

DRAFT FOR PUBLIC HEARING

City of Nehalem
**WATER SYSTEM DEVELOPMENT CHARGE
METHODOLOGY UPDATE**

March 2009

I. OVERVIEW

In 1996 the City of Nehalem completed a Water System Master Plan and System Development Charge (SDC) methodology, and in 1997 adopted Ordinance 97-01 to establish System Development Charges for the domestic water system. Over the past decade substantial system improvements identified in the earlier plan have been completed and the Master Plan was again updated in 2006.

The purpose of this document is to update the System Development Charge methodology and cost allocation to reflect the current Capital Improvement Plan (CIP) and incorporate the completed projects.

The proposed CIP and methodology updates incorporate the requirements of ORS 223.297 through 223.314 by reference. The values used in this update are to be adjusted annually based on the change in the Engineering News Record (ENR) 20 city average Construction Cost Index (CCI). For reference, the current March 2009 CCI is 8,534.

II. SDC ORDINANCE & METHODOLOGY

The adopting Ordinance 97-01 remains effective in support of the current SDC fee structure. A review of the ordinance indicates only minor revisions should be adopted to be compatible with current statutes. Specifically, the public notice periods referenced in Section 12 are less than mandated by statute. ORS 223.304 mandates that a 90-day notice be given to persons listed to receive notice, as opposed to the 45-day notice in the existing Ordinance. Similarly, the text must be available for review 60 days prior to an adopting hearing, as opposed to the 30 days listed in the ordinance. Excepting these revisions, the ordinance should remain in effect.

The methodology for allocating eligible water system expenses to benefitted users is defined adequately in the adopting Ordinance 97-01. This is simply based on distributing the cost or value of system capacity to all users. SDC Improvement Fees allocate the estimated costs of needed future improvements identified in a Capital Improvement Plan (CIP). SDC Reimbursements Fees allocate the value of existing capacity. The value of all existing and needed future improvements are allocated to all users on a cost per gallon of maximum day demand. This results in allocating only a prorated share of the cost to future users reflecting the percentage of actual future demands.

There are several variables used in the methodology of cost allocation, with the most important being the Maximum Daily Demand (MDD) per equivalent 3/4" meter connection. To be conservative, the capacity of each water system component, source, treatment, distribution and storage, is based on the ability to meet the maximum daily demand. This assures that adequate resources are available at all times to serve the demand. As the maximum daily demands approach the system capacity, capital improvements should be undertaken to expand the system.

The 2006 Nehalem Water Master Plan recommended that 280 gallons per connection per day (gpc/d) be used for average day demands. Maximum day demand in the 2006 Master Plan was identified as 2.41 times average day demands, or 675 gallons per connection per day (2.41 times 280 gpc/d). For use in the SDC methodology, similar to the Master Plan narrative, the term Connection is used interchangeably with Equivalent Dwelling Unit. The associated demand for an Equivalent Dwelling Unit (EDU), however, refers to a single family residential, 3/4" service metered demand, and must be adjusted for other meter sizes or commercial/industrial connections based on flow.

There are two components to the SDC cost allocations. SDC Reimbursement Fees are designated by statute to be based on the "value" of existing system improvement allocated over the capacity of the facility. SDC Improvement Fees are based on the current "estimated cost" of needed system improvements and again are allocated over the capacity of the estimated facility. Capacity of both reimbursement eligible components and improvements are stated in gallons per day (gpd) available to meet Maximum Day Demands of 675 gpc/d.

III. SDC GROWTH PROJECTIONS

One notable difference in this SDC Update from the current 1996 SDC is the absence of estimated growth projections or time lines for improvements. The SDC only allocate costs of service to the actual users. This function is achieved in the SDC independently of growth projections. The collected fees will fund the cost of needed improvements or reimburse the existing users for excess capacity regardless of growth rates. In an accelerated growth period, fee collections will be accelerated and permit improvements to be undertaken earlier. In a slow growth period, improvements can be postponed to coincide with actual demands.

The essence of the fee calculation is only to allocate the cost or value of each component to the associated capacity.

IV. WATERLINE CONSTRUCTION CREDITS

ORS 223.304(4) requires that a method of credits be available for the construction of qualified public improvements. The statute further defines qualified public improvements as those ... "required as a condition of development approval, identified in the plan and list adopted pursuant to ORS 223.309 and either:

- (a) *Not located on or contiguous to property that is the subject of development approval; or*
- (b) *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."*

The credit for any qualified public improvement should be based on the following average values, which include the cost of public works construction, select backfill within the street right-of-way and 20% engineering expenses:

CITY OF NEHALEM
WATERLINE CONSTRUCTION CREDITS
March 2009

LINE SIZE	8"	10"	12"
CONSTRUCTION COST	\$36/lf	\$42/lf	\$48/lf
UP-SIZING CREDIT	\$36/lf	\$42/lf	\$48/lf
OVERSIZE CREDIT	\$0	\$6/lf	\$12/lf

There are essentially two types of credits available, Up-sizing and/or Oversizing. Up-sizing credits apply to the entire cost of an off-site eligible public improvement when mandated to improve service or replace an existing line with a larger line size to serve future demands. Oversizing credits apply only to credit the component of an on-site eligible improvement which is sized greater than the base 8" diameter size required for all development.

If an up-sizing credit is provided for the entire cost of an eligible off-site public improvement, as mandated by the statute, then an SDC Overlay allocation should be adopted concurrently to define the specifically benefitted properties. This overlay allocation is discussed below.

V. WATER SYSTEM CAPITAL IMPROVEMENT PLAN

The City of Nehalem has essentially reconstructed the entire water system over the past decade so the list of needed improvements is short. The source of supply is the only capacity deficiency. The existing source on Bob's Creek has a capacity estimated at only 220,000 gallons per day during low flow periods, which is less than the current maximum day demand. As a result, there is no surplus capacity and additional source development is required.

Additionally, two new entries have been included for long term improvements. The first is an entry for planning and SDC maintenance through build-out of the Urban Growth Boundary. Continued master planning and SDC efforts will be required periodically over the next several decades as the community expands towards build-out. Based on the 2006 Master Plan, build-out EDU is estimated to be 4,659 dwellings, which equates to a maximum day demand of 3,140,000 gallons per day. An entry of \$50,000 is allotted to cover the cost of planning through build-out.

A second entry is included for constructing a new line or up-sizing water lines in the distribution system. This line item is intended to allow the City to mandate new or up-sized water lines, beyond that required to serve a subject development, to provide better regional flows. An entry of \$50,000 is included to provide for up-sizing.

CITY OF NEHALEM
WATER SYSTEM CAPITAL IMPROVEMENT PLAN
 March 2009

No.	PROJECT DESCRIPTION	PRIORITY	ESTIMATED COST (2009)	CAPACITY GPD	SDC COST PER GAL
Source Development:					
1	West Fork Coal Creek Source	1-5 yrs	\$1,500,000	820,000	\$1.829
Distribution System Improvements:					
2	Pipeline Up-sizing	1-20 yrs	\$50,000	3,140,000	\$0.016
System Planning:					
3	Planning & SDC Update	1-20 yrs	\$50,000	3,140,000	\$0.016
	TOTAL		\$1,600,000	--	\$1.861

VI. SDC IMPROVEMENT FEE CALCULATION

The Improvement Fee is intended to quantify the cost of needed improvements to serve future users. The fee calculation is equal to the maximum day demand per connection times the SDC cost per gallon:

$$\text{SDC Cost per EDU} = (\text{Maximum Day Demand}) \times (\text{Cost per Gallon})$$

$$\text{SDC Cost per EDU} = (675 \text{ gallons/EDU}) \times (\$1.861/\text{gallon})$$

$$\text{Improvement Fee} = \mathbf{\$1,256 \text{ per EDU}}$$

VII. SDC REIMBURSEMENT FEE ASSET SUMMARY

The Reimbursement Fee is intended to quantify the value of existing capacity available to serve future demands. The following table lists the current value of each capital improvement completed to-date, based on actual costs adjusted to the March 2009 ENR Construction Cost Index of 8,534, or an estimated current value if actual costs are not available. The current costs are divided by the capacity of each existing facility to determine the cost per gallon.

CITY OF NEHALEM
WATER SYSTEM REIMBURSEMENT FEE
ASSET SUMMARY & CAPACITY
 March 2009

PROJECT DESCRIPTION	ORIGINAL VALUE	CURRENT VALUE	CAPACITY GPD	SDC COST PER GAL
Source Development:				
Bob's Creek Source & Transmission Line	----	\$223,001	-0-	\$0.000
Treatment System Improvements:				
Water Treatment Plant Improvements	\$728,675 (99)	\$1,026,085	1,000,000 [†]	\$1.026
Distribution System Improvements:				
- 2008 System Improvements	\$3,510,480 (08)	\$3,260,480 ^{††}	3,140,000	\$1.038

- Tohls Street & 10 th Street	\$23,972 (04)	\$28,766	3140000	\$0.009
- Tideland Rd & N Fork Rd	\$136,498 (02)	\$178,130	3140000	\$0.057
- Nehalem Bridge	\$169,775 (99)	\$239,043	3140000	\$0.076
Storage Improvements:				
1.5 MG Treated Storage	\$667,183 (02)	\$870,674	1,200,000 ^{†††}	\$0.726
TOTAL		\$5,826,179	TOTAL	\$2.932

[†] Capacity based on overall improvements, not filter capacity alone.

^{††} Value is net of \$250,000 OECDD Grant Funding

^{†††} Capacity based on 1.50 MG total storage less 0.30 MG fire flow.

Output capacity of the water treatment facilities is currently limited to 400 gallons per minute, or 576,000 gpd, however, substantial support improvements have been completed that will accommodate increased capacity, such as the transmission pipelines, treatment building improvements, instrumentation and controls. As a result, the nominal capacity of the facility is defined as 1,000,000 gallons per day in the reimbursement fee summary as an average of the individual improvement components.

Distribution system improvements over the past decade have reconstructed most of the system, reinforcing it to serve both existing and future users. As a result, all expenditures are deemed to be SDC eligible and are prorated over all users, existing and future, to build-out of the UGB.

Capacity of the storage facilities is defined by the ability to meet one maximum day demand, based on 675 gpc/d. The total effective storage volume to serve domestic demands has been reduced by 300,000 gallons to 1,200,000 gallons, to provide 2,500 gpm fire flows for a period of 120 minutes.

VIII. SDC REIMBURSEMENT FEE CALCULATION

Similar to the Improvement Fee, the reimbursement component of the SDC is the per gallon cost times Maximum Day Demand of 675 gallons per EDU:

$$\text{SDC Cost per EDU} = (\text{Maximum Day Demand}) \times (\text{Cost per Gallon})$$

$$\text{SDC Cost per EDU} = (675 \text{ gallons/EDU}) \times (\$2.932/\text{gallon})$$

$$\text{Reimbursement Fee} = \mathbf{\$1,979 \text{ per EDU}}$$

IX. SDC OVERLAY COST ALLOCATION

ORS 223.304(4) requires that a credit be available for the construction of a “qualified public improvement” if it is required as a condition of development approval, identified in the Capital Improvement Plan and either located off the development site, or on-site and required to be built larger or with greater capacity than is necessary for the particular development.

It is clear that if the improvement is off-site, the qualified public improvement includes that portion required to meet the agency’s minimum standard. The minimum standard improvement, i.e., an 8" waterline, would by definition only benefit the off-site abutting users and would not have any regional benefit. As a result, the cost of these improvements should only be allocated to the abutting properties.

The portion of eligible project cost that should be allocated through the SDC Overlay is the cost of an 8" pipeline split equally to each side of the abutting properties. The overlay district should be identified in a revised SDC document with sufficient detail to estimate the assessment and magnitude of frontage benefitted, excluding non-developable sites.

The requirement to pay an SDC Overlay assessment would be in addition to the cost of the City-wide reimbursement and improvement SDC charges for a new demand.

X. SDC FEE SUMMARY

The table on the following page is a summary of the SDC fees that are applied to new connections or increased use of an existing connection based on meter size and industry accepted Equivalent Dwelling Unit factors:

**CITY OF NEHALEM
WATER SYSTEM SDC FEE SCHEDULE
March 2009**

METER SIZE	EDU FACTOR	IMPROVEMENT FEE	REIMBURSEMENT FEE	TOTAL SDC
3/4"	1.00	\$1,256	\$1,979	\$3,235
1"	2.00	\$2,512	\$3,958	\$6,470
1 ½"	4.50	\$5,652	\$8,906	\$14,558
2"	8.00	\$10,048	\$15,832	\$25,880
3"	18.00	\$22,608	\$35,622	\$58,230
4"	32.00	\$40,192	\$63,328	\$103,520