

RESOLUTION NO. 3 FOR 2005

A RESOLUTION SETTING SYSTEMS DEVELOPMENT CHARGES (SDC) AND SYSTEM DEVELOPMENT METHODOLOGY.

WHEREAS, the Sweet Home City Council on January 25, 2005 had a third and final reading adopting Ordinance No. 1164 regarding System Development Charges for the Water, Wastewater, and/or Storm Sewer; and

WHEREAS, Ordinance No. 1164 authorizes the City of Sweet Home to establish system development charges to be charged to each service upon all development within the city, upon the act of making a connection to the city water or sewer system within the city, and upon all development outside the boundary of the city that connects to or otherwise uses the water or wastewater facilities of the city; and

WHEREAS, the system development charge is payable upon the issuance of permits and/or development as described in Ordinance No. 1164; and

WHEREAS, Ordinance No. 1164 requires the methodology used to establish or modify system development charges be adopted by resolution.

NOW, THEREFORE, BE IT RESOLVED BY THE SWEET HOME CITY COUNCIL that February 25, 2005, the following shall become effective.

Section 1. System development charges and methodology shall be as described in attached **Exhibit "A" – Water** and **Exhibit "B" - Sewer**. Charges are based on the potential for available capacity use. Charges and connections may not be allowed in the event that there is no available capacity.

At the time a development and/or building permit is issued, the applicant shall be notified of the amount(s) of the system development charge(s) payable to the City. The charge(s) is payable upon issuance of a permit to connect to the water or wastewater system and prior to the initiation of service or use of the identified facilities. System development charges are as follows and as listed in Exhibit "A" – Water and Exhibit "B" – Sewer:

Meter Size	Water SDC – Exhibit "A"	Wastewater SDC – Exhibit "B"
¾ - Inch	\$1,215	\$624
1 – Inch	2,574	1,322
1 ½ - Inch	9,665	4,965
2 – Inch	18,374	9,439
3 – Inch	34,052	17,494
4 – Inch	55,076	28,295
6 – Inch	89,685	46,074
8 - Inch	161,293	82,862

Section 2. All temporary structures connected to the sanitary sewer system for no longer than 30 days shall be exempt from paying any sanitary sewer systems development charge.

All structures that have been either voluntarily or involuntarily burned, demolished or otherwise destroyed, and that have paid or been credited with payment of the system development charge(s) shall not be levied a second systems development charge(s) for reconstruction or reconnection to the sanitary sewer or water systems.

Section 3. All residential and commercial connections to the federally-funded sanitary sewer line (Environmental Protection Agency project #C-410432-02-2, or Economic Development Administration project #07-51-23386), and lines extended in relation to the federally-funded project by the City shall pay a hookup fee of \$900 per connection to the said line. Industrial users shall pay the "industrial cost recovery" fee in lieu of a hookup charge, but not less than \$900. The in lieu of assessment fee must be paid prior to the initiation of service.

All funds derived from the hookup fee on the federally funded sanitary sewer lines shall be used to retire the bonds issued to pay the local match of the federal grant, and all receipts in excess of the bonding requirements shall be placed in the sewer development fund division of the utilities reserve fund.

It has been determined that these estimated costs and schedule are classified as not being subject to Oregon Constitution, Article II, Section 11b limitations.

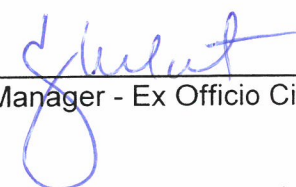
This resolution supersedes any/all prior resolutions on System Development Charges and Methodologies.

PASSED by the Council and approved by the Mayor this 8th day of February 2005.



Mayor

ATTEST:



City Manager - Ex Officio City Recorder



MEMORANDUM

TO: Michael Adams, City of Sweet Home

FROM: Paul L. Matthews
Kerstin S. Rock

DATE: November 11, 2004

SUBJECT: Water SDC Methodology

PROJECT: P162.041.SD

Introduction

Like many municipal water suppliers in Oregon, the City of Sweet Home (City) is faced with increasing costs for the expansion of its water system's capacity to serve growth. To mitigate this cost of growth in its water system, the City has historically assessed system development charges (SDCs) to new customers. As part of its routine business practices, the City has engaged Integrated Utilities Group, Inc. (IUG) to review its SDCs to ensure these charges are:

- Fair and Equitable, and
- Avoid subsidizing either growth or existing customers.

The assessment of SDCs in Oregon is governed by state law.¹ Among other requirements, Oregon Revised Statutes (ORS) 223.304 requires that "...the methodology supporting the system development charge shall be available at least 60 days prior to the first hearing." This memorandum presents the proposed SDC methodology for the City.

SDC Methodology

The proposed SDC methodology is based on historical investments by the City and future capital improvements as identified by City staff based on the existing water master plans and City staff's knowledge of the system. This methodology employs cost indices as allowed by ORS 223.304² to account for future inflation.

¹ See Oregon Revised Statutes (ORS) 223.297 to 223.314.

² ORS 223.304 states in part: "A change in the amount of a reimbursement fee or an improvement fee is not a modification of the system development charge if the change in the amount is based on the periodic application of an adopted specific cost index or on a modification to any of the factors related to rate that are incorporated in the established methodology."

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Reimbursement Fee

The reimbursement fee is based on the capacity buy-in approach, and requires three steps:

1. Fixed asset valuation,
2. Capacity definition, and
3. Assessment schedule.

The following is a description of each step.

Fixed Asset Valuation

Under the proposed methodology, the value of the City's fixed assets is based on the replacement cost new less depreciation (RCNLD) estimates developed by the City based on insurance coverage estimates and Linn County's land and property values. In addition to the City's fixed assets, the valuation also includes \$496,641 in cash and other reserves.

The City's system is designed to meet the needs of its customers and provide safe and reliable water service throughout its service area. The system consists of many individual components that serve specific functions. To estimate the value of assets related to each function, the RCNLD of each asset is allocated to one or more of ten functions. The City's functions are:

1. Source of Supply
2. Raw Water Pumping
3. Treatment
4. Net Storage
5. Pumping
6. Distribution
7. Direct Fire
8. Meters & Services
9. Treatment Train
10. Excluded from SDC

Assets captured under the *Distribution*, *Direct Fire*, and *Meters & Services* functions are typically contributed by developers and thus will be excluded from the calculation of the reimbursement fee SDC. To explicitly show the amount of excluded assets, the assets initially assigned to these three system functions were reassigned to the *Excluded from SDC* function. Table 1 summarizes the asset values attributed to each function. Based on the analysis, the total value of the City's system assets for fiscal year (FY) 2004 including a credit for existing debt⁵ is \$23.40 million. Of the total value, \$17.3 million are considered as contributed or obsolete assets.

⁵ The amount of outstanding debt service was estimated to be \$732,112 for the 1992 OEDD Promissory Note. The total net value of the system was therefore calculated by reducing the total system value of \$24.14 million by the amount of outstanding debt.

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Thus, for the purpose of establishing a reimbursement SDC, the City's water system is valued as \$6.1 million.

Capacity Definition

The next step in determining the reimbursement fee under the capacity buy-in approach is to define the system capacity. Specifically, under the capacity buy-in approach the system capacity is based on the unused capacity of the system for each function identified above. The City provided data used for this analysis.

Table 2 lists the current capacities of each function. Table 3 estimates the amount of capacity in the existing system that is available for growth. Underlying the numbers shown in this table is the assumption that one equivalent dwelling unit (EDU) consumes 800 cubic feet of water per month or 26.3 cubic feet per day. This estimate is based on the City's historical consumption data for all ¾-inch residential meters in FY2002 and FY2003. The amount of storage required per EDU is 69.03 cubic feet. Using these assumptions and the capacities for each function summarized in Table 3, the number of EDUs that can be served by each function are calculated. Subtracting the amount of EDUs currently served by the utility generates the number of EDUs available for growth. A description of how the number of EDUs currently served by the City is estimated follows below.

Assessment Schedule Development

Table 4 provides an inventory of the number of EDUs by meter size. The number of EDUs is based on the number of meters by size and the associated equivalency factor. The equivalency factors are calculated based on the average daily use of a single-family residential meter with a ¾-inch meter.

Analysis of the City's historical consumption records for FY2002 and FY2003 indicated that the number of observations underlying the equivalency factors for meters greater than 1½-inch were too small for the data to be reliable. The proposed methodology augments the City's historical data for meters above 1½-inch in size by equivalency factors developed for the Tualatin Valley Water District (TVWD). Although a different agency, comparison of the data for the utilities showed little variation in the consumption of meters up to 1½-inch. The proposed equivalency schedule is presented in Table 4.

Based on the number of meters served by the City in July 2004 and the equivalency schedule presented in Table 4, the total number of EDUs served by the City is 3,638.

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Fee Calculation

The total costs to be recovered from the reimbursement fee SDC are based on the percentage of remaining capacities by functions calculated in Table 3 and the total system asset values shown in Table 1. Table 5 presents the total reimbursement amount by function. The total amount attributable to the reimbursement fee is \$3,124,723. Table 6 calculates the reimbursement fee per EDU for each of the functions. The total reimbursement fee per EDU is \$737.

Improvement Fee

The improvement fee is based on the City's adopted capital improvement program (CIP). Specifically, the proposed improvement fee considers the proposed CIP projects for the period of FY2005 through FY2010.

To calculate an improvement fee based on the improvement cost approach, the following three tasks must be completed:

1. Multi-purpose project allocations,
2. Capacity definitions, and
3. Assessment schedule development.

Multi-Purpose Project Allocations

Allocating the costs of multi-purpose projects is an integral part of calculating an improvement fee. A multi-purpose project is an improvement that will serve both growth and address existing needs. Few projects are designed and built exclusively to serve growth or solve an existing deficiency. Rather, projects are designed to maximize economies of scale in design and construction. Therefore, projects serving both growth and rehabilitation/upgrade (i.e., multi-purpose projects) are allocated to growth and non-growth.

Table 7 lists each project along with its cost and the year of planned construction. In many cases two or more capital projects are part of an improvement of a particular system function. To avoid potential double-counting of added capacities, all projects were first assigned to functions and then grouped into project groups⁸. Table 8 summarizes the allocation of capital projects to functions. Tables 9 through 13 show the assignment of capacities of the projects to project groups. Based on this information, Table 14 summarizes the percent of capacities available for growth and the resulting improvement fee amount attributable to each system function. The total amount attributed to the improvement fee is \$5,947,675.

Capacity Definition

Table 15 summarizes the system capacities added by function. Similarly, Table 16 presents the estimated number of EDUs available for growth by function.

⁸ Some improvements require multiple projects to add capacity. To avoid double-counting capacity, the projects are grouped together and the added capacity reflects the total added capacity.

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Assessment Schedule

Similar to the reimbursement fee, the improvement fee portion of the City's proposed SDC will be based on meter size. Table 4 presents the number of EDUs for each meter size.

Fee Calculation

The improvement fee is calculated based on the cost of the growth-related capital projects and the additional capacities estimated by these projects. Table 17 summarizes the improvement fee by system function. Based on the CIP developed by the City, the improvement fee per EDU is \$478.

Recommendations

As shown in Tables 6 and 17, the total reimbursement and improvement fees are calculated to be \$737 and \$478 respectively, for a total SDC of \$1,215 per EDU. Table 18 presents the resulting schedule of SDCs by meter size.

Table 1: Net Fixed Asset Valuation	
Description	FY 2004 Assets
Source of Supply	\$0
Raw Water Pumping	40,023
Treatment	0
Net Storage	2,578,109
Transmission	3,376,808
Pumping	75,171
Distribution	0
Direct Fire	0
Meters & Services	0
Treatment Train	0
Exclude from SDC	17,344,547

Total	\$23,414,659

Table 2: System Component Capacities		
System Component	Capacities	Units
Source of Supply	1.5	MGD
Raw Water Pumping	1.5	MGD
Treatment	1.5	MGD
Net Storage	3.8	MG
Transmission	1.5	MGD
Pumping	1.5	MGD
Distribution	0	MGD
Direct Fire	0	EDU
Meters & Services	0	Eq. Mtr.
Treatment Train	0	MGD
Exclude from SDC	0	EDU

Table 3: Used and Unused Capacities of Existing System

Source of Supply	26.3	Cubic Feet per Day	133,690	7,625	3,638	3,987	52.29%
Raw Water Pumping	26.3	Cubic Feet per Day	133,690	7,625	3,638	3,987	52.29%
Treatment	26.3	Cubic Feet per Day	133,690	7,625	3,638	3,987	52.29%
Net Storage	69.0	Cubic Feet	133,690	7,330	3,638	3,693	50.37%
Transmission	26.3	Cubic Feet per Day	133,690	7,625	3,638	3,987	52.29%
Pumping	26.3	Cubic Feet per Day	133,690	7,625	3,638	3,987	52.29%
Distribution	26.3	Cubic Feet per Day	133,690	0	3,638	0	0%
Direct Fire	1.0	EDU	1	0	3,638	0	0%
Meters & Services	1.0	Eq. Mtr.	1	0	3,638	0	0%
Treatment Train	26.3	Cubic Feet per Day	133,690	0	3,638	0	0%
Exclude from SDC	1.0	EDU	1	0	3,638	0	0%

Table 4: Inventory of EDUs for FY2004

Meter Size	Number of Meters	Equivalency Factor	EDUs
3/4-Inch	2,283	1.00	2,283
1-Inch	73	2.12	155
1 1/2-Inch	38	7.96	302
2-Inch	21	15.13	318
3-Inch	2	28.03	56
4-Inch	7	45.34	317
6-Inch	1	73.83	74
8-Inch	1	132.78	133
Total	2,426		3,638

Table 5: Calculation of Reimbursement Totals		
System Component	Capacity Available for Growth	Reimbursement Total
Source of Supply	52.29%	\$0
Raw Water Pumping	52.29%	20,929
Treatment	52.29%	0
Net Storage	50.37%	1,298,721
Transmission	52.29%	1,765,766
Pumping	52.29%	39,308
Distribution	0.00%	0
Direct Fire	0.00%	0
Meters & Services	0.00%	0
Treatment Train	0.00%	0
Exclude from SDC	0.00%	0
Total		----- \$3,124,723

Table 6: Reimbursement Fee per EDUs	
System Component	Proposed Reimbursement SDC
Source of Supply	\$0
Raw Water Pumping	5
Treatment	0
Net Storage	279
Transmission	443
Pumping	10
Distribution	0
Direct Fire	0
Meters & Services	0
Treatment Train	0
Exclude from SDC	0

Total	\$737

Table 7: Overview of CIP Projects (2005 - 2010)

Description	Total Project Cost	Year of Construction
New H2O Plant Intake & Supply Line	\$2,151,000	2005
Chemical Injection	137,000	2005
New Treatment Units (6 MGD)	1,725,000	2005
New Building (expandable to 10 MGD)	1,170,000	2005
Clearwell (10 MGD)	618,960	2005
Backwash Ponds	188,700	2005
Facility	38,190	2005
Electrical/Controls/Security	669,000	2005
Dam Connection & Intake	150,000	2005
Air backwash & In-Line valves	156,000	2005
Line Replacement - 2" Program	350,000	2005
1st & Sunset	345,000	2005
Juniper - 6th	300,000	2005
8th & Alder	310,000	2005
17th - 18th	324,000	2005
9th Avenue	303,000	2005
22nd - 23rd Avenue	440,000	2005
Reservoir Replacement - 1.5 Mill Gallon	1,500,000	2005

Total	\$10,875,850	

Table 8 - Allocation of CIP to System Functions

Description	Source of Supply	Raw Water Pumping	Treatment	Net Storage	Transmission	Pumping	Distribution	Direct Fire	Meters & Services	Treatment Train	Exclude from SDC	Unused 1	Unused 2	#REF!
New H2O Plant Intake & Supply Line	\$0	\$0	\$2,151,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	#REF!
Chemical Injection	0	0	137,000	0	0	0	0	0	0	0	0	0	0	#REF!
New Treatment Units (6 MGD)	0	0	1,170,000	0	0	0	0	0	0	1,725,000	0	0	0	#REF!
New Building (expandable to 10 MGD)	0	0	618,960	0	0	0	0	0	0	0	0	0	0	#REF!
Clearwell (10 MGD)	0	0	188,700	0	0	0	0	0	0	0	0	0	0	#REF!
Backwash Ponds	0	0	38,190	0	0	0	0	0	0	0	0	0	0	#REF!
Facility	0	0	669,000	0	0	0	0	0	0	0	0	0	0	#REF!
Electrical Controls/Security	150,000	0	0	0	0	0	0	0	0	0	0	0	0	#REF!
Dam Connection & Intake	156,000	0	0	0	0	0	0	0	0	0	0	0	0	#REF!
Air backwash & In-Line valves	0	0	0	0	0	0	0	0	0	0	0	0	0	#REF!
Line Replacement - 2 nd Program	0	0	0	0	0	0	0	0	0	0	350,000	0	0	#REF!
1st & Sunset	0	0	0	0	0	0	0	0	0	0	345,000	0	0	#REF!
Juniper - 6th	0	0	0	0	0	0	0	0	0	0	300,000	0	0	#REF!
8th & Alder	0	0	0	0	0	0	0	0	0	0	310,000	0	0	#REF!
17th - 18th	0	0	0	0	0	0	0	0	0	0	324,000	0	0	#REF!
9th Avenue	0	0	0	0	0	0	0	0	0	0	303,000	0	0	#REF!
22nd - 23rd Avenue	0	0	0	0	0	0	0	0	0	0	440,000	0	0	#REF!
Reservoir Replacement - 1.5 Mill Gallon	0	0	0	1,500,000	0	0	0	0	0	0	0	0	0	#REF!
	\$306,000	\$0	\$4,972,850	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$1,725,000	\$2,372,000	\$0	\$0	#REF!

Table 9: Allocation of Source of Supply Expansion Costs

Description	Total Project Costs	Total Project Capacity	Total New Capacity	Capacity Units	Percent Cost for New Capacity	Cost of New Capacity	Project Group	Added Capacity
New H2O Plant Intake & Supply Line	\$0	0.00	0.00	MGD	0.00%	\$0	0	0.00
Chemical Injection	0	0.00	0.00	MGD	0.00%	0	0	0.00
New Treatment Units (6 MGD)	0	0.00	0.00	MGD	0.00%	0	0	0.00
New Building (expandable to 10 MGD)	0	0.00	0.00	MGD	0.00%	0	0	0.00
Clearwell (10 MGD)	0	0.00	0.00	MGD	0.00%	0	0	0.00
Backwash Ponds	0	0.00	0.00	MGD	0.00%	0	0	0.00
Facility	0	0.00	0.00	MGD	0.00%	0	0	0.00
Electrical/Controls/Security	0	0.00	0.00	MGD	0.00%	0	0	0.00
Dam Connection & Intake	150,000	3.75	3.03	MGD	80.91%	121,372	1	3.03
Air backwash & In-Line valves	156,000	3.75	3.03	MGD	80.91%	126,227	1	0.00
Line Replacement - 2" Program	0	0.00	0.00	MGD	0.00%	0	0	0.00
1st & Sunset	0	0.00	0.00	MGD	0.00%	0	0	0.00
Juniper - 6th	0	0.00	0.00	MGD	0.00%	0	0	0.00
8th & Alder	0	0.00	0.00	MGD	0.00%	0	0	0.00
17th - 18th	0	0.00	0.00	MGD	0.00%	0	0	0.00
9th Avenue	0	0.00	0.00	MGD	0.00%	0	0	0.00
22nd - 23rd Avenue	0	0.00	0.00	MGD	0.00%	0	0	0.00
Reservoir Replacement - 1.5 Mill Gallon	0	0.00	0.00	MGD	0.00%	0	0	0.00
Total	\$306,000					\$247,599		3.03

Table 10: Allocation of Treatment Expansion Costs

Description	Total Project Costs	Total Project Capacity	Total New Capacity	Capacity Units	Percent Cost for New Capacity	Cost of New Capacity	Project Group	Added Capacity
New H2O Plant Intake & Supply Line	\$2,151,000	3.75	3.03	MGD	80.91%	\$1,740,478	1	3.03
Chemical Injection	137,000	3.75	3.03	MGD	80.91%	110,853	1	0.00
New Treatment Units (6 MGD)	0	0.00	0.00	MGD	0.00%	0	0	0.00
New Building (expandable to 10 MGD)	1,170,000	3.75	3.03	MGD	80.91%	946,704	1	0.00
Clearwell (10 MGD)	618,960	3.75	3.03	MGD	80.91%	500,831	1	0.00
Backwash Ponds	188,700	3.75	3.03	MGD	80.91%	152,686	1	0.00
Facility	38,190	3.75	3.03	MGD	80.91%	30,901	1	0.00
Electrical/Controls/Security	669,000	3.75	3.03	MGD	80.91%	541,320	1	0.00
Dam Connection & Intake	0	0.00	0.00	MGD	0.00%	0	0	0.00
Air backwash & In-Line valves	0	0.00	0.00	MGD	0.00%	0	0	0.00
Line Replacement - 2" Program	0	0.00	0.00	MGD	0.00%	0	0	0.00
1st & Sunset	0	0.00	0.00	MGD	0.00%	0	0	0.00
Juniper - 6th	0	0.00	0.00	MGD	0.00%	0	0	0.00
8th & Alder	0	0.00	0.00	MGD	0.00%	0	0	0.00
17th - 18th	0	0.00	0.00	MGD	0.00%	0	0	0.00
9th Avenue	0	0.00	0.00	MGD	0.00%	0	0	0.00
22nd - 23rd Avenue	0	0.00	0.00	MGD	0.00%	0	0	0.00
Reservoir Replacement - 1.5 Mill Gallon	0	0.00	0.00	MGD	0.00%	0	0	0.00
Total	\$4,972,850					\$4,023,774		3.03

Table 11: Allocation of Net Storage Expansion Costs									
Description	Total Project Costs	Total Project Capacity	Total New Capacity	Capacity Units	Percent Cost for New Capacity	Cost of New Capacity	Project Group	Added Capacity	
New H2O Plant Intake & Supply Line	\$0	0.00	0.00	MG	0.00%	\$0	0	0.00	
Chemical Injection	0	0.00	0.00	MG	0.00%	0	0	0.00	
New Treatment Units (6 MGD)	0	0.00	0.00	MG	0.00%	0	0	0.00	
New Building (expandable to 10 MGD)	0	0.00	0.00	MG	0.00%	0	0	0.00	
Clearwell (10 MGD)	0	0.00	0.00	MG	0.00%	0	0	0.00	
Backwash Ponds	0	0.00	0.00	MG	0.00%	0	0	0.00	
Facility	0	0.00	0.00	MG	0.00%	0	0	0.00	
Electrical/Controls/Security	0	0.00	0.00	MG	0.00%	0	0	0.00	
Dam Connection & Intake	0	0.00	0.00	MG	0.00%	0	0	0.00	
Air backwash & In-Line valves	0	0.00	0.00	MG	0.00%	0	0	0.00	
Line Replacement - 2" Program	0	0.00	0.00	MG	0.00%	0	0	0.00	
1st & Sunset	0	0.00	0.00	MG	0.00%	0	0	0.00	
Juniper - 6th	0	0.00	0.00	MG	0.00%	0	0	0.00	
8th & Alder	0	0.00	0.00	MG	0.00%	0	0	0.00	
17th - 18th	0	0.00	0.00	MG	0.00%	0	0	0.00	
9th Avenue	0	0.00	0.00	MG	0.00%	0	0	0.00	
22nd - 23rd Avenue	0	0.00	0.00	MG	0.00%	0	0	0.00	
Reservoir Replacement - 1.5 Mill Gallon	1,500,000	1.50	0.50	MG	33.33%	500,000	0	0.50	
Total	\$1,500,000					\$500,000		0.50	

Table 12: Allocation of Treatment Train Expansion Costs									
Description	Total Project Costs	Total Project Capacity	Total New Capacity	Capacity Units	Percent Cost for New Capacity	Cost of New Capacity	Project Group	Added Capacity	
New H2O Plant Intake & Supply Line	\$0	0.00	0.00	MGD	0.00%	\$0	0	0.00	
Chemical Injection	0	0.00	0.00	MGD	0.00%	0	0	0.00	
New Treatment Units (6 MGD)	1,725,000	2.25	1.53	MGD	68.19%	1,176,302	0	1.53	
New Building (expandable to 10 MGD)	0	0.00	0.00	MGD	0.00%	0	0	0.00	
Clearwell (10 MGD)	0	0.00	0.00	MGD	0.00%	0	0	0.00	
Backwash Ponds	0	0.00	0.00	MGD	0.00%	0	0	0.00	
Facility	0	0.00	0.00	MGD	0.00%	0	0	0.00	
Electrical/Controls/Security	0	0.00	0.00	MGD	0.00%	0	0	0.00	
Dam Connection & Intake	0	0.00	0.00	MGD	0.00%	0	0	0.00	
Air backwash & In-Line valves	0	0.00	0.00	MGD	0.00%	0	0	0.00	
Line Replacement - 2" Program	0	0.00	0.00	MGD	0.00%	0	0	0.00	
1st & Sunset	0	0.00	0.00	MGD	0.00%	0	0	0.00	
Juniper - 6th	0	0.00	0.00	MGD	0.00%	0	0	0.00	
8th & Alder	0	0.00	0.00	MGD	0.00%	0	0	0.00	
17th - 18th	0	0.00	0.00	MGD	0.00%	0	0	0.00	
9th Avenue	0	0.00	0.00	MGD	0.00%	0	0	0.00	
22nd - 23rd Avenue	0	0.00	0.00	MGD	0.00%	0	0	0.00	
Reservoir Replacement - 1.5 Mill Gallon	0	0.00	0.00	MGD	0.00%	0	0	0.00	
Total	\$1,725,000					\$1,176,302		1.53	

Table 13: Allocation of Exclude from SDC Expansion Costs

Description	Total Project Costs	Total Project Capacity	Total New Capacity	Capacity Units	Percent Cost for New Capacity	Cost of New Capacity	Project Group	Added Capacity
New H2O Plant Intake & Supply Line	\$0	0.00	0.00	EDU	0.00%	\$0	0	0.00
Chemical Injection	0	0.00	0.00	EDU	0.00%	0	0	0.00
New Treatment Units (6 MGD)	0	0.00	0.00	EDU	0.00%	0	0	0.00
New Building (expandable to 10 MGD)	0	0.00	0.00	EDU	0.00%	0	0	0.00
Clearwell (10 MGD)	0	0.00	0.00	EDU	0.00%	0	0	0.00
Backwash Ponds	0	0.00	0.00	EDU	0.00%	0	0	0.00
Facility	0	0.00	0.00	EDU	0.00%	0	0	0.00
Electrical/Controls/Security	0	0.00	0.00	EDU	0.00%	0	0	0.00
Dam Connection & Intake	0	0.00	0.00	EDU	0.00%	0	0	0.00
Air backwash & In-Line valves	0	0.00	0.00	EDU	0.00%	0	0	0.00
Line Replacement - 2" Program	350,000	0.00	0.00	EDU	0.00%	0	0	0.00
1st & Sunset	345,000	0.00	0.00	EDU	0.00%	0	0	0.00
Juniper - 6th	300,000	0.00	0.00	EDU	0.00%	0	0	0.00
8th & Alder	310,000	0.00	0.00	EDU	0.00%	0	0	0.00
17th - 18th	324,000	0.00	0.00	EDU	0.00%	0	0	0.00
9th Avenue	303,000	0.00	0.00	EDU	0.00%	0	0	0.00
22nd - 23rd Avenue	440,000	0.00	0.00	EDU	0.00%	0	0	0.00
Reservoir Replacement - 1.5 Mill Gallon	0	0.00	0.00	EDU	0.00%	0	0	0.00
Total	\$2,372,000					\$0		0.00

Table 14
City of Sweet Home
Water SDC Study
Calculation of Improvement Fee Totals

Table 14: Calculation of Improvement Fee Totals		
System Component	Capacity Available for Growth	Improvement Fee Total
Source of Supply	79.46%	\$247,599
Raw Water Pumping	0.00%	0
Treatment	79.46%	4,023,774
Net Storage	20.78%	500,000
Transmission	0.00%	0
Pumping	0.00%	0
Distribution	0.00%	0
Direct Fire	0.00%	0
Meters & Services	0.00%	0
Treatment Train	100.00%	1,176,302
Exclude from SDC	0.00%	0
Total		----- \$5,947,675

Table 15
City of Sweet Home
Water SDC Study
System Capacities for System Improvements

Table 15: System Capacities for System Improvements		
System Component	Additional Capacity from Improvements	Units
Source of Supply	3.0	MGD
Raw Water Pumping	0.0	MGD
Treatment	3.0	MGD
Net Storage	0.5	MG
Transmission	0.0	MGD
Pumping	0.0	MGD
Distribution	0.0	MGD
Direct Fire	0.0	EDU
Meters & Services	0.0	Eq. Mfr.
Treatment Train	1.5	MGD
Exclude from SDC	0.0	EDU

Table 16: Used and Unused Capacities of System Improvements				
System Component	Requirements per EDUs	Units	Unit Conversion	Additional EDUs Available
Source of Supply	26.3	Cubic Feet per Day	133,690	15,424
Raw Water Pumping	26.3	Cubic Feet per Day	133,690	0
Treatment	26.3	Cubic Feet per Day	133,690	15,424
Net Storage	69.0	Cubic Feet	133,690	968
Transmission	26.3	Cubic Feet per Day	133,690	0
Pumping	26.3	Cubic Feet per Day	133,690	0
Distribution	26.3	Cubic Feet per Day	133,690	0
Direct Fire	1.0	EDU	1	0
Meters & Services	1.0	Eq. Mtr.	1	0
Treatment Train	26.3	Cubic Feet per Day	133,690	7,799
Exclude from SDC	1.0	EDU	1	0

Table 17: Improvement Fee per EDUs	
System Component	Proposed Improvement SDC
Source of Supply	\$13
Raw Water Pumping	0
Treatment	207
Net Storage	107
Transmission	0
Pumping	0
Distribution	0
Direct Fire	0
Meters & Services	0
Treatment Train	151
Exclude from SDC	0

Total	\$478

Table 18: Proposed SDC by Meter Size

Meter Size	Reimbursement	Improvement	Total
3/4-Inch	\$737	\$478	\$1,215
1-Inch	1,561	1,013	2,574
1 1/2-Inch	5,861	3,804	9,665
2-Inch	11,142	7,232	18,374
3-Inch	20,649	13,403	34,052
4-Inch	33,398	21,679	55,076
6-Inch	54,384	35,301	89,685
8-Inch	97,806	63,487	161,293



MEMORANDUM

TO: Michael Adams, City of Sweet Home

FROM: Paul L. Matthews
Kerstin S. Rock

DATE: November 17, 2004

SUBJECT: Sewer SDC Methodology

PROJECT: P162.041.SD

Introduction

Like many municipal sewer utilities in Oregon, the City of Sweet Home (City) is faced with increasing costs for the expansion of its sewer system's capacity to serve growth. To mitigate this cost of growth in its sewer system, the City has historically assessed system development charges (SDCs) to new customers. As part of its routine business practices, the City has engaged Integrated Utilities Group, Inc. (IUG) to review its SDCs to ensure these charges are:

- Fair and Equitable, and
- Avoid subsidizing either growth or existing customers.

The assessment of SDCs in Oregon is governed by state law.¹ Among other requirements, Oregon Revised Statutes (ORS) 223.304 requires that "...the methodology supporting the system development charge shall be available at least 60 days prior to the first hearing." This memorandum presents the proposed SDC methodology for the City.

SDC Methodology

The proposed SDC methodology is based on historical investments by the City and future capital improvements as identified by City staff based on the City's December 2002 *Sanitary Sewer Master Plan* developed by Brown and Caldwell and City staff's knowledge of the system. This methodology employs cost indices as allowed by ORS 223.304² to account for future inflation.

¹ See Oregon Revised Statutes (ORS) 223.297 to 223.314.

² ORS 223.304 states in part: "A change in the amount of a reimbursement fee or an improvement fee is not a modification of the system development charge if the change in the amount is based on the periodic application of an adopted specific cost index or on a modification to any of the factors related to rate that are incorporated in the established methodology."

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Reimbursement Fee

The reimbursement fee is based on the capacity buy-in approach, and requires three steps:

1. Fixed asset valuation,
2. Capacity definition, and
3. Assessment schedule development.

The following is a description of each step.

Fixed Asset Valuation

Under the proposed methodology, the value of the City's fixed assets is based on the replacement cost new less depreciation (RCNLD) estimates developed by the City based on insurance coverage estimates and Linn County's land and property values. In addition to the City's fixed assets, the valuation also includes \$772,826 of cash provided by existing customers.

The City's system is designed to meet the needs of its customers and provide safe and reliable sewer service throughout its service area. The system consists of individual components that serve specific functions. To estimate the value of assets related to each function, the RCNLD of each asset is allocated to one or more of four functions. The City's functions are:

1. Collection System
2. Interceptor System
3. Treatment Plant
4. Exclude from SDC

Assets captured under the *Collection System* function are typically contributed by developers and thus are excluded from the calculation of the reimbursement fee. To explicitly show the amount of excluded assets, the assets initially assigned to this function were reassigned to the *Excluded from SDC* function. Table 1 summarizes the asset values attributed to each function. Based on the analysis, the total value of the City's system for fiscal year (FY) 2004 including a credit for existing debt⁵ is \$25.31 million. Of the total value, \$18.26 million are excluded from the SDC because these assets are considered to have been contributed or to be obsolete. Thus, for the purpose of establishing a reimbursement fee, the City's remaining sewer system is valued as \$7.05 million.

⁵ The outstanding debt was estimated to be \$434,369 for the 1993 OEDD Promissory Note and \$150,953 for the DEQ Promissory Note. The total net value of the system was therefore calculated by reducing the total system value of \$25.9 million by the amount of outstanding debt.

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Capacity Definition

The next step in determining the reimbursement fee under the capacity buy-in approach is to define the system capacity. Specifically, under the capacity buy-in approach the system capacity is based on the unused capacity of the system for each function identified above. The City provided data used for this analysis.

Table 2 lists the current capacities of each function. Table 3 estimates the amount of capacity in the existing system that is available for growth. Underlying the numbers shown in this table is the assumption that one equivalent dwelling unit (EDU) contributes 3,354 cubic feet of sewer flow per month or 110.2 cubic feet per day. This estimate is based on the City's historical average wet weather flows during FY2004. Using this assumption and the capacities for each function summarized in Table 3, the number of EDUs that can be served by each function are calculated. Subtracting the number of EDUs currently served by the utility generates the number of EDUs available for growth. A description of how the number of EDUs currently served by the City is estimated follows below.

Assessment Schedule Development

Table 4 provides an inventory of the number of EDUs by meter size. The number of EDUs is based on the analysis of the City's water system. The equivalency factors are calculated based on the average daily water use of a single-family residential meter with a 3/4-inch meter.

Analysis of the City's historical water consumption records for FY2002 and FY2003 indicated that the number of observations underlying the equivalency factors for meters greater than 1 1/2-inch were too few for the data to be reliable. The proposed methodology augments the City's historical data for meters above 1 1/2-inch in size by equivalency factors developed from data of the Tualatin Valley Water District (TVWD). Although a different agency, comparison of the data for the utilities showed little variation in the consumption of meters up to 1 1/2-inch. The proposed equivalency schedule is presented in Table 4.

Based on the number of meters served by the City in July 2004 and the equivalency schedule presented in Table 4, the total number of EDUs served by the City is 3,638.

Fee Calculation

The total costs to be recovered from the reimbursement fee are based on the percentage of remaining capacities by functions calculated in Table 3 and the total system asset values shown in Table 1. Table 5 presents the total reimbursement amount by function. The total amount attributable to the reimbursement fee is \$4,783,849. Table 6 calculates the reimbursement fee per EDU for each of the functions. The total reimbursement fee per EDU is \$624.

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Improvement Fee

A review of the City's sewer capital improvement program (CIP) indicated that none of the proposed projects are growth related. Therefore, the City's SDC only contains a reimbursement fee SDC.

Recommendations

As shown in Tables 6 the total reimbursement fee is calculated to be \$624 per EDU. Table 7 presents the resulting schedule of SDCs by meter size.

Table 1: Net Fixed Asset Valuation	
Description	FY 2004 Assets
Collection System	\$0
Interceptor System	4,906,955
Treatment Plant	2,147,056
Exclude from SDC	18,263,872

Total	\$25,317,883

Table 2: System Component Capacities		
System Component	Capacities	Units
Collection System	0.0	NA
Interceptor System	12.3	MGD
Treatment Plant	6.0	MGD
Exclude from SDC	0.0	NA

Table 3: Used and Unused Capacities of Existing System

System Component	Requirements per EDUs	Units	Unit Conversion	EDUs Available	Used Capacity (EDUs)	Unused Capacity (EDUs)	Remaining Capacity
Collection System	110.2	Cubic Feet per Day	133,690	0	3,638	0	0.00%
Interceptor System	110.2	Cubic Feet per Day	133,690	14,916	3,638	11,278	75.61%
Treatment Plant	110.2	Cubic Feet per Day	133,690	7,276	3,638	3,638	50.00%
Exclude from SDC	0.0	NA	133,690	0	3,638	0	0.00%

Table 4: Inventory of EDUs for FY2004			
Meter Size	Number of Meters	Equivalency Factor	EDUs
3/4-Inch	2,283	1.00	2,283
1-Inch	73	2.12	155
1 1/2-Inch	38	7.96	302
2-Inch	21	15.13	318
3-Inch	2	28.03	56
4-Inch	7	45.34	317
6-Inch	1	73.83	74
8-Inch	1	132.78	133
Total	2,426		3,638

Table 5: Calculation of Reimbursement Totals		
System Component	Capacity Available for Growth	Reimbursement Total
Collection System	0.00%	\$0
Interceptor System	75.61%	3,710,234
Treatment Plant	50.00%	1,073,615
Exclude from SDC	0.00%	0
Total		----- \$4,783,849

Table 6: Reimbursement Fee per EDUs	
System Component	Proposed Reimbursement SDC
Collection System	\$0
Interceptor System	329
Treatment Plant	295
Exclude from SDC	0

Total	\$624

Table 7: Proposed SDC by Meter Size

Meter Size	Reimbursement	Improvement	Total
3/4-Inch	\$624	\$0	\$624
1-Inch	1,322	0	1,322
1 1/2-Inch	4,965	0	4,965
2-Inch	9,439	0	9,439
3-Inch	17,494	0	17,494
4-Inch	28,295	0	28,295
6-Inch	46,074	0	46,074
8-Inch	82,862	0	82,862