

# WATER SYSTEM DEVELOPMENT CHARGE

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This report summarizes the methodology and analysis undertaken in completing the System Development Charge (SDC) update, including the results and conclusions of the study, and recommendations.

## SYSTEM DEVELOPMENT CHARGES

System development charges are one-time fees imposed on new and increased development to recover the cost of system facilities needed to serve that growth. This report provides the rationale and calculations for a proposed water SDC.

### Methodology

An SDC can include two components: (1) a reimbursement fee and (2) an improvement fee.

#### 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 available capacity, no reimbursement fee may be charged.

#### Improvement Fee

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

Growth should be measured in units that most directly reflect the source of demand. For the City’s water utility, growth is measured in Equivalent Residential Units (ERUs). One ERU represents the water service needs of an average single-family residence.

#### Adjustments

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.”

An adjustment in this report is the deduction of existing SDC fund balance(s) from eligible costs. If this adjustment were not made, the City could collect more SDCs than it could legally spend.

#### Growth

Using data from the 2012 Water System Master Plan Update and the 2010 Census Demographic Profile, the City’s current water customer base is 2,082 equivalent residential units (ERUs). This is

calculated based on average day demand in the Master Plan Update of 0.90 million gallons per day (MGD), which is equal to 900,000 gallons per day (GPD). The Master Plan Update also states that “estimated average daily water usage is assumed to be approximately 165 gpcd [gallons per capita per day]”. 2010 census data states that the average household size in Veneta is 2.62, which defines the number of persons per ERU. The total estimate of 2,082 ERUs is then calculated by dividing the average day demand by the number of gallons per day of water usage per ERU, which is calculated by multiplying the per capita demand by persons per ERU (165 x 2.62 = 432).

Based on the projected system growth to build out population in the City’s Water System Master Plan Update, the City will add 2,668 ERUs. **Exhibit 1** presents the calculations behind this projected growth.

#### Exhibit 1: Growth in ERUs

Customer Base	Current Conditions	End of Period	Net Growth										
<b>Total # of ERUs</b>	<b>2,082</b>	<b>4,750</b>	<b>2,668</b>										
<table border="1"> <tr> <td>MGD Average Day Demand</td> <td>0.90</td> </tr> <tr> <td>GPD Average Day Demand</td> <td>900,000</td> </tr> <tr> <td>GPD Per Capita</td> <td>165</td> </tr> <tr> <td>Persons Per ERU</td> <td>2.62</td> </tr> <tr> <td><b>Total ERUs</b></td> <td><b>2,082</b></td> </tr> </table>				MGD Average Day Demand	0.90	GPD Average Day Demand	900,000	GPD Per Capita	165	Persons Per ERU	2.62	<b>Total ERUs</b>	<b>2,082</b>
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Sources: Water System Master Plan, 2012 Update;  
2010 Demographic Profile Data - American Fact Finder (U.S. Census Bureau)  
MGD = Million Gallons per Day, GPD = Gallons per Day

Source Water System Master Plan, 2012 Update

## Eligible Costs

The City has SDC-eligible costs in both its existing water facilities and its planned capital projects.

### Reimbursement Fee

The City has collected a water SDC for a number of years, and has used the proceeds to construct needed water facilities for future users. In lieu of performing a detailed system inventory and analyzing water assets for unused capacity, current unused capacity was calculated by reducing the SDC expenditure total for each year proportionally by the estimated ERU growth that has occurred since that year. The resulting total of unused capacity in the existing system was \$1,744,202. Because the City’s water infrastructure has that excess capacity that is available to serve growth, the City can charge a reimbursement fee as part of its water SDC. **Exhibit 2** summarizes the SDC-eligible cost of available capacity.

### Exhibit 2: Reimbursement Fee

Year of Water SDC Expenditures	Expenditures	% of Unused Capacity	Cost of Unused Capacity
FY 2003	\$ -	68.0%	\$ -
FY 2004	349,100	76.0%	265,244
FY 2005	80,000	76.0%	60,784
FY 2006	80,000	80.7%	64,579
FY 2007	306,400	80.7%	247,339
FY 2008	390,520	82.0%	320,284
FY 2009	181,065	83.4%	151,002
FY 2010	139,060	84.9%	118,031
FY 2011	86,110	86.5%	74,458
FY 2012	501,792	88.2%	442,482
	<b>\$ 2,114,048</b>		<b>\$ 1,744,202</b>
Growth in ERUs			2,668
<b>Reimbursement Fee per ERU</b>			<b>\$ 654</b>

To the extent that assets on this list were funded by debt, proceeds from a reimbursement fee should be used to pay debt service.

When the SDC-eligible cost of \$1,744,202 is divided by the expected growth of 2,668 ERUs, the resulting reimbursement fee is \$654 per ERU.

### Improvement Fee

Based on the capital improvement plan (CIP) developed by Murray, Smith & Associates, Inc., the City will construct water facilities with an estimated cost of \$16,900,899 over the planning period. However, not all of these projects will serve growth. Only the growth-related portion of each project can be collected as the improvement fee component of an SDC. **Exhibit 3** shows the growth-related portion of the planned water projects.

**Exhibit 3: Improvement Fee**

No.	CIP Project Description	Total Cost	% Growth	\$ Growth
1	<b>Long-Term Water Supply Development - updated cost</b>	\$ 10,943,373	100%	\$ 10,943,373
2	<b>Additional Water Service Extension Costs - EWEB Funding</b>	1,425,526	0%	-
3		-	100%	-
4	<b>Pumping Facilities</b>	-	100%	-
5	582-Foot Pressure Zone	150,000	0%	-
6	Upper Pressure Zone	65,000	100%	65,000
7	<b>Storage Facilities</b>	-	100%	-
8	582-Foot Pressure Zone	1,900,000	100%	1,900,000
9	<b>Distribution System Piping</b>	-	100%	-
10	582-Foot Pressure Zone - 1	333,000	100%	333,000
11	582-Foot Pressure Zone - 2	277,000	100%	277,000
12	582-Foot Pressure Zone - 3	93,000	100%	93,000
13	582-Foot Pressure Zone - 6	113,000	100%	113,000
14	582-Foot Pressure Zone - 7	113,000	100%	113,000
15	582-Foot Pressure Zone - 8	262,000	0%	-
16	582-Foot Pressure Zone - 9	175,000	0%	-
17	582-Foot Pressure Zone - 10	203,000	100%	203,000
18	582-Foot Pressure Zone - 11	203,000	100%	203,000
19	Pressure Reducing Facilities	100,000	0%	-
20	Routine Pipe Replacement	425,000	0%	-
21	<b>Other</b>	-	100%	-
22	Water Rate and SDC Study	60,000	50%	30,000
23	Water System Master Plan Update	60,000	50%	30,000
		<b><u>\$ 16,900,899</u></b>		<b><u>\$ 14,303,373</u></b>
	Growth in ERUs			2,668
	Improvement Fee per ERU			<b>\$ 5,361</b>

When the SDC-eligible cost of \$14,303,373 is divided by the expected growth of 2,668 ERUs, the resulting improvement fee is \$5,361 per ERU.

If the City decides to include one or more capacity-increasing water projects in its capital improvement plan that are not listed in **Exhibit 3**, we recommend that the projects be added to the list and that the eligible portion of those projects be added to the improvement fee cost basis. The revised cost basis should then be used to recalculate the SDC.

**Adjustments**

Data obtained from City staff indicates that the SDC fund balance at the beginning of the planning period will be \$241,382. This adjustment results in a net reduction of \$90 per ERU, as shown in **Exhibit 4**.

#### Exhibit 4: SDC Adjustment

Adjustment Description	Amount
less: Improvement Fee Fund Balance	\$ (241,382)
Growth in ERUs	2,668
Adjustment per ERU	\$ (90)

#### SDC Components

**Exhibit 5** summarizes the components of the proposed water SDC of \$5,924 per ERU. The proposed SDC represents an increase from the current SDC of \$1,937 per ERU.

#### Exhibit 5: SDC Components

Description	Amount
Reimbursement Fee	\$ 654
Improvement Fee	5,361
Adjustment	(90)
Total Fee per ERU	\$ 5,924
Current Water SDC	\$ 1,937
Proposed Change	206%

#### 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.