Rates in Effect September 1, 2017

System Development Charge Methodologies

Appendix C1 Excerpt

(Local Wastewater 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 C1

Local Wastewater System Charge Detail

1.0 Local Wastewater System Methodology

1.1 Local Wastewater SDC Formula

The general methodology used to develop SDCs includes the following four steps:

- Determine value of growth-related capacity
- Define system capacity
- Calculate unit cost of growth-related capacity
- Develop SDC rate schedule

Each step is discussed below and related information is displayed in Table 6.

1.1.1 Step 1 — Determine Value of Growth-Related Capacity (In 1998 dollars -- see current values in Table 6)

In Eugene, as in most communities, a portion of the capacity needed to serve new development will be met through a combination of existing available system capacity, and additional capacity added by planned system improvements. The reimbursement fee is intended to recover the costs associated with the growth-related (or available) capacity in the existing system, and the improvement fee is based on the costs of capacity-increasing future improvements needed to meet the demands of growth.

<u>Reimbursement Fee</u>

Calculation of the reimbursement fee begins with a review of utility fixed asset records to determine the value of the existing local wastewater system. The system value is based on Replacement Cost New which is a method that involves assigning asset values on the basis of what it would cost in current dollars to construct an equivalent set of infrastructure assets subject to current market conditions, regulatory requirements, and technological advances. The total value of the existing local wastewater system, including gravity lines (net of assessments), force mains (or pressure lines), and pump stations was estimated to be $96.1 million. Approximately $8.9 million of assets were funded from grants. Like assessments, grant funds are deducted from the system value in the SDC analysis because general system users did not fund these assets. Net of grants, the total value of the existing system is approximately $87.2 million.

Because reimbursement fees are intended to recover the value of the system's unused or available capacity, the total equity in the system is split between existing customers and new development based on the estimated proportionate use of capacity. The reimbursement cost basis is equal to the system equity associated with the capacity available to serve new customers. Approximately 52% of the existing system is available to meet the demands of new customers. Therefore, the value of available (or growth-related) capacity in the existing system is $45.3 million (net of grants).

<u>Improvement Fee</u>

Calculation of the improvement fee begins with a review of the utility's wastewater master plan to determine which, or what portion of, improvements are needed to provide capacity for new development. System capacity may be expanded through the upgrade of existing facilities or the construction of new facilities. The costs of the capacity-increasing improvements are projected based on standard cost-estimating techniques. The planned capacity-increasing improvements are projected to total $8.6 million (in 1998 dollars). These improvement costs are also net of assessments.

Combined, the reimbursement fee cost basis and the improvement fee cost basis represent the value of growth-related capacity, which is $53.9 million.

1.1.2 Step 2 — Define System Capacity

As mentioned previously, the total growth-related capacity includes available capacity in the existing system, and future capacity added by planned system improvements. Wastewater system capacity is measured in terms of the amount of flow that can be collected. Flow is measured in millions of gallons per day (mgd).

The City's Wastewater Master Plan identifies build-out capacity as 48.9 mgd. In order to reach that capacity, the City must construct an additional $8.6 million of improvements. Assuming that the unit cost of existing and future capacity is the same (in terms of replacement value), then the existing capacity of the system can be estimated as 44.5 mgd (in proportion to the system value that has been constructed.) The available capacity of 23.1 mgd (52%) is simply the difference between the estimated existing capacity and existing flows.

The additional capacity added by the improvements is estimated to be 4.4 mgd (the difference between build-out capacity and existing capacity.) Therefore, the total growth-related capacity is 27.5 mgd.

1.1.3 Step 3 — Calculate Unit Cost of Growth-Related Capacity (In 1998 dollars -- see current values in Table 6)

The unit cost of growth-related capacity is determined by dividing the growth-related costs identified in Step 1, by the growth-related capacity defined in Step 2. The unit cost is stated in terms of dollars per mgd. The total growth-related costs are $53.9 and the growth-related capacity is 27.5 mgd. Therefore, the unit cost of growth-related capacity is approximately $2 million per mgd.

1.1.4 Step 4 — Develop SDC Rate Schedule

The SDC rate schedule uses scaling measures that are designed with the intent that customers who are larger, or use infrastructure systems more intensively, pay the associated costs of capacity required to serve them. Fees for residential customers are computed by multiplying the unit costs of capacity by the capacity requirements of a typical user. Residential customers are then charged differential fees based on the attribute of square feet of living space of the development. Non-residential customers are assessed based on plumbing fixture units and land use type.

For more detailed information on the local wastewater rate schedule, see Table 7. For formula and calculation details, see Appendix F.

1.2 Residential Development Rates

An analysis based upon 1997 Eugene Water & Electric Board (EWEB) residential account data indicated a correlation between water usage and square feet of living area. The resultant SDC rate structure, applies a charge for every residential dwelling unit (be it a single-family home, a single-family accessory unit, each space of a mobile home park, each unit of a duplex, or each unit of an apartment complex) of a base rate plus the total living area in square feet multiplied by a rate factor. Additions to residential units that increase the living area will be charged per square foot of increased living area by the same rate factor. For current rates, see Appendix F.

1.3 Non-Residential Development Rates

The SDC rate structure for non-residential development applies a land use factor to the number of Plumbing Fixture Units (PFUs) for a development. This factor is intended to capture different intensities of use of plumbing fixtures by different types of non-residential customers. The factors were developed based on an analysis of actual water usage by land use category, correlated to PFUs. The number of PFUs for a particular development is determined using the PFU tables and calculation methods contained in the applicable Plumbing Code at the time of permit application.

The local wastewater rate schedule shown in Table 7 reflects rates per PFU for various development types indicated by an SDC use code. Developments are assigned an SDC use code based on the HUD/BPR land use code assigned at the time of permit application. For development types that are not included in the HUD/BPR land use codes a default PFU flow assignment, based on the average flow per PFU of all records in the data sample used to determine flow per PFU by land use category, will be used to calculate the SDC charge. When, due to extraordinary wastewater discharge flow, it has been determined by the City Engineer that PFU flow assignment as reflected in the rate table is not a reliable measure of the development's claim on system capacity, the SDC charge will be based on the development's estimated daily wastewater flow when in full use or production. The City Engineer may require that the owner(s) enter into an agreement with the City to review water usage or wastewater discharge at such time that the development is in full use or production.

T A B L E 6

Local Wastewater System Development Charge Analysis

1. Analysis of System Value	
Total Replacement Cost - Pipe	$644,408,484
Total Replacement Cost - Pumping Stations	$24,600,233
City Cost of future projects within UGB	$15,404,090
Other Wastewater Components	$5,049,356
Total Cost of Existing Wastewater System	**$689,462,164**

2. Analysis of Assessable Amount	
Size	Total Cost
6-inch	$14,641,676
8 to 48-inch	$487,216,521
Total Assessable Cost	**$501,858,197**

3. Capacity Information	
Total City System Capacity in mgd	**49.0**

4. Calculation of Wastewater SDC	
Total System Valuation, existing and planned	$689,462,164
Cost per unit of capacity per gallon	$3.50
Residential Rate Structure	$462.40 per RDU + $0.1121 per sq. ft. of living area
Non-Residential Rate Structure	See Table 7

5. Calculation of Reimbursement Percentage		
City System Capacity (EDUs) in mgd	49.0	100.00%
Existing Use in mgd	21.4	43.7%
Percent Available for New Development in mgd	27.6	56.3%
Total Value of Reserve Capacity (value of system)	$96,413,581	100.00%
Value of Increased Capacity (cost of future projects UGB- Master Plan)	$15,324,095	15.98%
Value of Reimbursable Capacity (previously paid value-existing users)	$81,009,630	84.02%

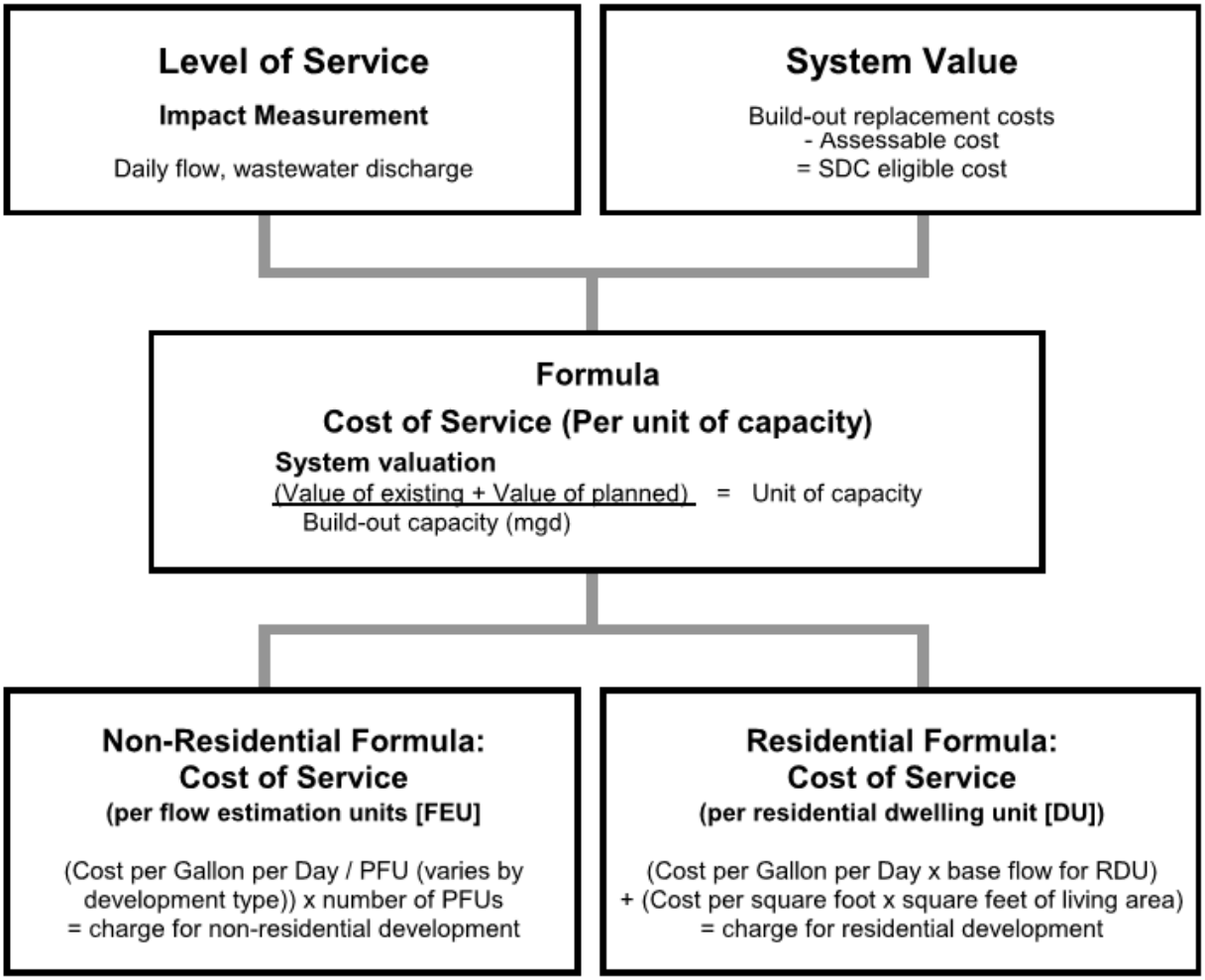
T A B L E 7

Local Wastewater Plumbing Fixture Unit Rates

Eugene Local Wastewater SDC Use Code*	Description	Average Daily Flow per PFU	Cost per PFU (Flow per PFU x $3.50*)
1F	Single-Family / Duplex Housing	$462.40 + (Sq Ft Living Area x $0.1121)	
1X	Mixed Use with Residential	$462.40 + (Sq Ft Living Area x $0.1121)	
11	Multi-Family Housing	$462.40 + (Sq Ft Living Area x $0.1121)	
12 A, B, & C	Elderly Housing Attach, Detach, & Group/Retirement Home	$462.40 + (Sq Ft Living Area x $0.1121)	
13	Residential Hotel	$462.40 + (Sq Ft Living Area x $0.1121)	
14	Mobile Home Park	$462.40 + (Sq Ft Living Area x $0.1121)	
15	Hotels, Motels, Lodging	19.05	$66.73
21	Beverage/Food Mfg	39.87	$139.55
24	Wood Products	47.93	$167.90
2X	Light Mfg./Printing	56.62	$198.34
3X	Manufacturing	58.65	$205.45
4X	Transportation & Utilities	18.22	$63.82
41	Fire Station	7.75	$27.15
51	Wholesale Trade	21.37	$74.86
54	Retail Trade / Grocery	55.46	$194.28
55	Retail Trade Automotive	7.83	$27.43
59	Retail Trade Other	39.91	$139.80
5A	Restaurant - Fast Food	25.44	$89.12
5B	Restaurant - Low to Med Turnover	62.47	$218.83
5C	Restaurant - Higher Turnover	22.45	$78.64
5D	Drinking Establishments	54.98	$192.59
5E	Take/Bake & Pick Up/Delivery Establishments	26.49	$92.79
5X	Retail Trade / Clothing & Dry Goods	12.35	$43.26
61	Financial Offices / Banks	16.99	$59.52
62	Other Services	28.51	$99.87
63	Rental/Storage Services	6.49	$22.73
64	Automotive & Other Repair Services	16.17	$56.64
65	Medical Services	28.75	$100.71
66	Construction Trade Services	13.69	$47.96
67	Government Services, Office/Business Parks	Based on specific use of development	
68	Education / Cultural	15.66	$54.86
69	Churches/Clubs/Organizations	15.70	$55.00
6A1	Laundry Services (Linen, Uniform)	538.96	$1,887.97
6A2	Laundry, Self-Service	299.64	$1,049.63
6A3	Dry Cleaning Service (with or w/out laundry services)	36.30	$127.16
6B	Car Wash	264.54	$926.68
6X	Professional/Real Estate/Insurance	67.76	$237.36
7X	Entertainment, Recreation & Sports	88.42	$309.73
82	Veterinarian Service	24.79	$86.84
*The unit cost of capacity for the local wastewater system is $3.50 per gallon per day.			
The flow per Plumbing Fixture Unit (PFU) is stated as gallons per day based on the size of development and type of land use.			
Land use types that do not fit into the above categories will receive a default flow assignment based on the sample average.			
The default flow is 47.93 gal/day x $3.50 = a cost per PFU of $167.76.			

A rate per PFU may be assigned by the City Engineer should a proposed use not be represented by one of the published SDC use codes and for which a default flow assignment is not representative of the proposed flow. In the case of those proposed developments that are determined to have a potential for exceptional water usage, the City Engineer may require that the Owner(s) enter into an agreement with the City to review water usage or wastewater discharge at such time the development is in full use or production as the final basis of the local wastewater SDC. A complete list of wastewater SDC/HUD BPR use codes is provided in Table 8.

Effective Sept-1-2017.

FIGURE 4

Local Wastewater System