Table 8 provides a detailed breakdown of the calculation and numerical supporting data of the stormwater SDC. Figure 5 illustrates the calculation formula of the stormwater SDC. The stormwater SDC rates per unit of capacity can be found in Appendix F in the current adopted SDC fee schedule.

2.0 Single Family Dwelling and Duplex Rates

The stormwater SDC for single family residential development is comprised of three rate categories: Small residential with a building footprint of 1,000 square feet or less; Medium residential with a building footprint of greater than 1,000 but less than 3,000 square feet; and Large residential with a building footprint of 3,000 square feet or more. Building footprint is defined as the first floor area plus attached or detached garage or carport. For the Small and Medium residential rate categories, an estimated average impervious surface area (square feet) specific to each category is multiplied by the applicable stormwater SDC rate per square foot to determine the appropriate single-family residential stormwater SDC flat rate per dwelling unit. For the Large residential category, the stormwater SDC is determined by multiplying the actual impervious surface of the total proposed building site by the applicable stormwater SDC unit cost per square foot. The stormwater SDC for a duplex is calculated as two times the appropriate stormwater SDC flat rate of either a Small or Medium residential category. Duplex units equal to or over 3,000 square feet each are treated as Large residential. Details of the stormwater SDC analysis are provided in Table 8. Rate formulas, calculations, and fee schedule are provided in Appendix F.

3.0 Manufactured Home Park Rates

Manufactured home developments are charged a flat rate per individual space based on the estimated average impervious area for a doublewide manufactured home, plus any additional common area impervious surface (e.g., clubhouse, private streets). To determine the amount of stormwater SDC attributable to the proposed spaces in the park, the total number of proposed spaces is first multiplied by the estimated average impervious surface area (square feet) per space, the results of which are then multiplied by the applicable stormwater SDC unit cost per square foot. To determine the amount of stormwater SDC attributable to all additional common area impervious surfaces within the park, these areas will be measured separately and the sum of this additional actual impervious surface area (square feet) will be multiplied by the current total

stormwater SDC rate per square foot. Details of the stormwater SDC analysis are provided in Table 8. Rate formulas, calculations, and fee schedules are provided in Appendix F.

4.0 Multi-Family and Non-Residential Rate

For all uses not listed in sections 2.0 and 3.0 above (e.g. multifamily, commercial, industrial) the SDC rate per square foot of impervious surface area is determined based on whether the development is: 1) not subject to stormwater quality standards of EC 9.6792 (3) or is subject to stormwater quality standards of EC 9.6792 (3) and constructing on-site infiltration or filtration facilities; or 2) subject to stormwater quality standards of EC 9.6792 (3) and not constructing on-site infiltration or filtration facilities to treat required impervious areas. The current applicable stormwater SDC rate per square foot of impervious surface area shall be as adopted in the SDC fee schedule located in Appendix F.

5.0 Stormwater Impacts Not Attributable to Impervious Surface Area

For all uses not listed in sections 2.0, 3.0, and 4.0 above, where any development type creates an impact through discharges to the public stormwater system (as allowed by Eugene Code 1971 section 6.610) which are not attributable to creation or modification of impervious surface area, will have stormwater SDCs calculated by evaluating the equivalent impervious surface area which would generate a similar impact.

6.0 Stormwater System SDC Impact Reduction Criteria

Two forms of separate and potentially additive impact reduction credits may be provided: reduced impact due to reduced quantity of stormwater runoff discharged to the City stormwater system and reduced impact due to pollution reduction water quality treatment which exceeds minimum standards.

6.1 Stormwater Flood Control (Destination and Quantity Reduction)

Reduction or elimination of stormwater which otherwise would be discharged into the public stormwater system may result in a corresponding reduction of stormwater SDC collected at the time of building and development permit issuance. Reduction of the stormwater SDC will be proportional to the reduction of runoff entering the public system from the fully developed site. (Note: detention facilities are not eligible for stormwater SDC impact reduction.) A 100% reduction in the stormwater SDC will be granted only for the complete containment and management of all runoff from the site that would otherwise directly or indirectly enter into the City's public stormwater system. Runoff discharged into an area that does not ultimately enter the City's public stormwater system constitutes acceptance of responsibility for compliance with any state or federal regulations that apply to the area or body of water receiving the runoff. To be eligible for the impact reduction, the development must meet standards for stormwater destination specified in Eugene Code 1971 section 9.6790 (3) in a manner which demonstrates ongoing reduction in impact to the public system.

6.1.1 Single-Family Development (SFD) and Duplex Development

Because stormwater SDCs for small- and medium-residential SFDs and duplexes are based on estimated average amounts of impervious surface areas, these buildings can qualify only for one of two impact reduction rates:

- a) 100% SDC reduction of general system capacity costs for complete elimination and management of runoff from the site entering the public system or discharging into an area which ultimately enters into the public system; or
- b) 50% reduction of general system capacity costs for partial reduction and management of runoff from the site entering the public system regardless of the amount of reduction.

The SDC reduction will be granted after review and approval by the City Engineer of the stormwater destination design and documentation submitted in accordance with standards specified in Eugene Code 1971 section 9.6790 (3).

6.1.2 Manufactured Home Park, Multi-family, and Nonresidential Development

Stormwater SDCs for these uses will be reduced proportional to the reduction in total stormwater runoff entering the public stormwater system from the fully developed site. (Total stormwater runoff includes both runoff from the site in its natural condition and any increase due to construction of impervious surfaces). The SDC reduction will be granted after review and approval by the City Engineer of the stormwater destination design and documentation submitted in accordance with standards specified in Eugene Code 1971 section 9.6790 (3).

6.2 Stormwater Quality (Pollution Reduction)

Reduction of stormwater pollution through stormwater quality treatment techniques may result in a corresponding reduction of stormwater SDC collected at the time of building and development permit issuance. A single-level stormwater quality SDC credit of 10% of the total stormwater SDC is applied to three categories of development:

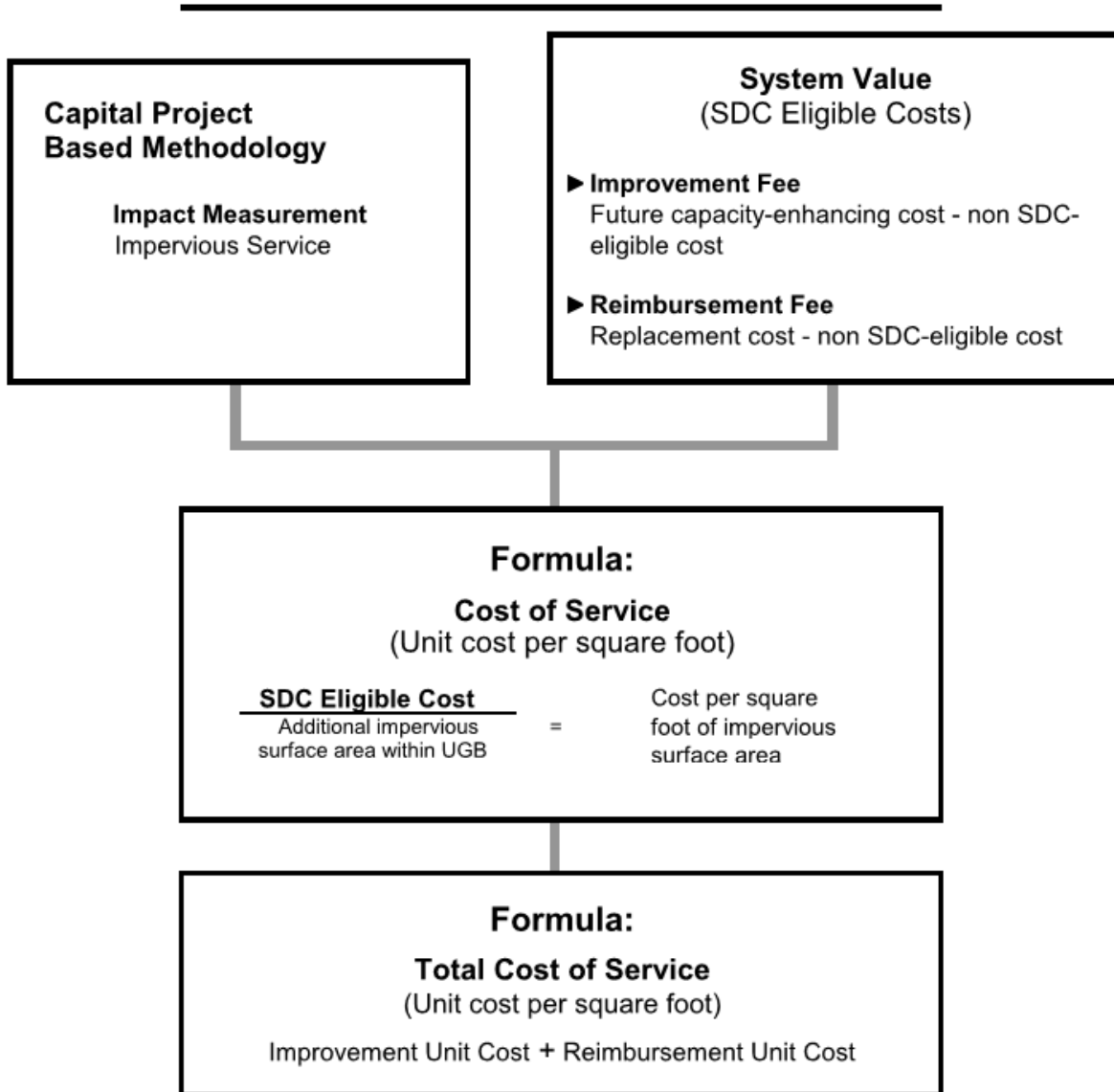
- 1) Development sites not subject to the standards for stormwater quality of Eugene Code 1971 section 9.6792 (3), but which treat a minimum of 20% of the total impervious area of the development site through privately maintained techniques and facilities in a manner which meets said standards;
- 2) Development sites where a portion of the site impervious area is subject to the standards for stormwater quality of Eugene Code 1971 section 9.6792 (3) and for which approved privately maintained stormwater management facilities are constructed which treat runoff from 20% or more impervious area than the minimum required, or which reduce a minimum of 20% of the total impervious area of the development site through use of impervious area reduction techniques specified in Eugene's adopted Stormwater Management Manual;

- 3) Development sites where all of the site impervious area is subject to the standards for stormwater quality of Eugene Code 1971 section 9.6792 (3) which reduce a minimum of 20% of the total impervious area of the development site through use of impervious area reduction techniques specified in Eugene's adopted Stormwater Management Manual.

A single-level stormwater quality SDC credit of 50% of the LID capacity component of the stormwater SDC is applied to development required to pay the LID component and installing an approved on-site mechanical treatment facility that treats all site impervious area subject to the standards for stormwater quality of Eugene Code 1971 section 9.6792 (3).

FIGURE 5

Stormwater System



NOTE: The costs per unit of measure, can be found in Table 8 and the SDC fee schedule in Appendix F.

TABLE 8

Stormwater Drainage Systems Development Charge Analysis

1. Existing Stormwater Drainage System Value & SDC-Eligible Costs		(Reimbursement Fee)
Total Replacement Cost - Existing Pipe System		\$345,704,684
Total Replacement Cost - Existing Open Channel Systems		\$98,817,731
Total Replacement Cost, Existing (Replacement Cost New)		\$444,522,415
Percent of Existing Pipe System to be Used by New Development		4.27%
Percent of Existing Open Channel system to Used by New Development		2.34%
Total SDC-Eligible Cost - Existing Pipe*		\$14,761,591
Total SDC-Eligible Cost - Existing Open Channel Systems*		\$2,312,336
Total SDC-Eligible Cost, Existing System		\$17,073,927
* Based on percent available capacity per hydraulic model		

2. Future Stormwater System SDC-Eligible Project Costs		(Improvement Fee)
Total Est. Cost, Future System (SDC-Eligible Projects)	(From Table 9)	\$42,149,922
SDC-Eligible Portion of Project Cost, Future System (excluding LID capacity)	(From Table 9)	\$18,800,662
SDC-Eligible Portion of Project Cost for Future System LID Capacity	(From Table 9)	\$8,513,629

3. Stormwater System Calculation Details		
Single-Family Dwelling (SFD), estimated average impervious surface area		
Small Residential	(building footprint ≤ 1,000 sq. ft.)	1,800 sq. ft.
Medium Residential	(building footprint >1,000 sq. ft. and < 3,000 sq.ft.)	2,900 sq. ft.
Mfg. Home Park Space,	estimated average impervious surface area	1,780 sq. ft.
Total Additional Impervious Surface Area within UGB (build-out)		155,770,560 sq. ft.
Total Additional Impervious Surface Area within UGB (build-out) requiring LID capacity		4,650,000 sq. ft.

4. Calculation of SDC*		
Unit Cost per Square Foot, Improvement Fee	[\$18,800,662 / 155,770,560]	\$0.1207
Unit Cost per Square Foot, Improvement Fee for LID capacity component	[\$8,513,629 / 4,650,000]	\$1.8309
Unit Cost per Square Foot, Reimbursement Fee	[\$17,073,927 / 155,770,560]	\$0.1096
Total Unit Cost per Square Foot for General Capacity	[Improvement + Reimbursement]	\$0.2303
Total Unit Cost per Square Foot with LID component	[Improvement + LID + Reimbursement]	\$2.0612
Small Residential SDC	(building footprint ≤ 1,000 sq. ft.)	1,800 sq. ft. x \$0.2303
Medium Residential SDC	(building footprint >1,000 sq. ft. and < 3,000 sq.ft.)	[2,900 sq.ft x \$0.2303]
Small Duplex SDC	(unit building footprints ≤ 1,000 sq. ft.)	[\$414.54 x 2]
Medium Duplex SDC	(unit building footprints >1,000 sq. ft. and < 3,000 sq.ft.)	[\$667.87 x 2]
Mfg. Home Park SDC per Space (portion of total charge)		[1,684 sq. ft. x \$0.2303]
Small Residential SDC with LID	(building footprint ≤ 1,000 sq. ft.)	1,800 sq. ft. x \$2.0612
Medium Residential SDC with LID	(building footprint >1,000 sq. ft. and < 3,000 sq.ft.)	[2,900 sq.ft x \$2.0612]
Small Duplex SDC with LID	(unit building footprints ≤ 1,000 sq. ft.)	[\$3,710.16 x 2]
Medium Duplex SDC with LID	(unit building footprints >1,000 sq. ft. and < 3,000 sq.ft.)	[\$5,977.48 x 2]
Mfg. Home Park SDC per Space (portion of total charge) with LID		[1,684 sq. ft. x \$2.0612]

*See Appendix F for complete rate schedule.

TABLE 9
City of Eugene

2003 Stormwater SDC-Eligible Project List

Project Name	Estimated Project Cost	Total SDC-Eligible Cost
Martin Drive Pipe Improvements (02-07 CIP)	\$150,541	\$150,541
Mt. Cavalry Pipe Improvements	\$1,235,418	\$300,507
Frederick Court Pipe Daylight	\$191,497	\$88,089
43rd Avenue Pipe Improvements	\$3,489,180	\$1,116,538
Morse Park Ranch Park Pipe Improvements	\$1,706,956	\$187,765
Laurelwood Flood Control Fac/Pipe Imps	\$3,251,063	\$487,659
Jackson Street Pipe Improvements	\$125,289	\$31,322
Windsor Circle Pipe Improvements	\$1,487,617	\$956,325
West Hawkins Lane Water Quality Facility	\$1,012,194	\$819,395
Bell Avenue (Increase Pipe Sizes Along)	\$1,286,245	\$591,673
Empire Park Pond Retrofit	\$623,212	\$124,642
Royal Node Stormwater Infrastructure	\$2,266,226	\$2,266,226
Greenhill Tributary Storm Improvements Ph 2	\$605,406	\$206,388
Greenhill Tributary Water Quality Facility	\$1,212,109	\$363,633
Roosevelt Channel - Culvert Improvement	\$219,985	\$69,469
A-1 Main Channel Culvert & Open Waterway Improvements	\$833,324	\$133,332
Lynnbrook Drive Open Waterway & Culvery Improvements	\$780,877	\$234,263
Spring Creek Bridge Construction & Waterway Improvements	\$225,490	\$51,863
Sanders Street Water Quality Facility	\$1,209,679	\$60,484
Spring Creek Drive Water Quality Facility	\$382,991	\$76,598
Kirsten Street Pipe Improvements	\$619,973	\$179,792
Hunsacker - Open Channel Improvements (02-07 CIP)	\$644,253	\$386,876
Lenox/Salty - Culvert Replacement (02-07 CIP)	\$278,422	\$166,730
Hunsacker Culvert Replacement (02-07 CIP)	\$42,090	\$25,901
Division Avenue Tip-Up Pipe Replacement	\$17,630	\$4,055
Irvington Drive Water Quality Facility	\$1,058,328	\$148,166
St. Peter School Culvert Replacement	\$89,735	\$26,921
River Point Pond Outlet Channel	\$604,273	\$247,752
Gilham Road System Culvert Replacement	\$43,707	\$43,707
Gilham Road System Water Quality Facility	\$1,058,491	\$105,849
Ascot Park Open Waterway Modification	\$116,874	\$77,137
3rd-4th Connector Stormwater Improvements (02-07 CIP)	\$194,248	\$194,248
Beaver St & Hunsaker Ln Stormwater Improvements	\$80,937	\$80,937
Greenhill Rd Stormwater Improvements	\$161,876	\$161,876
Irvington Drive - Stormwater (02-07 CIP)	\$161,876	\$161,876
Kinney Park Flow Diversion & Restoration	\$1,003,615	\$742,675
River Road - Stormwater (02-07 CIP)	\$80,937	\$80,937
Royal Ave., Terry to Greenhill	\$161,876	\$161,876
Services for New Development (\$100,000/year)	\$5,503,693	\$5,503,693
Streambank Stabilization (\$ varies/year)	\$7,931,793	\$1,982,948
Total for General System Capacity Projects	\$42,149,922	\$18,800,662
LID Facilities in conjunction with Pavement Preservation Program	\$6,324,995	\$6,324,995
LID Facilities in conjunction with Drywell Elimination Program	\$2,491,330	\$2,188,633
Total for LID System Capacity Projects	\$8,816,325	\$8,513,629