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City of Prineville, Oregon
Wastewater System Development Charge Methodology
Report
April 10, 2007

1.0 Executive Summary

In 2006, the City of Prineville adopted an Updated Wastewater Master Plan, dated November 2005, which identifies anticipated wastewater facility needs through development of a community of approximately 36,000 residents. The City last updated the Wastewater System Development Charge (SDC) methodology in 1997, and increased SDCs in 2006 using an inflation index to account for changes in construction costs. In 2006, the City engaged GEL Oregon, Inc. to update the City's Wastewater SDC methodology and rates to reflect adequate funding to construct facility needs identified in the Updated Master Plan. This report presents an updated SDC methodology, documents the calculation of Wastewater SDC rates, and identifies projects to be funded from SDC revenues.

GEL considered alternative methods noted within the report to identify the most equitable and supportable SDC to provide the necessary funding to complete planned improvements. GEL also considered implications resulting from infiltration and inflow (I & I) improvements on the capacity of treatment plant facilities. An additional consideration in the evaluation is the recent significant City investment in treatment facilities.

Due to the large dollar cost of treatment facilities and uncertainty to the timing of future improvements, and the current accelerated pace of development, the combination/hybrid method was determined most equitable and supportable. And to facilitate easier administration of the City's SDC program, including reimbursement for developer initiated improvements, the wastewater SDC improvement fee is segregated into two components; treatment plant improvements and collection system improvements. Additionally, due to a potential significant reduction in flow to the treatment plant and a corresponding reduction in necessary treatment facilities, I and I improvements have been included in the SDC reimbursement fee.

The calculated maximum SDC is based on the cost to complete improvements to serve an estimated population of 36,000 at the current service level (315 gallons per day per equivalent residential unit). However, the recommended calculated maximum SDC utilizes a flow of 260 gpd/ERU that includes investment in I and I improvements to reduce flow to treatment facilities. The maximum wastewater SDC for treatment facilities designed for the current flow per ERU is \$10,562. This amount includes interim treatment improvements, discussed later in the report. The maximum SDC, excluding the cost of interim improvements, is \$9,862. The maximum SDC utilizing reduced flow of 260 gpd/ERU is \$8,677.

The following table shows the calculated maximum amount of SDCs, and the various components, as discussed above.

Table 1

Wastewater SDC

Description	315 gpd/EDU with Interim Improvements	315 gpd/EDU without Interim Improvements	260 gpd/EDU without Interim Improvements
Improvement fee			
Treatment expansion	\$ 8,282	\$ 7,602	\$ 5,749
Collection improvements	1,488	1,488	1,488
Improvement fee total	9,770	9,091	7,238
Reimbursement fee			
Treatment	484	484	960
I & I reduction improvements	-	-	226
Reimbursement fee total	484	484	1,186
Administration fee	308	287	253
Total Wastewater SDC	\$ 10,562	\$ 9,862	\$ 8,677
Difference over/(under) 260 gpd/EDU	\$ 1,885	1,186	NA
Difference over/(under) 315 gpd/EDU w/o interim	\$ 700	NA	\$ (1,186)
Difference over/(under) 315 gpd/EDU w/ interim	NA	(700)	\$ (1,885)

To maximize cost/benefit of I and I improvements, further study and analysis is appropriate and recommended, and it must be noted that such improvements may or may not result in the reduced flow utilized in this evaluation. The SDC in this report should be adjusted to reflect the costs identified in the plan together with the more accurate estimate of flow reductions. Further discussion of the benefits of funding I and I improvements and the key elements of that study and plan are provided in section 4.1 of this report.

GEL recommends the City utilize the methodology generating a maximum wastewater SDC of \$8,677 consisting of the rate components noted above and initiate the I and I study and plan in Summer/Fall 2007. The I and I study and plan will require approximately 18-24 months to complete and an adjustment to the SDC calculation will require approximately thirty (30) days.

2.0 Overview

The City of Prineville, Oregon continues to experience steady accelerated growth. As new homes and commercial facilities are constructed in Prineville and its Urban Growth Boundary (UGB), they place additional demands upon the existing infrastructure and require the construction of additional municipal infrastructure to support the development.

In the community, citizens have contributed money through taxes, contributions, debt, and user fees to construct the infrastructure system elements that make urban living in the City possible. These elements typically include streets; water treatment, storage and distribution systems; wastewater collection, pumping and treatment systems; storm water drainage systems and parks. The City of Prineville is the municipal entity that has the responsibility for the construction and operation of these infrastructure systems with the exception of parks. Parks improvements and facilities are the responsibility of the Crook County Parks and Recreation District.

The City utilizes a variety of revenue and other resources to provide for the construction and operation of its infrastructure systems. These include, but are not limited to, state gas taxes, Crook County contributions, franchise fees, developer contributions, property owner contributions, grants from federal and state sources, short- and long-term borrowing, user fees and system development charges (SDCs). This report addresses the maximum amount of SDCs may be charged to support the construction of Wastewater Facilities that serve residents and others using the City's wastewater system. System Development Charges (SDCs) are one-time fees charged to new development to help pay a portion of the costs associated with building capital facilities to meet needs created by growth. In the state of Oregon, SDCs are authorized for five types of capital facilities including transportation, water, sewer, stormwater, and wastewater.

Section 3.0 of this report presents authority and background information including (1) legislative authority for SDCs; (2) an explanation of “improvement fee” and “reimbursement fee” SDCs; (3) requirements and options for credits, exemptions and discounts; (4) guiding concepts for SDCs and (5) alternative methodology approaches. Section 4.0 presents the methodology used to develop the updated Wastewater SDCs, section 5.0 presents the calculation of Wastewater SDC Rates, and section 6.0 presents recommendations and implementation issues and section 7.0 presents a summary of on-going steps to keep the SDC relevant.

3.0 Authority and Background Information

A. Legislative Authority

While SDCs have been in use in Oregon since the mid-1970's, State legislation regarding SDCs was not adopted until 1989, when the Oregon Systems Development Act (ORS 223.297 - 223.314) was passed. The purpose of this Act was to "...provide a uniform framework for the imposition of system development charges..". In 1993, 1999, and 2001 additional statutory provisions were added to address concerns and clarify requirements regarding SDCs. The SDC Act requires local governments to:

- Enact SDCs by ordinance or resolution;
- Develop a methodology outlining how the SDCs were developed;
- Adopt a Capital Improvements Plan (CIP) to designate capital improvements that may be funded with “improvement fee” SDC revenues;

- Provide credit against the amount of the SDC for the construction of "qualified public improvements";
- Separately account for and report receipt and expenditure of SDC revenues, and develop procedures for challenging expenditures; and
- Use SDC revenues only for costs related to capital expenditures (operations and maintenance uses are prohibited).

B. "Improvement fee" and "Reimbursement fee" SDCs

The Oregon Systems Development Act provides for the imposition of two types of SDCs: (1) "improvement fee" SDCs, and (2) "reimbursement fee" SDCs. "Improvement fee" SDCs may be charged for new capital improvements that will increase capacity.

Revenues from "improvement fee" SDCs may be spent only on capacity-increasing capital improvements identified in the required Capital Improvements Plan (CIP) that lists each project, and the expected timing and cost of each project.

(2) "reimbursement fee" SDCs may be charged for the costs of existing capital facilities if "excess capacity" is available to accommodate growth. Revenues from "reimbursement fees" may be used on any capital improvement project, including major repairs, upgrades, or renovations or the repayment of indebtedness associated with the system.

C. Requirements and Options for Credits, Exemptions, and Discounts

(1) Credits A credit is a reduction in the amount of the SDC for a specific development. The Oregon SDC Act requires that credit be allowed for the construction of a "qualified public improvement" which (1) is required as a condition of development approval, (2) is identified in the Capital Improvement Plan, and (3) either is not located on or contiguous to property that is the subject of development approval, or is located on or contiguous to such property and is required to be built larger or with greater capacity than is necessary for the particular development project. The credit for a qualified public improvement may only be applied against an SDC for the same type of improvement (e.g., a Wastewater improvement can only be used for a credit for a Wastewater SDC), and may be granted only for the cost of that portion of an improvement which exceeds the minimum standard facility size or capacity needed to serve the particular project. For multi-phase projects, any excess credit may be applied against SDCs that accrue in subsequent phases of the original development project. In addition to these required credits, the City may, if it so chooses, provide a greater credit, establish a system providing for the transferability of credits, provide a credit for a capital improvement not identified in the Capital Improvement Plan, or provide a share of the cost of an improvement by other means.

(2) Exemptions The City may exempt certain types of development, such as "affordable housing" from the requirement to pay SDCs. Exemptions reduce SDC revenues and, therefore, increase the amounts that must come from other sources, such as user fees and property taxes.

(3) Discounts The City may discount the SDC rates by choosing not to charge a reimbursement fee for excess capacity, or by reducing the portion of growth-required improvements to be funded with SDCs. A discount in the SDC rates may also be applied on a pro-rata basis to any identified deficiencies, which must to be funded from sources

other than improvement fee SDCs. For example, the City may charge new development an SDC rate sufficient to recover only fifty percent (50%) of identified growth-required costs. The portion of growth-required costs to be funded with SDCs must be identified in the CIP. Because discounts reduce SDC revenues, they increase the amounts that must come from other sources, such as user fees or general fund contributions, in order to acquire the facilities identified in the Updated Master Plan.

D. Guiding Concepts

The Oregon Revised Statutes provide the source of authority for the adoption of SDCs. There is some dispute whether SDCs are also subject to the requirements of U.S. Supreme Court cases; in particular, *Nollan v. California Coastal Commission* and *Dolan v. City of Tigard*. More recent U.S. Supreme Court cases, including *Eastern Enterprises v. Apfel* and *Del Monte Dunes v. City of Monterey*, and a 2002 Oregon Court of Appeals decision in *Homebuilders Association et al v. Tualatin Hills Park & Recreation District* suggest that SDCs are not subject to the requirements of *Nollan* and *Dolan*. Nonetheless, even if SDCs are not subject to *Nollan* and *Dolan*, the method described in this report meets those requirements as follows:

(1) "Essential Nexus" Requirement

In a 1987 case, *Nollan v. California Coastal Commission*, the U.S. Supreme Court established that government agencies must show that an "essential nexus" (e.g. reasonable connection) exists between a project's impacts and any dedication requirements. For SDCs, the "essential nexus" requirement means there must be a reasonable connection between the nature of the development and the facilities being funded with the SDC revenues. For example, new parks are needed to serve the recreation needs of new development in order to prevent overcrowding of existing facilities and to meet the needs identified in the City's Updated Wastewater Master Plan; therefore an "essential nexus" exists between new development and the SDCs needed to build wastewater system infrastructure improvements to serve new development.

(2) "Rough Proportionality" Requirement

In its landmark 1994 decision in *Dolan v. City of Tigard*, the U.S. Supreme Court cited the requirement for "rough proportionality" between the requirements placed on a developer by government and the impacts of the development. This concept of rough proportionality is applied in SDCs by insuring that new growth is not required to pay (through fees, exactions, or taxes) to upgrade existing deficiencies or provide new facilities beyond a level "roughly proportionate" with the extent of new development's impact; SDCs can be charged only for the portion of capital facility costs that are attributable to growth. As an example, if a City's Wastewater Updated Master Plan calls for doubling the City's treatment plant capacity during a twenty-year period, and fifty percent (50%) growth is expected during that period; new development can only be charged a fee sufficient to provide fifty percent (50%) of the cost of the expanded treatment facilities and cannot be required to pay the additional expansion costs.

E. Alternative Methodology Approaches

There are three basic approaches used to develop improvement fee SDCs: “standards-driven”, “improvements-driven”, and “combination/hybrid”.

(1) Standards-Driven Approach

The “standards-driven” approach is based on the application of Level of Service (LOS) Standards for facilities such as treatment plant, collection lines, etc. Facility needs are determined by applying the LOS Standards to projected future demand, as applicable. SDC-eligible amounts are calculated based on the costs of facilities needed to serve growth. This approach works best where level of service standards have been adopted but no specific list of projects is available.

(2) Improvements-Driven Approach

The “improvements-driven” approach is based on a specific list of planned capacity-increasing capital improvements. The portion of each project that is attributable to growth is determined, and the SDC-eligible costs are calculated by dividing the total costs of growth-required projects by the projected increase in projected future demand, as applicable. This approach works best where a detailed master plan or project list is available and the benefits of projects can be readily apportioned between growth and current users.

(3) Combination/Hybrid Approach

The combination/hybrid-approach includes elements of both the “improvements driven” and “standards-driven” approaches. Level of Service standards may be used to create a list of planned capacity-increasing projects, and the growth required portions of projects are then used as the basis for determining SDC eligible costs. This approach works best where Levels of Service have been identified and the benefits of individual projects are not easily apportioned between growth and current users.

4.0 Wastewater SDC Methodology

The Combination/Hybrid approach has been used to develop the updated Wastewater SDC methodology. The City’s 2005 Updated Wastewater Master Plan (Plan) includes a detailed inventory of existing City facilities in Chapter 4. Chapter 7 provides an analysis of wastewater treatment alternatives and recommends and identifies specific additions to collection infrastructure and treatment facilities needed to meet City needs through the year 2026 and beyond. The Plan notes that based on existing capacity and projected development additional treatment facilities will not be needed until 2013 with initial efforts on that project beginning sooner. Additionally the Plan notes that collection facilities are at or exceed capacity.

Subsequent discussions with City staff and ACE Consulting (ACE is the engineering firm that prepared the Updated Master Plan) indicate that additional treatment facilities may be necessary prior to 2013 if large development interests desire to proceed with their development plans prior to 2013. These discussions also indicate that the need for additional treatment facilities may be deferred if “flow” to the treatment plant is reduced by performing infiltration and inflow improvements, such as slip lining collection lines, and reducing the amount of water entering the system through infiltration and inflows (I&I). (See additional discussion on infiltration and inflow below).

Necessary facility improvements identified in the Plan will be included as projects in the City’s Wastewater five-year Capital Improvement Plan as the expected need for them occurs based upon updated actual and projected development activity. Additionally, slip lining improvements and other significant repair and maintenance capital improvements that extend the useful life of the system will be included in the City’s five-year repair and maintenance CIP based upon need, available funding and capacity to complete projects. The five-year CIP schedules should be reviewed and updated annually.

Wastewater facilities benefit City residents, businesses, their employees and customers, and visitors. The methodology used to update the City's Wastewater SDCs establish the required “essential nexus” between a project’s impacts and the SDC by identifying specific types of Wastewater facilities and analyzing the proportionate need of each type of facility for use by each type of development. The SDCs to be paid by a development meet the "rough proportionality" requirement because they are based on the nature of the development and the extent of the impact of the development on the types of treatment and collection facilities for which they are charged. The evaluation best supports a Wastewater SDC that is based on an equivalent dwelling unit (EDU) basis. Wastewater SDCs may be charged to both residential and non-residential development. Each residential unit represents a single EDU, multi-family developments reflect a discounted EDU factor resulting from less water entering the system from this type of residential development, and non-residential development requires an analysis of domestic water used and directed to the collection and treatment systems to determine EDUs.

An analysis was performed to determine the maximum Wastewater SDC under existing treatment flows per equivalent residential unit (gpd/EDU) and a reduced flow per EDU. The current flow is 315 gpd/EDU. Per discussion in the updated master plan and discussions with ACE and City staff and engineering consultants a reduced flow of 260 gpd/EDU is possible if existing I & I is diminished by completing various collection system improvements and less water consumption by new water customers due to the installation of reduced flow appliances.

The maximum Wastewater SDC for current conditions is calculated at \$10,562 per EDU. The maximum amount for a system designed for 260 gpd/EDU is \$8,677, a reduction of \$1,885. The components of the SDC are provided below in Table 2.

Table 2
Wastewater SDC

Description	315 gpd/EDU with Interim Improvements	315 gpd/EDU without Interim Improvements	260 gpd/EDU without Interim Improvements
Improvement fee			
Treatment expansion	\$ 8,282	\$ 7,602	\$ 5,749
Collection improvements	1,488	1,488	1,488
Improvement fee total	9,770	9,091	7,238
Reimbursement fee			
Treatment	484	484	960
I & I reduction improvements	-	-	226
Reimbursement fee total	484	484	1,186
Administration fee	308	287	253
Total Wastewater SDC	\$ 10,562	\$ 9,862	\$ 8,677
Difference over/(under) 260 gpd/EDU	\$ 1,885	1,186	NA
Difference over/(under) 315 gpd/EDU w/o interim	\$ 700	NA	\$ (1,186)
Difference over/(under) 315 gpd/EDU w/ interim	NA	(700)	\$ (1,885)

A treatment system designed for a lower flow per EDU will result in significantly less capital requirements, reducing the treatment plant component by \$2,533. The savings are partially offset by increasing the reimbursement fee for treatment resulting from additional capacity within the existing system. Current estimated treatment capacity is approximately 800 EDUs. Reducing gpd per EDU from 315 to 260 will increase existing treatment capacity to approximately 1,921 EDUs, approximately 4-5 years based on current development activity. A calculation for 315 gpd/EDU without interim improvements is provided for comparison purposes only. Based upon current development activity interim improvements are anticipated to be required if I and I improvements are not initiated to reduce flow and gpd/EDU.

Collection system improvement costs are the same in either model as are the number of EDUs to serve a projected future population of 36,000. Therefore, the collection system improvement fee is the same in both models. Additionally, the 260 gpd/EDU model includes I and I reimbursement costs. The calculated allocation of I and I costs (72%) represents the new EDUs to be added to the system in relation to the existing number of EDUs estimated within the system.

An administrative fee has been calculated at three percent (3%) of the combined improvement and reimbursement fees. The administration fee calculation included master plan updates each five years, updates to the wastewater SDC methodology each five years, and financial and planning department fee administration.

Table 3

Improvement Fee - Treatment Plant Expansions

	315 gpd/EDU	315 gpd/EDU	260 gpd/EDU
Phase I - level II (gpd) - interim improvement	570,000	-	-
Less: capacity of improvements	(570,000)	-	-
Phase II - level IV (gpd)	1,250,000	1,250,000	1,250,000
Phase III - level IV (gpd)	1,250,000	1,250,000	1,250,000
Phase IV - level IV (gpd)	1,250,000	1,250,000	-
Total gpd - build out capacity additions	3,750,000	3,750,000	2,500,000
Total cost of expansion projects	\$ 90,315,000	\$ 82,905,000	\$ 55,281,000
Needed capacity to serve at build out	3,435,138	3,435,138	2,543,872
EDU's build out - improvement fee only	10,905	10,905	9,784
SDC improvement fee - treatment build out	\$ 8,282	\$ 7,602	\$ 5,650
Maximum EDU's with plant expansion	11,905	11,905	9,615
SDC improvement fee - treatment max EDU	\$ 7,586	\$ 6,964	\$ 5,749

Table 4

Treatment Plant Expansions

	Capacity (gpd)	Cost (2005)	Cost (2007)
Lagoon expansion	570,000	7,175,000	7,410,000
SMR Plant - Phase I	1,250,000	24,954,000	25,772,000
SMR Plant - Phase II	1,250,000	28,573,000	29,509,000
SMR Plant - Phase III	1,250,000	26,748,000	27,624,000
		87,450,000	90,315,000
Engineering News Record Index - November 2005	7,630		
Engineering News Record Index - February 2007	7,880		
Percentage change in ENR	3.28%		

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Table 5

Improvement Fee - Collection System

EDU's - existing/new capacity to build out		11,705
Collection system costs	\$	17,422,068
Cost per EDU	\$	1,488

Table 6

Collection System Improvements

Project	Improvements		Cost
Railroad Interceptor	6,586 lineal feet	6"-15" sanitary sewers	\$ 606,666
North Interceptor	5,811 lineal feet	6"-15" sanitary sewers 776 gpm lift station	2,073,050
Pinkard Lane Railroad	1,405 lineal feet	10" sanitary sewers	178,892
Swamp Sewer	14,555 lineal feet	8"-21" sanitary sewers 1128 gpm lift station	3,930,121
Colson & Colson/White Deer Ranch Sewer	5,394 lineal feet	8"-21" sanitary sewers	902,793
Melrose - Bailey Interceptor Sewer	21,475 lineal feet	8"-36" sanitary sewer	3,239,026
Rimrock Park Interceptor Sewer	11,111 lineal feet	8"-36" sanitary sewer 3823 gpm lift station	5,938,790
			<hr/>
			\$ 16,869,338
Engineering News Record Index - November 2005	7,630		
Engineering News Record Index - February 2007	7,880		
Percentage change in ENR	3.28%		
Inflation adjusted cost estimate for Collection System Improvements			<hr/> <hr/>
			\$ 17,422,068

Note: Projects and costs per ACE Consulting Master Plan Update 2005

Table 7

Current and Projected Capacity Needs to Build Out

<u>Description</u>	GPD per EDU	GPD per EDU
	315	260
Current plant capacity gpd	1,670,000	1,670,000
Estimated available capacity - (800 & 1,921 EDUs)	252,000	499,480
Estimated current gpd served	1,418,000	1,170,520
Estimated EDUs in system (315 gpd)	4,502	4,502
Estimated population served	10,000	10,000
Projected population at build out	36,000	36,000
Estimated EDU's at build out	16,207	16,207
Estimated additional EDUs to build out	11,705	11,705
Estimated additional net treatment capacity	3,435,138	2,543,872

Table 8

Reimbursement - Wastewater Treatment

	315 gpd/EDU	260 gpd/EDU
2006 Cost Treatment Plant Expansion (570k gpd)	\$ 14,017,925	\$ 14,017,925
Less: Debt service reserve	\$ (1,194,843)	\$ (1,194,843)
Net Treatment plant expansion cost	\$ 12,823,082	\$ 12,823,082
Remaining capacity in gpd	252,000	499,480
Original capacity of expansion	570,000	570,000
Percentage remaining capacity	44%	88%
Dollar allocation - remaining capacity	\$ 5,669,152	\$ 11,236,619
Remaining capacity in EDUs	800	1,921
Additional EDU's to build out	10,905	9,784
Total EDUs	11,705	11,705
Reimbursement - existing treatment	\$ 484	\$ 960

Table 9

Reimbursement - I and I Improvements

Total slip lining cost	\$ 3,670,680
Cost allocated to new customers	\$ 2,651,047
EDU's - existing/new capacity to build out	11,705
Reimbursement cost per EDU	\$ 226

4.1 Discussion of Infiltration and Inflows into the Collection System

ACE Consultants noted in their Wastewater Master Plan Update 2005 that “the collection system is currently successfully conveying the current sewage flows in most parts of the City to the wastewater treatment plant, but until recently maintenance and upgrading have been deferred, there are numerous bottlenecks in the system, pipes in extensive portions of the sewer system are regularly flowing overfull (in a surcharged condition) with water surfaces almost to the ground surface in some places, and there is little or no reserve capacity available to support handling the additional wastewater flows generated as the City grows.”

ACE also notes “construction of proposed developments must be severely restricted without addressing the sewage collection system problems and construction of new sewers to provide service to the developing areas.” And also noted in the Master Plan Update is that infiltration and inflow (I and I) has been identified as a probable major problem in the Prineville collection system and that a proactive sewer system maintenance and rehabilitation program are recommended in order to maintain the City’s investment in the collection system and delay the need for a wastewater plant expansion for as long as possible.

The Master Plan Update wastewater plant expansions are based on a daily use per household or equivalent dwelling unit (EDU) of 315 gallons per day (gpd). This use is consistent with the long-term historical use rate. Recently the City performed several I and I maintenance projects and preliminary indications are that daily use per EDU has been reduced. City staff has established periodic reading of flows and will perform continuing analysis to determine with greater certainty what degree the reduced flow is attributable to I and I maintenance. Presently, it is not possible to measure the exact amount of reduced I and I flow resulting from collection system maintenance.

The Wastewater Master Plan Update 2005 notes (page Chapter 4-1) that “In the model the I and I added as much as .6 mgd to the amount of existing flow at the Wastewater Treatment Plant.” The design capacity of the existing Treatment Plant is 1.67 mgd. Therefore, there is as much as a thirty-six percent (36%) negative impact on the treatment plant capacity resulting from I and I. Reducing I and I will result in reductions in the daily flow per EDU, thereby increasing the number of EDUs that may be served with existing and additional treatment facilities and reducing the SDC necessary to fund the construction of treatment facilities.

In 2006 the City initiated a slip lining and manhole maintenance program to reduce inflows and infiltration impacts to the flows to the treatment plant. An inventory of existing sewer collection system pipe suitable for slip lining and manholes was conducted. Subsequently, an independent cost estimate was secured. The results of the inventory and cost estimate is provided in Table 10 below.

Table 10
Slip Lining Cost Schedule
October 23, 2006

Description	Lineal Feet
8-inch	68,851
10-inch	7,946
12-inch	2,373
15-inch	3,057
18-inch	2,490
Total lineal feet	84,717
Cost per lineal foot (average)	\$ 40.00
Slip line cost	\$ 3,388,680
Manholes	282
Cost per manhole	\$ 1,000
Manhole cost	\$ 282,000
Total cost	\$ 3,670,680

Notes:

1. The City has several thousand feet of six-inch sewer lines in the system, these lines are very costly to slip line due to the size and type of equipment that is used to perform this type of operation. So the numbers above are reflective of all 8-inch to 15-inch concrete and AC type pipe only.
2. Per foot cost estimates calculated by C-More Pipes of Rickeall, Oregon.

Table 11
Allocation of Slip Lining Cost

	EDU's	Percent
Current users	4,502	28%
New users	11,705	72%
	16,207	

The consensus of ACE, City staff, and GEL is that it is beneficial to current and future system users to have I and I projects and project costs included in the SDC methodology. The reasoning is that without I and I improvements the SDC for treatment plant expansions would be based upon the current 315 gpd per EDU rate. With I and I improvements the treatment plant expansions can be based upon a lower gpd per EDU rate, thereby increasing the number of EDU's that may be added to the system for any given expansion project, thereby reducing the resulting SDC. Additionally, by reducing the gpd usage per EDU in the SDC methodology the allocated cost per EDU for collection system improvements is reduced. Lastly, the reduced gpd use per EDU will

result in reduced operating costs per EDU. That is, the operating costs, which are largely fixed for a given treatment plant capacity, will be able to be spread over a greater number of customers with a lower gpd usage rate.

ACE's analysis indicates they used 240 gpd per EDU together with I and I flow consistent with the current peak flows based on an iterative modeling process. The estimated amount of I and I in the final model runs ranged from a low of 4,055 gallons/day/mile of sewer to 60,825 gallons/day/mile of sewer. The low end of the range is consistent with the amount of I and I ACE established as the allowable leakage for 8" sewers based on the formula used in leakage testing of new sewer pipes.

Based on ACE's analysis and further dialogue with ACE, GEL is unable to ascertain with any certainty the amount of flow reduction resulting from completion of I and I improvements in Prineville. However it is expected that I and I reductions will occur, therefore, GEL is utilizing a reduction in I and I of one-half its existing flow for the SDC methodology calculations, and recommending revisiting the calculation once an I and I study and plan is completed.

A one-half reduction in I and I from the current estimate of .6 mgd to .3 mgd, represents an eighteen percent (18%) reduction in the amount of flow to the treatment plant (300,000/1,667,000) at its current maximum capacity. Applying an eighteen percent (18%) reduction to the gpd flow of the current system reduces gpd to approximately 260 gpd from 315 gpd ($315 * (1 - .18)$). Reducing the gpd per EDU to 260 increases the number of EDUs that may be added to the system prior to treatment plant expansions.

The financial impact of the I and I adjustment noted above is significant. And it must be emphasized that this adjustment is not scientific or based on actual reduced flow data. Rather it recognizes that flow reductions will occur and the amount estimated in this calculation is in the middle of the existing range. Actual I and I flow reductions will almost certainly be different and are dependent on the improvements the City completes and the diligence the City performs to ensure private improvements are completed.

The City will achieve best results by first completing an Infiltration and Inflow study and plan that will identify projects, ascertain the best cost/benefit, identify leaking sewer laterals, and other sources of I and I. The final plan will set forth a project schedule, estimated costs for improvements, an implementation plan, including alternatives to address inappropriate storm connections and other inflow sources.

7.0 SUMMARY

The City's growth will require a combination of techniques, including system development charges and other funds to pay for capital facilities needed to serve the Wastewater needs of current and future residents and employees. Federal and state resources to offset the significant capital infrastructure costs of wastewater facilities are

diminished with future access to capital (outside of possible preferred lending rates) limited.

The City's Wastewater facility needs and the CIP should be reviewed and updated at least once each budgeting cycle. A cost adjustment index should be adopted to adjust the System Development Charges rates annually to reflect changes in costs for land and construction. The SDC methodology should also be periodically updated when significant changes are made to the Master Plan or CIP.

Appendix
Oregon Revised Statutes

System Development Charges

- 223.297 Policy
- 223.299 Definitions for ORS 223.297 to 223.314
- 223.301 Certain system development charges and methodologies prohibited
- 223.302 System development charges; use of revenues; review procedures
- 223.304 Determination of amount of system development charges; methodology; credit allowed against charge; limitation of action contesting methodology for imposing charge; notification request
- 223.307 Authorized expenditure of system development charges
- 223.309 Preparation of plan for capital improvements financed by system development charges; modification
- 223.311 Deposit of system development charge revenues; annual accounting
- 223.313 Application of ORS 223.297 to 223.314
- 223.314 Establishment or modification of system development charge not a land use decision

System Development Charges

223.297 Policy. The purpose of ORS 223.297 to 223.314 is to provide a uniform framework for the imposition of system development charges by local governments, to provide equitable funding for orderly growth and development in Oregon’s communities and to establish that the charges may be used only for capital improvements. [1989 c.449 §1; 1991 c.902 §25; 2003 c.765 §1; 2003 c.802 §17]

Note: 223.297 to 223.314 were added to and made a part of 223.205 to 223.295 by legislative action, but were not added to and made a part of the Bancroft Bonding Act. See section 10, chapter 449, Oregon Laws 1989.

223.299 Definitions for ORS 223.297 to 223.314. As used in ORS 223.297 to 223.314:

- (1)(a) “Capital improvement” means facilities or assets used for the following:
 - (A) Water supply, treatment and distribution;
 - (B) Waste water collection, transmission, treatment and disposal;

- (C) Drainage and flood control;
- (D) Transportation; or
- (E) Parks and recreation.

(b) “Capital improvement” does not include costs of the operation or routine maintenance of capital improvements.

(2) “Improvement fee” means a fee for costs associated with capital improvements to be constructed.

(3) “Reimbursement fee” means a fee for costs associated with capital improvements already constructed, or under construction when the fee is established, for which the local government determines that capacity exists.

(4)(a) “System development charge” means a reimbursement fee, an improvement fee or a combination thereof assessed or collected at the time of increased usage of a capital improvement or issuance of a development permit, building permit or connection to the capital improvement. “System development charge” includes that portion of a sewer or water system connection charge that is greater than the amount necessary to reimburse the local government for its average cost of inspecting and installing connections with water and sewer facilities.

(b) “System development charge” does not include any fees assessed or collected as part of a local improvement district or a charge in lieu of a local improvement district assessment, or the cost of complying with requirements or conditions imposed upon a land use decision, expedited land division or limited land use decision. [1989 c.449 §2; 1991 c.817 §29; 1991 c.902 §26; 1995 c.595 §28; 2003 c.765 §2a; 2003 c.802 §18]

Note: See note under 223.297.

223.300 [Repealed by 1975 c.642 §26]

223.301 Certain system development charges and methodologies prohibited. (1)

As used in this section, “employer” means any person who contracts to pay remuneration for, and secures the right to direct and control the services of, any person.

(2) A local government may not establish or impose a system development charge that requires an employer to pay a reimbursement fee or an improvement fee based on:

- (a) The number of individuals hired by the employer after a specified date; or
- (b) A methodology that assumes that costs are necessarily incurred for capital

improvements when an employer hires an additional employee.

(3) A methodology set forth in an ordinance or resolution that establishes an improvement fee or a reimbursement fee shall not include or incorporate any method or system under which the payment of the fee or the amount of the fee is determined by the number of employees of an employer without regard to new construction, new development or new use of an existing structure by the employer. [1999 c.1098 §2; 2003 c.802 §19]

Note: See note under 223.297.

223.302 System development charges; use of revenues; review procedures. (1)

Local governments are authorized to establish system development charges, but the

revenues produced therefrom must be expended only in accordance with ORS 223.297 to 223.314. If a local government expends revenues from system development charges in violation of the limitations described in ORS 223.307, the local government shall replace the misspent amount with moneys derived from sources other than system development charges. Replacement moneys must be deposited in a fund designated for the system development charge revenues not later than one year following a determination that the funds were misspent.

(2) Local governments shall adopt administrative review procedures by which any citizen or other interested person may challenge an expenditure of system development charge revenues. Such procedures shall provide that such a challenge must be filed within two years of the expenditure of the system development charge revenues. The decision of the local government shall be judicially reviewed only as provided in ORS 34.010 to 34.100.

(3)(a) A local government must advise a person who makes a written objection to the calculation of a system development charge of the right to petition for review pursuant to ORS 34.010 to 34.100.

(b) If a local government has adopted an administrative review procedure for objections to the calculation of a system development charge, the local government shall provide adequate notice regarding the procedure for review to a person who makes a written objection to the calculation of a system development charge. [1989 c.449 §3; 1991 c.902 §27; 2001 c.662 §2; 2003 c.765 §3; 2003 c.802 §20]

Note: See note under 223.297.

223.304 Determination of amount of system development charges; methodology; credit allowed against charge; limitation of action contesting methodology for imposing charge; notification request. (1)(a) Reimbursement fees must be established or modified by ordinance or resolution setting forth a methodology that is, when applicable, based on:

(A) Ratemaking principles employed to finance publicly owned capital improvements;

(B) Prior contributions by existing users;

(C) Gifts or grants from federal or state government or private persons;

(D) The value of unused capacity available to future system users or the cost of the existing facilities; and

(E) Other relevant factors identified by the local government imposing the fee.

(b) The methodology for establishing or modifying a reimbursement fee must:

(A) Promote the objective of future system users contributing no more than an equitable share to the cost of existing facilities.

(B) Be available for public inspection.

(2) Improvement fees must:

(a) Be established or modified by ordinance or resolution setting forth a methodology that is available for public inspection and demonstrates consideration of:

(A) The projected cost of the capital improvements identified in the plan and list adopted pursuant to ORS 223.309 that are needed to increase the capacity of the systems to which the fee is related; and

(B) The need for increased capacity in the system to which the fee is related that will be required to serve the demands placed on the system by future users.

(b) Be calculated to obtain the cost of capital improvements for the projected need for available system capacity for future users.

(3) A local government may establish and impose a system development charge that is a combination of a reimbursement fee and an improvement fee, if the methodology demonstrates that the charge is not based on providing the same system capacity.

(4) The ordinance or resolution that establishes or modifies an improvement fee shall also provide for a credit against such fee for the construction of a qualified public improvement. A “qualified public improvement” means a capital improvement that is 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.

(5)(a) The credit provided for in subsection (4) of this section is only for the improvement fee charged for the type of improvement being constructed, and credit for qualified public improvements under subsection (4)(b) of this section may be granted only for the cost of that portion of such improvement that exceeds the local government’s minimum standard facility size or capacity needed to serve the particular development project or property. The applicant shall have the burden of demonstrating that a particular improvement qualifies for credit under subsection (4)(b) of this section.

(b) A local government may deny the credit provided for in subsection (4) of this section if the local government demonstrates:

(A) That the application does not meet the requirements of subsection (4) of this section; or

(B) By reference to the list adopted pursuant to ORS 223.309, that the improvement for which credit is sought was not included in the plan and list adopted pursuant to ORS 223.309.

(c) When the construction of a qualified public improvement gives rise to a credit amount greater than the improvement fee that would otherwise be levied against the project receiving development approval, the excess credit may be applied against improvement fees that accrue in subsequent phases of the original development project. This subsection does not prohibit a local government from providing a greater credit, or from establishing a system providing for the transferability of credits, or from providing a credit for a capital improvement not identified in the plan and list adopted pursuant to ORS 223.309, or from providing a share of the cost of such improvement by other means, if a local government so chooses.

(d) Credits must be used in the time specified in the ordinance but not later than 10 years from the date the credit is given.

(6) Any local government that proposes to establish or modify a system development charge shall maintain a list of persons who have made a written request for notification prior to adoption or amendment of a methodology for any system development charge.

(7)(a) Written notice must be mailed to persons on the list at least 90 days prior to the

first hearing to establish or modify a system development charge, and the methodology supporting the system development charge must be available at least 60 days prior to the first hearing. The failure of a person on the list to receive a notice that was mailed does not invalidate the action of the local government. The local government may periodically delete names from the list, but at least 30 days prior to removing a name from the list shall notify the person whose name is to be deleted that a new written request for notification is required if the person wishes to remain on the notification list.

(b) Legal action intended to contest the methodology used for calculating a system development charge may not be filed after 60 days following adoption or modification of the system development charge ordinance or resolution by the local government. A person shall request judicial review of the methodology used for calculating a system development charge only as provided in ORS 34.010 to 34.100.

(8) A change in the amount of a reimbursement fee or an improvement fee is not a modification of the system development charge methodology if the change in amount is based on:

(a) A change in the cost of materials, labor or real property applied to projects or project capacity as set forth on the list adopted pursuant to ORS 223.309; or

(b) The periodic application of one or more specific cost indexes or other periodic data sources. A specific cost index or periodic data source must be:

(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. [1989 c.449 §4; 1991 c.902 §28; 1993 c.804 §20; 2001 c.662 §3; 2003 c.765 §§4a,5a; 2003 c.802 §21]

Note: See note under 223.297.

223.305 [Repealed by 1971 c.325 §1]

223.307 Authorized expenditure of system development charges. (1)

Reimbursement fees may be spent only on capital improvements associated with the systems for which the fees are assessed including expenditures relating to repayment of indebtedness.

(2) Improvement fees may be spent only on capacity increasing capital improvements, including expenditures relating to repayment of debt for such improvements. An increase in system capacity may be established if a capital improvement increases the level of performance or service provided by existing facilities or provides new facilities. The portion of the improvements funded by improvement fees must be related to the need for increased capacity to provide service for future users.

(3) System development charges may not be expended for costs associated with the construction of administrative office facilities that are more than an incidental part of other capital improvements or for the expenses of the operation or maintenance of the facilities constructed with system development charge revenues.

(4) Any capital improvement being funded wholly or in part with system development charge revenues must be included in the plan and list adopted by a local government pursuant to ORS 223.309.

(5) Notwithstanding subsections (1) and (2) of this section, system development charge revenues may be expended 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. [1989 c.449 §5; 1991 c.902 §29; 2003 c.765 §6; 2003 c.802 §22]

Note: See note under 223.297.

223.309 Preparation of plan for capital improvements financed by system development charges; modification. (1) Prior to the establishment of a system development charge by ordinance or resolution, a local government shall prepare a capital improvement plan, public facilities plan, master plan or comparable plan that includes a list of the capital improvements that the local government intends to fund, in whole or in part, with revenues from an improvement fee and the estimated cost, timing and percentage of costs eligible to be funded with revenues from the improvement fee for each improvement.

(2) A local government that has prepared a plan and the list described in subsection (1) of this section may modify the plan and list at any time. If a system development charge will be increased by a proposed modification of the list to include a capacity increasing capital improvement, as described in ORS 223.307 (2):

(a) The local government shall provide, at least 30 days prior to the adoption of the modification, notice of the proposed modification to the persons who have requested written notice under ORS 223.304 (6).

(b) The local government shall hold a public hearing if the local government receives a written request for a hearing on the proposed modification within seven days of the date the proposed modification is scheduled for adoption.

(c) Notwithstanding ORS 294.160, a public hearing is not required if the local government does not receive a written request for a hearing.

(d) The decision of a local government to increase the system development charge by modifying the list may be judicially reviewed only as provided in ORS 34.010 to 34.100. [1989 c.449 §6; 1991 c.902 §30; 2001 c.662 §4; 2003 c.765 §7a; 2003 c.802 §23]

Note: See note under 223.297.

223.310 [Amended by 1957 c.397 §3; repealed by 1971 c.325 §1]

223.311 Deposit of system development charge revenues; annual accounting. (1) System development charge revenues must be deposited in accounts designated for such moneys. The local government shall provide an annual accounting, to be completed by January 1 of each year, for system development charges showing the total amount of system development charge revenues collected for each system and the projects that were funded in the previous fiscal year.

(2) The local government shall include in the annual accounting:

(a) A list of the amount spent on each project funded, in whole or in part, with system development charge revenues; and

(b) The amount of revenue collected by the local government from system development charges and attributed to the costs of complying with the provisions of ORS 223.297 to 223.314, as described in ORS 223.307. [1989 c.449 §7; 1991 c.902 §31; 2001 c.662 §5; 2003 c.765 §8a; 2003 c.802 §24]

Note: See note under 223.297.

223.312 [1957 c.95 §4; repealed by 1971 c.325 §1]

223.313 Application of ORS 223.297 to 223.314. (1) ORS 223.297 to 223.314 shall apply only to system development charges in effect on or after July 1, 1991.

(2) The provisions of ORS 223.297 to 223.314 shall not be applicable if they are construed to impair bond obligations for which system development charges have been pledged or to impair the ability of local governments to issue new bonds or other financing as provided by law for improvements allowed under ORS 223.297 to 223.314. [1989 c.449 §8; 1991 c.902 §32; 2003 c.802 §25]

Note: See note under 223.297.

223.314 Establishment or modification of system development charge not a land use decision. The establishment, modification or implementation of a system development charge, or a plan or list adopted pursuant to ORS 223.309, or any modification of a plan or list, is not a land use decision pursuant to ORS chapters 195 and 197. [1989 c.449 §9; 2001 c.662 §6; 2003 c.765 §9]

Note: See note under 223.297.