Methodology Report

Stormwater System Development Charges

Prepared For

City of Sherwood

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SECTION 1

Introduction

Oregon legislation establishes guidelines for the calculation of system development charges (SDCs). Within these guidelines, local governments have latitude in selecting technical approaches and establishing policies related to the development and administration of SDCs. A discussion of this legislation follows, along with the methodology for calculating updated sanitary sewer SDCs for the City of Sherwood (the City).

SDC Legislation in Oregon

In the 1989 Oregon state legislative session, a bill was passed that created a uniform framework for the imposition of SDCs statewide. This legislation (Oregon Revised Statute [ORS] 223.297-223.314), which became effective on July 1, 1991, (with subsequent amendments), authorizes local governments to assess SDCs for the following types of capital improvements:

- Drainage and flood control
- Water supply, treatment, and distribution
- Wastewater collection, transmission, treatment, and disposal
- Transportation
- Parks and recreation

The legislation provides guidelines on the calculation and modification of SDCs, accounting requirements to track SDC revenues, and the adoption of administrative review procedures.

SDC Structure

SDCs can be developed around two concepts: (1) a reimbursement fee, and (2) an improvement fee, or a combination of the two. The **reimbursement fee** is based on the costs of capital improvements *already constructed or under construction*. The legislation requires the reimbursement fee to be established or modified by an ordinance or resolution setting forth the methodology used to calculate the charge. This methodology must consider the cost of existing facilities, prior contributions by existing users, gifts or grants from federal or state government or private persons, the value of unused capacity available for future system users, rate-making principles employed to finance the capital improvements, and other relevant factors. The objective of the methodology must be that future system users contribute no more than an equitable share of the capital costs of *existing* facilities. Reimbursement fee revenues are restricted only to capital expenditures for the specific system with which they are assessed, including debt service.

The methodology for establishing or modifying an **improvement fee** must be specified in an ordinance or resolution that demonstrates consideration of the *projected costs of capital improvements identified in an adopted plan and list*, that are needed to increase capacity in the system to meet the demands of new development. Revenues generated through improvement fees are dedicated to capacity-increasing capital improvements or the repayment of debt on such improvements. An increase in capacity is established if an improvement increases the level of service provided by existing facilities or provides new facilities.

In many systems, growth needs will be met through a combination of existing available capacity and future capacity-enhancing improvements. Therefore, the law provides for a **combined fee** (reimbursement plus improvement component). However, when such a fee is developed, the methodology must demonstrate that the charge is not based on providing the same system capacity.

Credits

The legislation requires that a credit be provided against the improvement fee for the construction of "qualified public improvements." Qualified public improvements are improvements that are required as a condition of development approval, identified in the system's capital improvement program, and either (1) not located on or contiguous to the property being developed, or (2) located in whole or in part, on or contiguous to, property that is the subject of development approval and required to be built larger or with greater capacity than is necessary for the particular development project to which the improvement fee is related.

Update and Review

The methodology for establishing or modifying improvement or reimbursement fees shall be available for public inspection. The local government must maintain a list of persons who have made a written request for notification prior to the adoption or amendment of such fees. The legislation includes provisions regarding notification of hearings and filing for reviews. The notification requirements for changes to the fees that represent a modification to the methodology are 90-day written notice prior to first public hearing, with the SDC methodology available for review 60 days prior to public hearing.

Other Provisions

Other provisions of the legislation require:

- Preparation of a capital improvement program (CIP) or comparable plan (prior to the establishment of a SDC), that includes a list of the improvements that the jurisdiction intends to fund with improvement fee revenues and the estimated timing, cost, and eligible portion of each improvement.
- Deposit of SDC revenues into dedicated accounts and annual accounting of revenues and expenditures, including a list of the amount spent on each project funded, in whole or in part, by SDC revenues.
- Creation of an administrative appeals procedure, in accordance with the legislation, whereby a citizen or other interested party may challenge an expenditure of SDC revenues.

The provisions of the legislation are invalidated if they are construed to impair the local government's bond obligations or the ability of the local government to issue new bonds or other financing.

SECTION 2

Stormwater SDC Methodology

Overview

The general methodology used to calculate stormwater SDCs begins with an analysis of system planning assumptions to determine growth's capacity needs, and how they will be met through existing system available capacity and capacity expansion. Then, the capacity to serve growth is valued to determine the "cost basis" for the SDCs, which is then divided by the total growth capacity units to determine the system-wide unit costs of capacity. The final step is to determine the SDC schedule, which identifies how different developments will be charged, based on their estimated capacity requirements.

Growth Capacity Needs

The amount of impervious surface area is the most common method of measuring the volume of runoff, or capacity needs placed on a stormwater system by its users. Impervious areas are hard surfaces including (but not limited to) rooftops, driveways, walkways, and parking lots, that cause more runoff from an area than existed prior to the development. The greater the amount of impervious area on a lot, the greater the amount of runoff generated from that lot.

While several other factors can influence the amount of runoff, the amount of impervious surface area is generally considered the primary determinant of the volume of runoff and the primary cause of any increase in the rate of runoff. For this reason, impervious area is the most common and equitable billing method used in communities around the country for charging for stormwater service and SDCs.

A typical residential lot is estimated to have 2,640 square feet (SF) of impervious area, based on information from Clean Water Services. To estimate future stormwater equivalent service units (ESUs) to be served by the system, the projected growth in impervious area (from the GIS data developed in the Stormwater Master Plan) was divided by 2,640 SF per ESU. As shown in Table 1, the projected growth in ESUs is 7,710. This is accounted for through projected increases in ESUs in three growth areas within the City: infill of the Urban Growth Boundary, Brookman Concept Area, and Tonquin Employment Area.

Table 1
Projected Growth in Stromwater ESUs

EDUs	Growth
Infill Urban Growth Boundary	3,210
Brookman Concept Area	1,690
Tonquin Employment Area	2,810
Total Growth ESUs	7,710

Sources: Stormwater Master Plan

SDC Cost Basis

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; the improvement fee is based on the costs of capacity-increasing future improvements needed to meet the demands of growth. The value of capacity needed to serve growth in aggregate within the planning period is referred to as the "cost basis".

Reimbursement Fee Cost Basis

Table 2 shows the inflated system value of the City's stormwater system. With the concurrence of City staff, and according to previous system development charge reports prepared for the City, it is assumed that all assets acquired prior to the year 2000 were donated, grant-funded, and/or constructed by private development, and were excluded from the cost basis. An additional $9.1 million of asset value was identified by the City as funded by private development, so is excluded from the cost basis. For the remaining infrastructure constructed after 2000, the City's Master Plan consultant estimated unused capacity of 20 percent in the stormwater system, based on an analysis of hydraulic modeling data. The reimbursement fee cost basis is about $1.6 million.

Table 2
Stormwater Reimbursement Fee Cost Basis

Description	Inflated Cost[1]	City Cost	Growth Share %	Growth Share $
Infrastructure				
Original Assets (Pre - 2000)	$35,147,896	$0	20%	$0
Private Development	$9,084,872	$0	20%	$0
Post 2000 Infrastructure	$7,877,721	$7,877,721	20%	$1,575,544
Total	**$52,110,489**	**$7,877,721**		**$1,575,544**

Source: Costs from City fixed asset records; growth % from Murraysmith.
[1]Reflects ENR Construction Cost Index = 12,133

Improvement Fee Cost Basis

Planned future local stormwater system capacity-increasing improvements to be funded by the City[1] are shown in **Table 3**. System capacity may be expanded through the upgrade of existing facilities or the construction of new facilities. Table 3 identifies the portion of each project that is related to meeting the capacity needs of future growth, as determined by the City's Master Plan consultant. A portion of Master Plan costs are also included (based on the portion of the City-funded project costs that are growth related). The cost basis also includes the full cost of the SDC study.

[1] For pupose of evaluating the City's local stormwater SDC, the cost of improvements to the regional system operated by Clean Water Services (CWS) are excluded.

Table 3
Stormwater SDC Project List

PROJECT	Time Period	Cost Estimate	SDC-Eligible Portion[1] %	SDC-Eligible Portion[1] $
Condition Projects				
SW Willamette St., etc.	15-Year	$370,000	20%	$74,000
SW Merryman St, N to SW Oregon St.	20-Year	$680,000	20%	$136,000
SW Lower Roy St. to SW Oregon, etc.	20-Year	$580,000	20%	$116,000
SW Galbreath Dr.	20-Year	$80,000	20%	$16,000
SW Meinecke Rd	20-Year	$70,000	20%	$14,000
SW Sherwood Blvd & Langer Dr, etc.	20-Year	$330,000	20%	$66,000
Subtotal		**$2,110,000**		**$422,000**
Stormwater Management				
NW 2nd St. & NW Park St. SW Facility Rehab (design)	5-Year	$353,000	0%	$0
Proprietary Catch Basin SW St. Charles Way	5-Year	$85,000	0%	$0
Proprietary Catch Basin SW St. Charles Way	5-Year	$95,000	0%	$0
Swale SW Washington St & SW Meinecke Rd	5-Year	$110,000	2%	$2,200
Extended Detention Basin; Existing Ponds SW Oregon	10-Year	$3,248,089	42%	$1,364,197
Gleneagle Dr SW Facility	10-Year	$615,000	17%	$104,550
Extended Detention Basin SW Pacific Hwy	20-Year	$220,000	39%	$85,800
Swale SW Willamette	20-Year	$120,000	7%	$8,400
Swale SW Murdock Rd.	20-Year	$120,000	0%	$0
Extended Detention Basin SW Murdock Rd	20-Year	$330,000	57%	$188,100
Riparian Area Planting; Confluence to SW Sunset Blvd	20-Year	$344,000	0%	$0
Subtotal		**$5,640,089**		**$1,753,247**
Cost Estmates for Water Quality/ Hydromodification Facilities on future streets[2]				
Ice Age Road - Entire road from Oregon St. to WWSP	20-Year	$1,400,000	100.0%	$1,400,000
Brookman Road				
West HWY 99 to Middlebrook	20-Year	$2,400,000	100.0%	$2,400,000
M - By Riverside and Reserves at CC	20-Year	$1,100,000	100.0%	$1,100,000
East - CC to Ladd Hill Road	20-Year	$1,600,000	100.0%	$1,600,000
Subtotal		**$6,500,000**		$6,500,000
Planning				
Rate Study	5-Year	$6,000	0%	$0
SDC Study	5-Year	$7,000	100%	$7,000
Master Plan	20-Year	$250,000	41%	$101,370
Public Works Facility	10-Year	$1,450,000	41%	$587,946
Hydromodification Study	10-Year	$125,000	41%	$50,685
Subtotal		**$1,838,000**		**$747,001**
Total		**$16,088,089**		**$9,422,248**

[1] Condition projects based on existing system average available capacity; stormwater management projects SDC % based on Master Plan; planning projects reflect average project list SDC share.
[2] Any qualified developer constructed improvements will be provided SDC credits in accordance with the City's credit policy.

SDC Schedule

The reimbursement and improvement unit costs of capacity are determined by dividing the reimbursement and improvement fee cost bases, by the growth-related ESUs shown in Table 1. As shown in **Table 4**, the SDC per ESU is $1,462 and is comprised of $1,222 improvement fee and $204 reimbursement fee. Based on an impervious surface allowance per ESU of 2,640 (from Table 1), the resulting SDC on a per square-foot basis is $0.55 per square foot.

Table 4
Local Stormwater SDC Calculation

	Improvement	Reimbursement	Compliance	Total
Growth-related cost	$9,422,248	$1,575,544	$278,036	$11,275,829
Growth ESUs	7,710	7,710	7,710	
Full Cost per ESU	**$1,222**	**$204**	**$36**	**$1,462**
***Net of Credit*[1]**				***$804***

[1]45 percent of SDC is assumed credited for construction of on-site water quality management facilties that meet or exceed Clean Water Services requirements.

Compliance Costs

Local governments are entitled to spend SDC revenue on costs associated with complying with the SDC statutes. Compliance costs include staff time related to developing the SDC methodology, and annual accounting and other administrative costs. **Table 5** shows the calculation of the compliance charge per ESU, which is estimated to be $36.

Table 5
Stormwater Compliance Charge

Item	Annual $
Staff Support of SDC Study	$2,411
Staff Accounting	$972
Financial Management	$6,684
Engineering	$2,755
Accounting	$1,080
Total Compliance Costs	$13,902
Estimated Annual ESUs	386
Cost per ESU	$36

Stormwater SDC Credits

Per Clean Water Services (District) policy, new developments that provide on-site water quantity or quality improvements, are entitled to a credit in SDC fees. Improvements that meet or exceed the requirements in the District's Design & Construction Standards are eligible for 100 percent credit on the local portion of the regional stormwater SDC. As a result of this policy, little (if any) revenue from the regional SDCs is available to the City.

For purposes of charging the City's own (supplemental) stormwater SDC, only a water quality SDC credit, equal to 45 percen of the fee will be provided to developments that meet the District's meet or exceed the requirements in the District's Design & Construction Standards. Local stormwater facilities are designed to manage flows from rights-of-way and from adjacent properties and even with the existence of onsite facilities. The direct or indirect benefit a development receives from City stormwater management facilities is not eliminated by the presence of onsite stormwater management facilities designed based on District standards.

Table 4 shows the net SDC, with 45 percent credit on the improvement fee, which equals $804 per ESU. Water quality credits are in addition to any credits for construction of qualified public improvements, as required by Oregon SDC statutes.

Inflationary Adjustments

The SDCs may be adjusted annually based on a standard inflationary index. Specifically, the City uses the Engineering News Record (ENR) construction cost index for Seattle as the basis for adjusting the SDCs.