City of Maupin
Systems Development Charges
Methodology Report

Prepared for the City of Maupin by

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PRESENTED TO COUNCIL AUG 26 2009

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Executive Summary

The purpose of this report is to provide specific information on Systems Development Charges (SDCs) and set forth the methodology used to establish and administrate them for the City of Maupin. SDCs are one time fees imposed on new development that help recover the cost of necessary capital improvements induced by growth. Based on data from the Oregon State Office of Economic Analysis (OSOEA) the City of Maupin will add 61 new residents over the next twenty years. This figure is based on a county-wide analysis and given recent growth trends in Maupin, is a very conservative projection for the city. Based on growth experienced over the past ten years in Maupin, city staff have projected growth of 268 persons over 20 years. Given that Maupin did not previously have a system for recovering infrastructure costs from new development, city officials determined that SDCs would be needed to support growth.

The process of creating the SDC Methodology Report was undertaken by the 2008-2009 RARE Participant. Research and writing was initiated concurrently with the drafting of Maupin's Capital Improvement Plan (CIP). Research consisted of collecting data on Maupin's infrastructure capacities, expected population growth, construction cost and cost indexes, Oregon SDC Law and calculation methods. City staff used the data to calculate and prepare a schedule of fees for Maupin's water, sewer, park and transportation systems. After the SDC Methodology Report was completed it was submitted to the City Council for review and approval. The SDC Methodology Report was accepted in an open public hearing with City Council for which a 90 day public notice was given. This report was available for review to citizens and interested persons 60 days before the public hearing. The SDC Methodology Report was accepted on --,--,2009 and an ordinance and resolution were passed on --,--,2009 to establish SDCs in Maupin.

With established SDCs the City of Maupin has an additional source of funding and a legal safeguard against sudden infrastructure costs associated with new development. If City Staff projected population growth occurs, charging the max base fee, the City can expect $1,427,804 in funding from SDCs over the 20-Year planning period of the CIP. The actual amount will most likely be different as this does not account for new business or multi-family dwellings. In any eventuality SDCs will help Maupin in infrastructure financing and planning.

Introduction to Systems Development Charges

Systems Development Charges, or SDCs, are one time fees imposed on new development by municipal or regional governments. These fees are intended to ensure that development pays an equitable share of the cost associated with infrastructure needed to serve it. SDCs can recover either a portion or the entire cost of needed infrastructure capacity depending on what percent can be devoted to new development and methodological decisions of local government.

Local governmental units are given authority to impose SDCs by Oregon Revised Statutes (ORS) 223.297-223.314. According to the legislation, SDC fees must be based on a publicly adopted plan that was established prior to the SDCs (such as a comprehensive plan or capital improvement plan). ORS 223 also regulates the methodology of calculating SDC fees and sets administrative standards. While there is considerable room within the language of the legislation for communities to tailor SDC methodologies to their own needs there are several principles outlined that define how SDCs must be structured. Legally, fee calculation must take into account a number of factors including expected growth, rate making methodologies used to estimate project costs, previous contributions of existing system users, outside assistance and value of remaining capacity. Basically what all this boils down to is that, through SDCs, governments can only recover a proportionate share of previous and expected future costs of infrastructure capacity that it actually incurs due to new development.

To accomplish this SDCs are structured around two types of fees; a reimbursement fee and an improvement fee. Reimbursement fees are meant to recover costs associated with remaining capacity of existing infrastructure. Calculation of a reimbursement fee is based on the value of remaining capacity and expected growth of demand. Improvement fees are meant to recover all or a portion of costs associated with future capital improvement projects that will expand infrastructure capacities to serve new development. Calculation of an improvement fee is based on financial estimates from a publicly adopted plan of capital improvement projects, expected population growth and expected per capita use of infrastructure capacity.

Systems Development Charges Methodology

Introduction

As stated in the previous section SDCs are built around the basic concepts of the reimbursement fee and the improvement fee. Reimbursement fees recover the cost of existing capacity available for growth and improvement fees recover for the expected costs of future capacity expansion to accommodate growth. Put together, the two fees are referred to as a combined fee. To arrive at the final fees there are three basic steps to complete so that a government can assure citizens and property owners that new development will be paying its proportionate share of infrastructure costs only; no more and no less. These three basic steps are determine Capacity Need, develop a Cost Basis and develop the Schedule of Fees. There are also smaller considerations such as compliance costs that, along with each basic step, will be described in detail.

Before diving into calculations, however, a brief discussion of data, data collection and calculation assumptions to provide some perspective is important. At their root, SDC fees are based off predictive models of infrastructure use. Models, even very good models, rely on previously collected data and assumptions. Understanding that fact, the data and assumptions used in a methodology are key to determining if it is appropriate. For this methodology data was collected from many sources. The data on infrastructure use utilized to predict expected demand of new development came from the Maupin Public Works department. Demographic data, such as average household size was collected for the "place" Maupin from the 2000 US Census. There are generally many possibilities for data sources and assumptions based on that data. Those making the methodology must essentially choose the data that they find is the most representative of reality. One example from this methodology is utilizing an average household size of 2.26 from the 2000 US Census rather than data from other sources. Another example is assuming that a base size water meter serves an average sized household. These are important factors to keep in mind while evaluating this methodology.

Step 1: Determine Capacity Need

Determining Capacity Need for each infrastructure system is the first step in creating SDC fees. The point of this step is to determine if SDCs can be imposed and to outline the context in which SDCs are being written. **Capacity Need** is a measure of a community's infrastructure capacity versus the demand for infrastructure capacity. To determine a community's Capacity Need there is a process of gathering information and calculation that is detailed below.

Define Capacity Measurement

In this step authors of the methodology decide, based on available information and characteristics of their infrastructure systems, the best means of measuring infrastructure capacity. While there are many ways of doing this, there are several standards for each type of infrastructure. These standards represent the most important considerations when communities determine the size of their infrastructure systems. Standards for infrastructure systems included in this methodology are:

Water- Average Daily Demand (Measured in gallons per day)

Sewer- Average Annual Flow (Measured in gallons per day)

Parks- Acres per Thousand Persons

Determine Capacity Requirements

After the Capacity Measurement has been defined the Capacity Requirement of each system can be derived. For this methodology **Capacity Requirement** can be understood as the demand for services in a community, expressed in the chosen Capacity Measurement, and is divided into the Existing Capacity Requirement and Growth Capacity Requirement. The **Existing Capacity Requirement** is the current demand on a community's infrastructure systems. The **Growth Capacity Requirement** is the expected demand of future development for infrastructure services.

Existing Capacity Requirement is not calculated but, is basically a figure generally kept by a community's public works department. From that data, however, another important figure can be calculated called Remaining Capacity, which will become important shortly. **Remaining Capacity** is the amount of infrastructure capacity a system has after the current demand has been accounted for and thus can be devoted to growth. Current Capacity less the Existing Capacity Requirement will yield the Remaining Capacity. If the number yielded is negative it means there is a deficit of capacity and thus a Reimbursement Fee cannot be imposed as there is no capacity that can serve growth. If the number is positive it means there is a surplus of capacity and a Reimbursement Fee can be imposed.

Remaining Capacity = Current Capacity – Existing Capacity Requirement

Growth Capacity Requirement is calculated using some information from the previous paragraph and some from other sources. To calculate the Growth Capacity Requirement, the expected population growth of a community within the planning period of the Capital Improvement Plan needs to be determined first. Several entities maintain data on expected population growth within Oregon. Data from one of these agencies, such as Oregon State Office of Economic Analysis or Portland State University's Population Center, is generally considered credible for use in SDC calculation. Then the Expected Demand per System User is needed. This is calculated using information obtained for the previous section from the public works department. Basically, Expected Demand per System User is calculated by dividing the Existing Capacity Requirement by the number of system users. In each system, arriving at the number of system users is a unique process as it is not always straight population. The methodology for each system will be explained in their respective sections. After the Expected Demand per System User has been calculated, Growth Capacity Requirement is then derived by multiplying Expected Demand per System User and Expected Population Growth.

Growth Capacity Requirement = Expected Growth * Expected Demand per System User

Expected Demand per System User = Current Demand / System Users

Determine Capacity Need

The final step to arrive at Capacity Need is to combine the figures calculated previously in the Capacity Requirement section. Growth Capacity Requirements less Remaining Capacity yields Capacity Need. If Remaining Capacity is negative (i.e. there is a deficit of current capacity) Capacity Need will actually be larger than the Growth Capacity Requirement. If Remaining Capacity is positive (i.e. there is a surplus of current capacity), Capacity Need will be smaller than Growth Capacity Requirements. Capacity Need basically shows if a government will need to add capacity to a given system over the timeline of their Capital Improvement Plan in order to serve the demands of expected population growth and fulfills legal requirements in ORS for a community to demonstrate the state of its infrastructure systems when establishing SDCs.

Capacity Need = Growth Capacity Requirement – Remaining Capacity

Step 2: Develop Cost Basis

After determining Capacity Need, the Cost Basis for each system can be developed. The **Cost Basis**, in its final form, represents the total value of all eligible existing capacity and the expected cost of future capacity expansion that is intended to be recovered through SDCs. The process for developing the Cost Bases of the Reimbursement and Improvement Fee will be explained in further detail below.

Reimbursement Fee Cost Basis

Developing a Cost Basis for the Reimbursement Fee has two major steps. The first step is to determine the value of Existing Infrastructure. **Existing Infrastructure** is considered any infrastructure, including projects from the Capital Improvement Plan, that are already constructed or being constructed when SDCs are established and is further broken down into two categories; "Fixed Capital Assets" and "Completed CIP Projects". Each category of Existing Infrastructure is examined separately and then the final values are added together.

Determining the value of Fixed Capital Assets is the most time consuming consideration, since the cost of the Completed CIP Projects should be known, and can be completed through several methods. These methods include original cost, book value (original cost less depreciation), replacement cost, etc… When selecting a method there are several important considerations particularly the availability of historical data and records. Given the difficulty of obtaining data due to the age of some system components, this methodology utilizes replacement cost methods. Data for this valuation came from Maupin Public Works and Tenneson Engineering. Then the known costs of completed projects from the capital improvement plan are added.

Total System Value = Replacement Value + Completed CIP Project Costs

After the value of the entire system has been established the portion of that value which is eligible to be recovered with SDCs can be calculated. Eligible costs are the portion of project monies that go to expanding infrastructure capacity to serve new development. The calculation is done in two steps. First, the total cost of the Existing Infrastructure must be adjusted to reflect any Outside Assistance. This is done by simply subtracting the amount of any grant, gift, donation, etc… that was given to the governmental unit to complete a project. The value yielded is referred to as the Adjusted System Value. Then the final Reimbursement Fee Cost Basis is yielded by multiplying the percent of capacity allocated to growth (expressed as a percentage of total capacity) by the Adjusted System Value.

Reimbursement Fee Cost Basis = Adjusted System Value * Growth Allocation (%)

Adjusted System Value= Total System Value – Outside Assistance

Growth Allocation = (Remaining Capacity / Total Capacity)

Improvement Fee Cost Basis

Developing the Cost Basis for the Improvement Fee also has two major steps. By far the most time consuming, and important, is the creation of a list of capital improvement projects and estimation of their costs. After the list has been completed

each project must be reviewed to see if it is eligible to have any costs recovered by SDCs. Projects that are eligible will expand system capacity and will be able to serve new growth.

The creation of the list of capital improvement projects, essentially a Capital Improvement Plan, involves many smaller steps. Overall, it is a document that should guide the development of the community's infrastructure over time. A publicly adopted CIP, or similar document, is required by ORS for establishing SDCs. The capital improvement list should detail project costs, scope, time frame and growth allocation.

With a completed list of capital improvement projects and their costs, the Cost Basis for the Improvement Fee can then be calculated. To start, a complete review of the project list to determine which projects and what portion of each eligible project's cost will provide capacity for new development and thus be eligible for recovery through SDCs is necessary. Projects that expand capacity are generally upgrades of existing infrastructure or construction of new infrastructure. If applicable, the expected cost of capacity expanding projects should be adjusted to reflect known or expected Outside Assistance. Then, to obtain the eligible costs for each project multiply the Adjusted Project Cost by the percent of resulting capacity that will be allocated to new growth.

Improvement Fee Cost Basis = Adjusted Project Costs * Growth Allocation (%)

Adjusted Project Costs = Total Project Cost – Outside Assistance

Growth Allocation = Project Capacity Allocated to New Growth / Total Project Capacity

Step 3: Develop SDC Schedule

The final step in calculating SDCs is to develop the Schedule of SDC Fees. There are, of course, several intermediary steps to arriving and the final fees. These steps include determining the Cost per Demand Unit, calculating the Base Fee and finalizing the Schedule of SDC Fees.

Determine Cost per Demand Unit

The purpose of this step is to condense all of the previous work down to a figure that can be used to calculate the actual SDC fee. This is done by dividing the Cost Bases of the Reimbursement and Improvement Fees for each system by that system's Growth Units, expressed in Demand Units. A **Demand Unit** (DU) is one of whatever the System Capacity Measurement is that was determined earlier (i.e. one gallon per day for water). **Growth Units** are the Demand Units that can be allocated to growth and are calculated by adding Remaining Capacity and Expected Capacity Expansion from projects planned in the CIP. Once the Cost per Demand Unit for the Reimbursement Fee and Improvement Fee have been calculated they can be added together to yield the Total Cost per Demand Unit. The Demand Units used for this methodology report are listed below.

Water- Gallon per Day

Sewer- Gallon per Day

Parks- Acre per System User

Cost per Demand Unit = Cost Basis / Growth Units

Growth Units = Remaining Capacity + Expected Capacity Expansion

Calculate Base Fee

After the Cost per Demand Unit has been established the next step is to calculate the Base Fee. The **Base Fee** is the amount of money that will be collected from an average System User and is the basis for creating the final Schedule of SDC Fees. Calculating the Base Fee has three intermediary steps including determining expected demand of new development, base fee calculation and adjustments.

Practically speaking there is no way to precisely determine the demand of development before it is built. However, using data from the public works department and some previously calculated figures an adequate estimate of expected demand can be arrived at. Expected demand is calculated by multiplying the Expected Demand per

System User (expressed in Demand Units) by the Average Expected Number of Inhabitants. The Average Expected Number of Inhabitants can be different for various types of development depending on the infrastructure system and is based off of data from the US Census, reputable engineering or planning journals and other SDC methodologies. Again, this will be explained in greater detail for each individual system. The number yielded will be the Expected Demand per Base Scaling Unit.

Expected Demand per Base Scaling Unit = Expected Demand per System User *

Average Expected Number of Inhabitants

SDCs often employ a Scaling Method to help predict the intensity at which development will utilize infrastructure. A **Scaling Method** is a mathematical model that predicts development's potential impact on infrastructure based on the size of a system specific indicator (i.e. meter size, square footage, etc…). Again there are many ways to do this but, there are standards that have commonly been used. The Scaling Methods used for this methodology are listed below. Each method will be explained further in its respective section.

Water- Equivalent Meter Unit (meter size)

Sewer- Equivalent Meter Unit (meter size)

Parks- Number of Dwelling Units (Residential), Building Size (Non-Residential)

For each Scaling Method a Base Scaling unit is selected. A **Base Scaling Unit** generally reflects the most common size of the system indicator or the easiest way to quantify development's potential impact. The Base Scaling Units for each system are listed below.

Water- ¾" Water Meter

Sewer- ¾" Water Meter

Parks- One Dwelling Unit (Residential), 1,000 Square Feet (Non-Residential)

To calculate the Base Fee simply multiply the Expected Demand per Base Scaling Unit by the Cost per Demand Unit. The Base Fee for the Reimbursement Fee and the Improvement Fee should be calculated separately and then added together. This figure is the Combined Base Fee.

Base Fee = Expected Demand per Base Scaling Unit * Cost Per Demand Unit

Combined Base Fee = Reimbursement Base Fee + Improvement Base Fee

With the Combined Base Fee calculated, adjustments can be made. ORS legally requires that SDCs provide credit against SDC fees for any existing connection fees that go above the cost of installation, expected contribution to debt amortization, etc… Subtract any of these credits from the Combined Base Fee. The yielded figure will be the Adjusted Base Fee. Credits are generally applied on a per system basis. Credits in this methodology will be explained in the individual system SDC sections.

Then the Compliance Cost can be incorporated to arrive at the final fees. **Compliance Cost** is the money spent on developing and administering SDCs. Governments are allowed by ORS to recover these costs of through SDC Fees. The Compliance Cost Adjustment is calculated by dividing the Expected Cost of Compliance by the Total Expected SDC Revenue. The Adjusted Base Fees are then multiplied by the Compliance Cost Adjustment to yield the amount that will be added to each SDC fee. This figure is then added to the Adjusted Base Fee to arrive at the Final Base Fee. Compliance cost for the City of Maupin was calculated to be $28,500 over the 20 year planning period of the CIP ($8,500 for development and $1,000 per year). This was calculated to be approximately 2% of expected SDC revenue.

Compliance Cost Adjustment = Compliance Cost / Expected SDC Revenue

Expected SDC Revenue = $\sum$ Base Adjusted Fees * (Expected Growth / Average Household Size)

Final Base Fee = Base Adjusted Fee + (Base Adjusted Fee * Compliance Cost Adjustment)

Finalize Schedule of SDC Fees

The numbers arrived at from this step will be the basis of SDC fees that new development will pay. Before completing this step a thorough review of all previous work is advisable. Basically, finalizing the Schedule of SDC Fees is done by applying a system's Scaling Method to the Final Base Fee. The figures yielded will represent the maximum justifiable amount a government can charge. If it is desirable governments can decide to charge less than the maximum justifiable amount.

Systems Development Charges

Administrative Standards

Introduction/Overview

Along with a required direction for methodology, ORS also sets out guidelines for the administration of SDCs and the revenues taken in from their establishment. These administrative standards are in place to ensure that SDC revenue is managed appropriately, that there is ample opportunity for public review and challenge, that there is a system for updating SDCs, and flexibility for the community. The different considerations and standards will each be addressed in this section.

Issuance of SDC Fees

Once SDCs are calculated and established they are ready to be issued to new development. Within ORS, there are standardized points at which fees can be imposed that allow for some flexibility on the government's part. Fees can be assessed or collected at the time of increased usage of infrastructure capacity, issuance of a development or building permit, or connection to the infrastructure system. Many governments offer payment plans if requested by the payer.

Fiscal Management

ORS has very specific standards on how revenues from SDCs are to be handled and used within a community. These standards are intended to ensure that money taken in from SDCs is used in a manner that law makers intended and that developers are treated fairly. If a government spends money in a way not specified in ORS 223.297-314 they are legally obligated to replace those funds from a source other than SDCs no later than one year following the determination that funds were misspent.

First and foremost, there are standards for how monies taken in from reimbursement fees and improvement fees can be used respectively. Revenues from the

reimbursement fee may only be used for capital improvements to the system for which they were charged. ORS also includes repayment of debt on previous capital improvements in the permissible uses of reimbursement fee revenues. Permissible expenditures for improvement fee revenues are on capacity expanding capital improvements including repayment of debt on such projects. Capacity expanding improvements are defined in ORS as projects which increase the level of service from existing facilities or provide new facilities. Any projects paid for either wholly or in part with SDCs must be on the publicly adopted capital improvement plan. SDC revenues may not be used to construct administrative offices that are more than an incidental portion of a project. Furthermore, revenues from both types of fees can be used to pay for the costs complying with ORS 223.297-314 including developing SDCs and creating the annual financial report. If the reimbursement fee and improvement fee are made into a combined fee the same expenditure rules still apply for revenues taken in for existing capacity and future capital improvement projects respectively.

The other important standard for fiscal management outlined in ORS is in regards to the deposit of SDC revenues and annual accounting. Revenues from SDCs must be deposited in accounts dedicated to those particular monies. Generally it is best to keep a separate account for each type of infrastructure for which SDCs have been established, although this is not required. For accounting, governments that impose SDCs are required to prepare an annual financial report before January 1st of each year. The report must include how much revenue was brought in from SDCs and a list of the amount spent on each project funded, in whole or in part, with SDC revenues.

Public Notification: Establishing or Modifying SDC Methodology

When establishing or modifying SDC methodology a government is required to maintain a list of persons who have made a written request for notification prior to adoption or amendment of SDCs. The government is required to give notice to these individuals at least 90 days prior to the first scheduled public hearing. The methodology, either being established or amended, needs to be available for review at least 60 days prior to the first hearing. Failure of a person on the list to receive notification does not

invalidate the action of the government. The government may also delete names from the maintained list but, must notify individuals at least 30 days prior to their removal so they may send another written request if they desire.

Public Notification: Updates & Changes to the CIP & SDC Fees

Inevitably SDC Fees will change over time as they are based on a Capital Improvement Plan which is updated regularly. In ORS there are several standards for what qualifies as a "change" to SDCs and the subsequent action that must be taken. First off, the most common change that ORS addresses is the annual adjustment of SDC fees through a Construction Cost Index (CCI). The annual application of a reputable CCI to SDC fees, established for purposes other than SDC calculation, to reflect the changes in costs of labor, materials, etc… is not considered a change to SDCs. Thus, there is no requirement for a public hearing or notification. These sorts of changes are also not considered a land use decision.

On the other hand when changes are made to the Capital Improvement Plan things can be different. In ORS 223.309, governments are required to provide 30 days notice if a change will be made to the Capital Improvement Plan that will increase any SDC fee. Then, if the government receives a written request within seven days of the proposed modification date they will need to hold a public hearing.

Challenges to Methodology & Expenditures

It is required by ORS legislation that citizens and interested persons be able to challenge SDC fees and methodology. There are regulations for both the government and individuals wishing to challenge. Any citizen or interested person may challenge the expenditure of SDC revenues if they feel they are not being spent in accordance with ORS 223.297-314. Governments are required to establish an administrative review process to accommodate this. Individuals wishing to challenge must make a written objection. The government will then advise them on the right to challenge and the administrative review process. Any challenge to SDC expenditures must be made within

two years of the expenditure. Litigation intended to challenge SDC calculation methodology may only be filed up to 60 days after adoption of the methodology.

Application for Credit

Governments are also required by ORS legislation to provide a system for credit against SDCs for "qualified public improvements" completed by developers in lieu of paying fees. A qualified public improvement is defined in ORS 223.304 as a project that is required as a condition of development, identified in the publicly adopted plan and will serve more than just the development being proposed. The last requirement can be accomplished by the improvement being not located on or contiguous to the proposed development or located within the development but, built with greater capacity than is necessary to serve the properties within. Credits may only be counted against the SDC for the type of system the qualified improvement is constructed for. Credits must be used by the developer within ten years of receiving them. If a credit is more than the SDC fee a government may allow for credit transfer if it is desirable. Credit requests can also be denied if the applicant does not show that the improvement meets ORS criteria for a "qualified public improvement".

Domestic Water System SDC Calculations

The purpose of this section is to describe the calculations of Maupin's domestic water system SDCs. The section includes a discussion of system capacity requirements, SDC Cost Basis, the final Schedule of SDC Fees and various aspects of data used to calculate them. The final Schedule of SDC Fees reflects the maximum amount that could be imposed with SDCs.

Capacity Need

Maupin's domestic water system was constructed incrementally over the past 80 years. Some original components are still in use including the original 300,000 gallon storage tank. Currently, Maupin has the water rights and infrastructure capacity to deliver 4.84 cubic feet of water per second. This translates precisely to a capacity of 3,127,956.48 gallons per day. Total water storage capacity is 1,305,000 gallons including a 5,000 gallon holding tank used for chlorine injection.

Average daily use of water capacity on a per capita level was calculated to be 484.9 gallons per day per System User using source water extraction data from the Public Works Department. This figure is extremely high compared to what is normally expected even on a regional level (around 150 gallons per person per day). This issue was addressed by investigating available metering data the City had archived. It was found that while some residences had use rates similar to what was expected many had exorbitantly high rates of use. From this analysis, it was determined that 484.9 gallons per capita per day was a justifiable conclusion. Storage capacity needs were based on recommendations from Tenneson Engineering as the City had no records or standards of use.

The total number of current System Users for the domestic water system was calculated by multiplying the total number of Equivalent Meter Units by the average household size for the "place" Maupin according to the US Census. A ¾" water meter was considered one Equivalent Meter Unit with larger meters equaling proportionally more Equivalent Meter Units based on the amount of water they could deliver. The Existing Capacity Requirement was then divided by the number of System Users to arrive at the Expected Demand per System User.

Given growth projections by city staff, the City of Maupin can expect to add 129,953 gallons per day of demand over the 20 year planning period of the Capital Improvement Plan. Table W-1, seen below, is the actual table used in the SDC calculations and lays out all pertinent final figures calculated for capacity need of the domestic water system.

Domestic Water System Capacity Need	
Capacity measurement:	Average Demand (Gallons per Day)
Capacity Need:	
Existing Capacity Requirement	
Current Capacity	
source & distribution (gal/day)	3,127,956.48
storage (gal)	1,305,000.00
Current Demand	
source & distribution (gal/day)	500,636.21
storage (gal)	305,000.00
Remaining Capacity	
source & distribution (gal/day)	2,627,320.27
storage (gal)	1,000,000.00
Growth Capacity Requirement	
Projected Growth	268.00
Expected Demand per System User	
source & distribution (gal/day)	484.90
storage (gal)	484.90
Growth Capacity Requirement	
source & distribution (gal/day)	129,953.20
storage (gal)	129,953.20
Capacity Need:	
source & distribution (gal/day)	-2,497,367.07
storage (gal)	-870,046.80

Table W-1

Cost Basis

This section provides a summary of the important figures yielded from the process of existing system valuation and capital improvement planning. A detailed table that provides a list of all components of the cost basis can be found in Appendix A: Itemized Cost Bases.

Domestic Water System Cost Basis					
Reimbursement Fee Cost Basis:	**$5,197,214.73**				
Fixed Capital Assets	Total Value	Adjustments	Adjusted Value	Growth Allocation (%)	Eligible Value
Source & Distribution	$4,699,357.00	$0.00	$4,699,357.00	83.99%	$3,947,214.73
Storage	$1,631,250.00	$0.00	$1,631,250.00	76.63%	$1,250,000.00
Completed CIP Projects					
Source & Distribution	$0.00	$0.00	$0.00	0.00%	$0.00
Storage	$0.00	$0.00	$0.00	0.00%	$0.00
Subtotals	$6,330,607.00		$6,330,607.00		**$5,197,214.73**
Improvement Fee Cost Basis:	**$416,529.71**				
Planned Improvements by Component	Total Value	Adjustments	Adjusted Value	Growth Allocation (%)	Eligible Value
Source & Distribution	$1,194,217.50	$0.00	$1,194,217.50	34.88%	$416,529.71
Storage	$1,437,500.00	$0.00	$1,437,500.00	0.00%	$0.00
Subtotals	$2,631,717.50		$2,631,717.50		**$416,529.71**

Table W-2

The Reimbursement Fee Cost Basis was calculated using replacement value methodology. Data for this process was provided from the Maupin Department of Public Works and Tenneson Engineering. As can be seen in table W-2 most of the Reimbursement Fee cost basis comes from existing capacity of source collection and distribution.

The Cost Basis for the Improvement Fee portion is based off of the 20-Year Capital Improvement Plan adopted prior to the establishment of SDCs in Maupin. Most capacity expanding projects are geared towards the source and distribution component. These projects are largely focused on replacing old transite piping with new PVC piping with a larger diameter that will increase the flow capacity of the water distribution system. All of these projects are listed

with detailed information in the Capital Improvement Plan and in Appendix A: Itemized Cost Bases.

Schedule of SDC Fees

Base Fee

This section outlines the calculation of the Combined Base Fee and the final SDC fee schedule for the domestic water system. The Base Fee was calculated using the expected demand for a ¾" water meter and the total Cost per Demand Unit. The expected demand of a ¾" water meter (the base scaling unit) was calculated by multiplying the Expected Demand per System User by the average household size. This assumes that a ¾" meter will serve an average sized household.

Domestic Water System Base Fee						
Cost Per Demand Unit:						
Reimbursement Fee	Cost Basis	Growth Units	Cost Per Unit			
Source & Distribution	$3,947,214.73	2,627,320.27	$1.50			
Storage	$1,250,000.00	1,000,000.00	$1.25			
Improvement Fee	Cost Basis	Growth Units	Cost Per Unit			
Source & Distribution	$416,529.71	1,090,996.25	$0.38			
Storage	$0.00	0.00	$0.00			
Base Fee (Combined Fee)	Cost Per Unit	Calculated Fee	Credits	Adjusted Fee	Compliance Cost	Final Fee
Source & Distribution	$1.88	$2,064.80	$1,500.00			
Storage	$1.25	$1,369.84				
Subtotals	**$3.13**	**$3,434.65**	**$1,500.00**	**$1,934.65**	**$38.69**	**$1973.34**
Scaling Unit:	3/4 Meter Equivalent					

Table W-3

An adjustment of $1500 was credited to reflect the connection fees currently charged for a water hookup. These fees go above and beyond the cost of installation and thus must legally be credited for in SDC methodology. The hookup fees will, however, still be paid by new development, just not as part of SDC fees. City staff and officials determined that keeping monies from water hookup fees in accounts that could be dedicated to system maintenance, rather than be restricted by ORS, was in the best interests of City Government and System Users.

Scaling Method

The scaling method used to produce the final schedule of fees is the Equivalent Meter Units. As stated before, the Base Scaling Unit selected is a ¾" Water Meter, which is considered one Equivalent Meter Unit. The fee for larger meter sizes is then calculated based on how much water a particular size can deliver proportionally to a ¾" meter. For example, a 1" water meter can deliver 2.5 times the amount of water as a ¾" meter and thus is considered 2.5 Equivalent Meter Units. Data on meter size water delivery capabilities came from the American Water Works Association Meter Capacity Ratios. This scaling method was chosen because, it allows the City to make a schedule of fees that most closely predicts the intensity at which new development will utilize the capacity of the domestic water system regardless of the type of development. This final schedule shown in Table W-4 reflects the maximum amount that could be imposed for SDC fees given the methodology used. The final fee of each meter size was calculated by multiplying the Base Fee by the Equivalent Meter Units.

Final Schedule

Domestic Water System Schedule of Fees		
Meter Size	Equivalent Meter Units	Final Fee
3/4"	1	$1,973
1"	2.5	$4,933
1 1/2"	5	$9,867
2"	8	$15,787
3"	16	$31,573
4"	25	$49,333
6"	50	$98,677

Table W-4

*** Fire Suppression System SDC Fees**

After review of this document by Tenneson Engineering, it was suggested that Maupin also impose SDC fees for installation of sprinkler systems for fire suppression. Development, thus, will be charged the fee for a ¾" water meter ($1,973) if they install a fire suppression system of any size.

Sanitary Sewer System SDC Calculations

The purpose of this section is to describe the calculations of Maupin's sanitary sewer system SDCs. The section includes a discussion of system capacity requirements, SDC cost basis and the final schedule of SDC fees. The final schedule of fees reflects the maximum amount that could be imposed with SDCs.

Capacity Need

The majority of Maupin's public sewer infrastructure was constructed approximately sixty years ago. The current system is comprised of components ranging in age from original system components to relatively new portions from repair projects that were completed as needed. Maupin's sewer system currently has 110,000 gallons per day of treatment capacity. An average of 88,000 gallons per day of flow is received or approximately 80% of capacity. Pipes for collection of sewage range in age and are made of various materials. The collection system was originally sized to serve the City's treatment capacity.

Total number of System Users Expected for the sanitary sewer system was calculated in a similar fashion to the water system. The number of existing Equivalent Meter Units, again with a ¾" meter equaling one Equivalent Meter Unit, was multiplied by the average household size for Maupin. The Existing Capacity Requirement was then divided by the number of System Users to calculate the Demand per System User.

Over the twenty year period of the CIP approximately 24,965 gallons per day of extra demand are expected to be added. This will mean that, if current use rates continue, the sewer system will reach capacity within the 20 year planning period. Table S-1, seen below, shows the figures calculated for capacity requirements for the sanitary sewer system that will later be used to calculate final SDC fees. These figures are based on data from Maupin Public Works Department, Tenneson Engineering and the US Census.

Sanitary Sewer System Capacity Need	
Capacity measurement:	Average Annual Flow (Gallons Per Day)
Capacity Requirement:	
Existing Capacity Requirement	
Current Capacity	
Collection (gal/day)	110,000.00
Treatment (gal/day)	110,000.00
Current Demand	
Collection (gal/day)	88,000.00
Treatment (gal/day)	88,000.00
Remaining Capacity	
Collection (gal/day)	22,000.00
Treatment (gal/day)	22,000.00
Growth Capacity Requirement	
Estimated Growth	268.00
Expected Demand per System User	
Collection (gal/day)	93.15
Treatment (gal/day)	93.15
Growth Capacity Requirement	
Collection (gal/day)	24,965.07
Treatment (gal/day)	24,965.07
Capacity Need:	
Collection (gal/day)	2,965.07
Treatment (gal/day)	2,965.07

Table S-1

Cost Basis

This section provides a summary of the important figures yielded from the process of existing system valuation and capital improvement planning. A detailed table that provides a list of all components of the cost basis can be found in Appendix A: Itemized Cost Bases.

Sanitary Sewer System Cost Basis					
Reimbursement Fee Cost Basis:	**$228,171.79**				
Fixed Capital Assets	Total Value	Adjustments	Adjusted Value	Growth Allocation (%)	Eligible Value
Collection	$10,138,120.00	$0.00	$10,138,120.00	0.25%	$25,000.00
Treatment	$3,250,500.00	$2,437,875.00	$812,625.00	20.00%	$162,525.00
Completed CIP Projects					
Collection	$173,750.00	$122,112.00	$51,638.00	78.71%	$40,646.79
Treatment	$0.00	$0.00	$0.00		$0.00
Subtotals	***$13,562,370.00***		***$11,002,383.00***		***$228,171.79***
Improvement Fee Cost Basis:	**$3,807,291.44**				
Planned Improvements by Component	Total Value	Adjustments	Adjusted Value	Growth Allocation (%)	Eligible Value
Collection	$1,087,181.25	$0.00	$1,087,181.25	51.26%	$557,291.44
Treatment	$3,250,000.00	$0.00	$3,250,000.00	100%	$3,250,000.00
Miscellaneous	$117,300.00	$0.00	$117,300.00	0.00%	$0.00
Subtotals	***$4,454,481.25***		***$4,454,481.25***		***$3,807,291.44***

Table S-2

The system valuation for existing capital in the sanitary sewer system also utilized the replacement value methodology. Most of the eligible value from existing capital came from the remaining treatment capacity. This value would have been higher, however much of the debt incurred to build the treatment plant through a bond has been paid off. So, an adjustment was made to reflect the previous contributions of the tax base. Despite this, the reimbursement fee cost basis is rather high considering the number of growth units. This can be explained by rises in costs per capacity unit since the original construction of the treatment facility.

For the improvement fee all of the eligible value comes from planned improvements to the sewage collection system. This is reflective of the many upgrades planned in the 20-Year Capital Improvement Plan to dated piping materials and increases in pipe diameter that will increase longevity and flow capacity and the expansion of treatment capacities.

Schedule of SDC Fees

This section outlines the data for calculating the combined base fee for the sanitary sewer system and the final SDC fee schedule. The base fee reflects the expected demand for new development based on water meter size and the cost per demand unit.

Base Fee

This section outlines the calculation of the Combined Base Fee and the final SDC fee schedule for the domestic water system. Again, similar to the domestic water system, the Base Fee for the sanitary sewer system was calculated using the expected demand for a ¾" water meter and the total Cost per Demand Unit. The expected demand of a ¾" water meter (the base scaling unit) was calculated by multiplying the Expected Demand per System User by the average household size. This assumes that a ¾" meter will serve an average sized household.

Sanitary Sewer System Base Fee						
Cost Per Demand Unit:						
Reimbursement Fee	Cost Basis	Growth Units	Cost Per Unit			
Collection	$65,646.79	22,000.00	$2.98			
Treatment	$162,525.00	22,000.00	$7.39			
Improvement Fee	Cost Basis	Growth Units	Cost Per Unit			
Collection	$557,291.44	56,386.24	$9.88			
Treatment	$3,250,000.00	110,000.00	$29.55			
Base Fee (Combined Fee)	Cost Per Unit	Calculated Fee	Credits	Adjusted Fee	Compliance Cost	Final Fee
Collection	$12.87	$2,708.93	$1,500.00	$1,208.93		
Treatment	$36.93	$7,775.12		$7,775.12		
Subtotals	**$49.80**	**$10,484.05**	**$1,500.00**	**$8,984.05**	**$179.68**	**$9,163.73**
Scaling Unit:	3/4" Meter Equivalent					

Table S-3

A $1500 adjustment was credited against the Base Fee to reflect the cost of sewer connection fees which are imposed by the City in the same way as the water connection fees. These fees, again, will still be paid by new development but not as part of SDCs so that those monies can be utilized for system maintenance.

Scaling Method

The scaling method used to produce the final schedule of fees is also ¾" water meter equivalent for the sanitary sewer system. Similar to the domestic water system, this scaling method was chosen because it allows the City to make a schedule of fees that most closely predicts the intensity at which new development will utilize the capacity regardless of development type. The Base Scaling Unit selected is a ¾" Water Meter, which is considered one Equivalent Meter Unit. The fee for larger meter sizes is then calculated based on how much water a particular size can deliver proportionally to a ¾" meter. For example, a 1" water meter

can deliver 2.5 times the amount of water as a ¾" meter and thus is considered 2.5 Equivalent Meter Units. The reason this also works for the sanitary sewer system is because, if water is delivered to a building it is very likely that it will also pass through the sewer system. Data on meter size water delivery capabilities came from the American Water Works Association Meter Capacity Ratios. The final schedule shown in Table S-4 reflects the maximum amount that could be imposed for SDC fees given the methodology used. The final fee of each meter size was calculated by multiplying the Base Fee by the Equivalent Meter Units.

Final Schedule

Sanitary Sewer Schedule of Fees		
Meter Size	Equivalent Meter Units	Final Fee
3/4"	1	$9,164
1"	2.5	$22,909
1 1/2"	5	$45,819
2"	8	$73,310
3"	16	$146,620
4"	25	$229,093
6"	50	$458,186

Table S-4

Parks System SDC Calculations

The purpose of this section is to describe the calculations of Maupin's parks system SDCs. The section includes a discussion of system capacity requirements, SDC cost basis and the final schedule of SDC fees. The final schedule of fees reflects the maximum amount that could be imposed with SDCs.

Capacity Need

Currently Maupin has approximately 13 acres of parkland. The ratio of park acres to population is 26.5 acres per thousand persons which is well above most city standards. Each park, aside from being just open acreage, has various improvements depending on the intended use of each park. Maupin's park system is widely used by tourists throughout the summer months and is intended to bring in revenue from their visits. In the 2008 tourist season, City Park brought in $107,607 in revenue to the city. This revenue provides all of the needed funds for operation and maintenance of Maupin's parks system.

Due to the physical size of the community, as determined by the urban growth boundary and city limits, there is not considerable room for expansion of parks (though there is some). However, this should not be an issue as Maupin has direct access to recreational BLM lands along the Deschutes River. For this reason it is recommended in this report that the City set a standard for parks level of service (LOS) at 10 acres per thousand population. This will allow Maupin to recover some of the investment already made in the parks system and accounts for the unique recreational situation of the town.

The current certified population of Maupin was used for the figure Total Number of System Users. This method was selected as sizing of municipal public parks systems are based directly on a community's population. Figures shown below in Table P-1 gives figures calculated for parks system Capacity Need using these data and assumptions.

Parks System Capacity Need	
Capacity measurement:	Acreage Per Thousand Population
Capacity Requirement:	
Existing Capacity Requirement	
Current Capacity	
Acreage	13
Current Demand	
Acreage	4.9
Remaining Capacity	
Acreage	8.1
Growth Capacity Requirement	
Estimated Growth	268
Expected Demand per Person	
Acreage	0.01
Growth Capacity Requirement	2.68
Capacity Need:	
Acreage	-5.42

Table P-1

Cost Basis

This section provides a summary of the important figures yielded from the process of existing system valuation and capital improvement planning. A detailed table that provides a list of all components of the cost basis can be found in Appendix A: Itemized Cost Bases.

Park System Cost Basis					
Reimbursement Fee Cost Basis:		**$315,900**			
Fixed Capital Assets	Total Value	Adjustments	Adjusted Value	Growth Allocation (%)	Eligible Value
Acreage	$507,000.00	$0.00	$507,000.00	62.31%	$315,900.00
Completed CIP Projects					
Acreage	$0.00	$0.00	$0.00	0.00%	$0.00
Subtotals	**$507,000.00**		**$507,000.00**		**$315,900.00**
Improvement Fee Cost Basis:		**$0**			
Planned Improvements by Component	Total Value	Adjustments	Adjusted Value	Growth Allocation (%)	Eligible Value
Acreage	$0.00	$0.00	$0.00	0.00%	$0.00
Other	$848,470.00	$0.00	$848,470.00	0.00%	$0.00
Subtotals	**$848,470.00**		**$848,470.00**		**$0.00**

Table P-2

Existing capital valuation was completed using replacement value methodology with data from the Wasco County Assessor's Office, Wasco County Public Works Office and the City of Maupin. The total value of existing park system was based on the average real market value of undeveloped land per acre in the Maupin area. Since SDCs cannot take into account anything besides the actual land area devoted to the parks system no other considerations were necessary for system valuation.

This restriction also had an impact on the improvement fee cost basis. There are actually several improvements to the community's parks over the twenty year planning period of the Capital Improvement Plan. However, none of these projects will expand the amount of land held

by the City and used for parks purposes. So, as can be seen above, the cost basis for the parks improvement fee is zero.

Schedule of SDC Fees

Base Fee

This section outlines the data and methodology for calculating the combined base fee for the parks system and the final SDC fee schedule. The base fee reflects the expected demand for new development based on the predicted number of inhabitants and the cost per demand unit.

Park System Base Fee						
Cost Per Demand Unit:						
Reimbursement Fee	Cost Basis	Growth Units	Cost Per Unit			
Acreage	$315,900.00	8.1	$39,000.00			
Improvement Fee	Cost Basis	Growth Units	Cost Per Unit			
Acreage	$0.00	8.1	$0.00			
Other	$0.00	0	$0.00			
Base Fee (Combined Fee)	Cost Per Unit	Calculated Fee	Credits	Adjusted Fee	Compliance Cost	Final Fee
Residential	$39,000.00	$881.40	$0.00	$881.40	$17.63	$899.03
Non-Residential						
Commercial	$39,000.00	$1,131.00	$0.00	$1,131.00	$22.62	$1,153.62
Industrial	$39,000.00	$663.00	$0.00	$663.00	$13.26	$676.26
Scaling Unit:						
Residential	Dwelling Units					
Non-Residential	Square Feet					

Table P-3

Due to the relatively low standard set for park level of service and expected demand due to Maupin's direct access to non-city owned recreational lands actual amount arrived at for SDC fees is also relatively low. Since there are no projects in the CIP which add land area to the parks system the only fee really being paid is a reimbursement fee. However, the fee is still considered a combined fee. No adjustments were needed to the SDC fee as the City currently has no fee imposed on new development for the parks system and is not paying off any debt on park acreage.

Scaling Method

The Scaling Method for the parks system, like the Capacity Measurement and System User calculation, is based on predicting the expected number of inhabitants of a given development. This approach was selected as population directly impacts parks infrastructure capacity as compared to water or sewer where meter equivalents are more predictive. However, developments of different uses have different rates of inhabitation. Thus a scaling method had to be devised to address those different categories. For this methodology development has been categorized into "Residential" and "Non-Residential" with the latter being further divided into "Commercial" and "Industrial". The split of residential versus non-residential uses is based on the predictive methods for each use. Residential development's scaling method utilizes the number of Dwelling Units to predict the number of inhabitants with one Dwelling Unit expected to house an average sized household for Maupin according to the US Census. For both non-residential types of development the square footage of the building is used to predict the number of building inhabitants (i.e. employees). Square footage was used because, ORS bars governments from assuming that additional employees will necessarily yield a higher impact on infrastructure. However, since population is what the scaling method is based on, a system to predict the likely number of inhabitants for non-residential uses while not being based directly on the number of inhabitants was needed. Thus, square footage was selected as it was seen as the next most predictive method. So, residential development pays a fee per dwelling unit and non-residential pays a fee per 1,000 square feet.

Final Schedule

Park System Schedule of Fees	
Residential	Final Fee
Cost Per Dwelling Unit	$899
Non-Residential	Final Fee
Cost Per 1,000 Square Feet	
Commercial	$1,154
Industrial	$676

Table P-4

Appendix A: Itemized Cost Bases

Domestic Water System Itemized Cost Basis

Reimbursement Fee Cost Basis: **3932419.85**

Fixed Capital Assets	Unit Measure	Cost per Unit	Number of Units	Calculated Value	Adjusted Value	Growth Allocation (%)	Eligible Cost
Source & Distribution							
Source Collection & Pumping	Number	300000	1	300000	300000	57.08%	171240.00
Piping (Total)	Linear Feet	See Below	See Below	4020857	4020857	57.08%	2295105.18
12"	Linear Feet	60	3500	210000	210000	57.08%	
10"	Linear Feet	55	1925	105875	105875	57.08%	
8"	Linear Feet	43	29838	1283034	1283034	57.08%	
6"	Linear Feet	38	42438	1612644	1612644	57.08%	
4"	Linear Feet	33	5338	176154	176154	57.08%	
2"	Linear Feet	27	21350	576450	576450	57.08%	
1"	Linear Feet	27	2100	56700	56700	57.08%	
Pressure Release Valves	Number	32500	3	97500	97500	57.08%	55653.00
Valves	Number	1500	80	120000	120000	57.08%	68496.00
Hydrants	Number	3500	46	161000	161000	57.08%	91898.80
Subtotals				**4699357**	**4699357**		**2682392.98**
Storage							
Storage and Holding Tanks	Gallons	1.25	1,305,000	1631250	1631250	76.63%	1250026.88
Subtotals				**1631250**	**1631250**		**1250026.88**

Improvement Fee Cost Basis: 3807291.44

Planned Improvements by Component	Unit Measure	Cost Per Unit	Number of Units	Construction Cost	Planning Cost	Total Cost	Adjusted Cost	Growth Allocation (%)	Eligible Cost
Collection									
Grant Ave: Burnham to 4th	Linear Feet	55	1050	57750.00	8662.50	66412.50	66412.50	54.00%	35862.75
Deschutes-Dufur Alley: 5th to US 197	Linear Feet	65	1350	87750.00	13162.50	100912.50	100912.50	45.00%	45410.63
Dufur Ave: 5th to US 197	Linear Feet	55	1275	70125.00	10518.75	80643.75	80643.75	15.00%	12096.56
Staats-Elrod Alley: Burnham to 3rd St	Linear Feet	55	1500	82500.00	12375.00	94875.00	94875.00	54.00%	51232.50
Lower 2nd Street to US 197	Linear Feet	55	300	16500.00	2475.00	18975.00	18975.00	0.00%	0.00
Upper Burnham Ave	Linear Feet	55	900	49500.00	7425.00	56925.00	56925.00	77.00%	43832.25
Staats Ave: Burnham to 5th	Linear Feet	55	975	53625.00	8043.75	61668.75	61668.75	54.00%	33301.13
Elrod Ave: Burnham to US 197	Linear Feet	55	1500	82500.00	12375.00	94875.00	94875.00	65.00%	61668.75
Lower Burnham Ave	Linear Feet	55	1200	66000.00	9900.00	75900.00	75900.00	65.00%	49335.00
6th St: Dufur to Staats	Linear Feet	55	300	16500.00	2475.00	18975.00	18975.00	77.00%	14610.75
4th St: Lincoln to Deschutes	Linear Feet	55	1200	66000.00	9900.00	75900.00	75900.00	54.00%	40986.00
Slusther-Grant Alley: 6th to 4th	Linear Feet	55	750	41250.00	6187.50	47437.50	47437.50	54.00%	25616.25
Elrod Place: Tolentino to US 197	Linear Feet	55	1200	66000.00	9900.00	75900.00	75900.00	54.00%	40986.00
5th St: Lincoln to Staats	Linear Feet	55	1650	90750.00	13612.50	104362.50	104362.50	54.00%	56355.75
E. Sewer from Grant to 2nd	Linear Feet	65	900	58500.00	8775.00	67275.00	67275.00	37.00%	24891.75
E. Sewer from 2nd to Treatment Plant	Linear Feet	65	300	19500.00	2925.00	22425.00	22425.00	37.00%	8297.25
Blue Rock Road Complex	Linear Feet	55	375	20625.00	3093.75	23718.75	23718.75	54.00%	12808.13
Subtotals						*1087181.25*	*1087181.25*		*557291.44*
Treatment									
Treatment Plant Expansion	Gallons	25.69	110000	2826086.96	423913.04	3250000.00	3250000.00	100.00%	3250000.00
Subtotals						**3250000**	**3250000**		**3250000**
Misellaneous									
Maintinence ($4500/Year)	Unit	4500	20	90000.00	13500.00	103500.00	103500.00	0.00%	0
Park Pumps	Unit	6000	2	12000.00	1800.00	13800.00	13800.00	0.00%	0
Subtotals						*117300.00*	*117300.00*		*0.00*

Sanitary Sewer System Itemized Cost Basis

Reimbursement Fee Cost Basis: 228146.79

Fixed Capital Assets	Unit Measure	Cost per Unit	Number of Units	Calculated Value	Adjusted Value	Growth Allocation (%)	Eligible Value
Collection							
Piping (Total)	Linear Feet	See Below	See Below	5593900.00	5593900.00	0.00%	0.00
10"	Linear Feet	65.00	7700.00	500500.00	500500.00	0.00%	
8"	Linear Feet	55.00	23800.00	1309000.00	1309000.00	0.00%	
6"	Linear Feet	50.00	75688.00	3784400.00	3784400.00	0.00%	
Pumping Station	Unit	125000.00	1.00	125000.00	125000.00	20.00%	25000.00
Subtotals				***5718900.00***	***5718900.00***		***25000.00***
Treatment							
Sewage Treatment	Gallons	29.55	110000.00	3250000.00	812500.00	20.00%	162500.00
Subtotals				***3250000.00***	***812500.00***		***162500.00***

Completed CIP Projects

Collection	Project Cost	Adjusted Cost	Growth Allocation (%)	Eligible Cost
Deschutes Ave: Burnham to 2nd	80000	6272.00	95.00%	5958.40
4th Street: Deschutes to Staats	33000	2587.20	54.00%	1397.09
4th Street: Deschutes to behind Am. Legion	19500	1528.80	100.00%	1528.80
Staats Ave: 5th to 3rd	41250	41250.00	77.00%	31762.50
Subtotals	***173750.00***	***51638.00***		***40646.79***
Treatment				
none				
Subtotals	**0.00**	**0.00**		**0.00**

Improvement Fee Cost Basis: **507495.00**

Planned Improvements by Component	Unit Measure	Cost Per Units	Number of Units	Estimated Total Cost	Adjusted Cost	Growth Allocation (%)	Eligible Cost
Collection							
Grant Ave: Burnham to 4th	Linear Feet	55	1050	57750.00	57750.00	54.00%	31185.00
Deschutes-Dufur Alley: 5th to US 197	Linear Feet	65	1350	87750.00	87750.00	45.00%	39487.50
Stoats-Elrod Alley: Burnham to 3rd St	Linear Feet	55	1500	82500.00	82500.00	54.00%	44550.00
Lower 2nd Street to US 197	Linear Feet	55	300	16500.00	16500.00	0.00%	0.00
Upper Burnham Ave	Linear Feet	55	900	49500.00	49500.00	77.00%	38115.00
Stoats Ave: Burnham to 5th	Linear Feet	55	975	53625.00	53625.00	54.00%	28957.50
Elrod Ave: Burnham to US 197	Linear Feet	55	1500	82500.00	82500.00	65.00%	53625.00
Lower Burnham Ave	Linear Feet	55	1200	66000.00	66000.00	65.00%	42900.00
5th St: Dufur to Stoats	Linear Feet	55	300	16500.00	16500.00	77.00%	12705.00
4th St: Lincoln to Deschutes	Linear Feet	55	1200	66000.00	66000.00	54.00%	35640.00
Stusther-Grant Alley: 5th to 4th	Linear Feet	55	750	41250.00	41250.00	54.00%	22275.00
Elrod Place: Tolenpno to US 197	Linear Feet	55	1200	66000.00	66000.00	54.00%	35640.00
5th St: Lincoln to Stoats	Linear Feet	55	1650	90750.00	90750.00	54.00%	49005.00
E. Sewer from Grant to 2nd	Linear Feet	65	900	58500.00	58500.00	37.00%	21645.00
E. Sewer from 2nd to Treatment Plant	Linear Feet	65	300	19500.00	19500.00	37.00%	7215.00
Blue Rock Road Complex	Linear Feet	55	1500	82500.00	82500.00	54.00%	44550.00
Subtotals				*937125.00*	*937125.00*		*507495.00*
Treatment							
None							
Subtotals				**0**	**0**		**0**
Misellaneous							
Maintinence (4500/Year)	Unit	4500	20	90000.00	90000.00	0.00%	0
Park Pumps	Unit	6000	2	12000.00	12000.00	0.00%	0
Subtotals				*102000.00*	*102000.00*		*0.00*

ParkSystem Itemized Cost Basis

Reimbursement Fee Cost Basis:	315900						
Fixed Capital Assets	Unit Measure	Cost per Unit	Number of Units	Calculated Value	Adjusted Value	Growth Allocation (%)	Eligible Cost
Acreage	Acre	39000	13	507000	507000	62.31%	315900
Subtotals				507000	507000		315900

Completed CIP Projects	Project Cost	Adjusted Cost	Growth Allocation (%)	Eligible Cost
Acreage				
None	0	0	0	0
Subtotals	0	0		0

Improvement Fee Cost Basis:	0.00								
Planned Improvements by Component	Unit Measure	Cost per Unit	Number of Units	Construction Cost	Planning Cost	Total Cost	Adjusted Cost	Growth Allocation (%)	Eligible Cost
Acreage									
None				0.00	0.00	0.00	0.00	0.00%	0.00
Subtotals						0.00	0.00		0.00
Other									
City Park: Community Building Restroom Addition	Unit	11500	2	23000	3450.00	26450.00	26450.00	0.00%	0
City Park: New Restroom Facilities	Unit	131000	1	131000	19650.00	150650.00	150650.00	0.00%	0
City Park: Boat Landing Improvement	Unit	84000	1	84000	12600.00	96600.00	96600.00	0.00%	0
City Park: Paving Tent Side Parking Lot	Square Feet	5	29760	148800	22320.00	171120.00	171120.00	0.00%	0
Playground Equipment	Unit	40000	1	40000	6000.00	46000.00	46000.00	0.00%	0
Mountain Fir Park: Overlook Shelter	Unit	23000	1	23000	3450.00	26450.00	26450.00	0.00%	0
Mountain Fir Park: Ornamental Rock Barrier	Linear Feet	160	450	72000	10800.00	82800.00	82800.00	0.00%	0
Greenway Park: Water Feature	Unit	126000	1	126000	18900.00	144900.00	144900.00	0.00%	0
Mountain Fir Park: Tennis Court	Unit	28000	2	56000	8400.00	64400.00	64400.00	0.00%	0
Tree Replacement/Care	Year	1700	20	34000	5100.00	39100.00	39100.00	0.00%	0
Subtotals						848470.00	848470.00		0

Appendix B: "Systems Development Charges Act"

Oregon Revised Statutes Chapter 223.297- 223.314

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]

Appendix C: Glossary of Terms and Equations

Glossary of Terms in Alphabetical Order

Adjusted System Value – The total system value of a given infrastructure type less outside assistance. This calculation is generally done separately for the reimbursement and improvement fees.

Base Fee – The fee initially calculated based on the expected demand for one Base Scaling Unit. It is the basis for creating the final Schedule of SDC Fees.

Base Scaling Unit – A unit of measure generally reflecting the most common size of a selected system indicator (i.e. meter size) or the easiest way to quantify development's potential impact.

Capacity Expanding Project – Infrastructure projects that increase a systems ability to serve user demand, particularly growth demand. See also Qualified Public Improvement.

Capacity Measurement – The method selected by a government to quantify an infrastructure system's ability to serve demands for services. Often is based upon the most important considerations for sizing an infrastructure system (i.e. annual average flow measured in gallons for sewer)

Capacity Need – A measure of a community's infrastructure capacity versus the demand for infrastructure capacity.

Capacity Requirement – The demand for infrastructure services in a community, expressed in the chosen Capacity Measurement, and is divided into the Existing Capacity Requirement and Growth Capacity Requirement.

Combined Fee – The sum of the Improvement Fee and Reimbursement Fee.

Compliance Cost – The cost of developing and administrating SDCs to governmental entity imposing SDC fees.

Compliance Cost Adjustment – The percent of total expected revenues from SDCs that will be used to pay compliance costs. This figure is used to adjust the Base Fee to incorporate compliance costs.

Construction Cost Index – A figure, often put out annually by professional engineering journals or groups, that states the rise of costs for components of construction projects as a percentage. This is used to annually adjust SDC fees for inflation, rises in construction costs, etc…

Cost Basis – The total value of all eligible existing capacity and the expected cost of future capacity expansion that is intended to be recovered through SDCs.

Demand Unit – One of the selected Capacity Measurement, i.e. One Gallon per Day for Water or Sewer and One Acre for Parks.

Equivalent Meter Unit – An Equivalent Meter Unit is equal to a ¾" water meter based on the amount of water the meter is capable of delivering. Larger meters are equal to more Equivalent Meter Units proportionally to how much water they are capable of delivering compared to a ¾" meter (i.e. a 1" meter is equal to 2.5 Equivalent Meter Units)

Existing Capacity Requirement – The current demand on a community's infrastructure systems expressed in the selected Capacity Measurement.

Existing Infrastructure – Any infrastructure, including projects from the Capital Improvement Plan, that are already constructed or being constructed when SDCs are established and is further broken down into two categories; "Fixed Capital Assets" and "Completed CIP Projects".

Growth Allocation – The portion of infrastructure capacity, either existing or planned, that can be dedicated to serving growth.

Growth Capacity Requirement – The expected demand of future development for infrastructure services.

Growth Unit – A Demand Unit that can serve growth of infrastructure needs.

Improvement Fee – The portion of an SDC that recovers the expected cost of planned capacity expanding infrastructure projects.

Qualified Public Improvement – ORS has a fairly lengthy definition of a Qualified Public Improvement, see ORS 223.304 Section (4) in Appendix B.

Reimbursement Fee – The portion of an SDC that recovers the value of infrastructure constructed before or at the time that SDCs are established.

Remaining Capacity – The amount of infrastructure capacity a system has after the current demand has been accounted for and thus can be devoted to growth.

Scaling Method – A mathematical model that predicts development's potential impact on infrastructure based on the size of a system specific indicator (i.e. meter size, square footage, etc…)

Systems Development Charge – A one time fee imposed on new development to recover a proportionate share of infrastructure costs.

Total System Value – The estimated value of a particular infrastructure system not adjusted for outside assistance.

Glossary of Equations in Order of Appearance

Remaining Capacity = Current Capacity – Existing Capacity Requirement

Growth Capacity Requirement = Expected Growth * Expected Demand per System User

Expected Demand per System User = Current Demand / System Users

Capacity Need = Growth Capacity Requirement – Remaining Capacity

Total System Value = Replacement Value + Completed CIP Project Costs

Reimbursement Fee Cost Basis = Adjusted System Value * Growth Allocation (%)

Adjusted System Value = Total System Value – Outside Assistance

Growth Allocation = (Remaining Capacity / Total Capacity)

Improvement Fee Cost Basis = Adjusted Project Costs * Growth Allocation (%)

Adjusted Project Costs = Total Project Cost – Outside Assistance

Growth Allocation = Project Capacity Allocated to New Growth / Total Project Capacity

Cost per Demand Unit = Cost Basis / Growth Units

Growth Units = Remaining Capacity + Expected Capacity Expansion

Expected Demand per Base Scaling Unit = Expected Demand per System User *

Average Expected Number of Inhabitants

Base Fee = Expected Demand per Base Scaling Unit * Cost Per Demand Unit

Combined Base Fee = Reimbursement Base Fee + Improvement Base Fee

Compliance Cost Adjustment = Compliance Cost / Expected SDC Revenue

Expected SDC Revenue = $\sum$ Base Adjusted Fees * (Expected Growth / Average Household Size)

Final Base Fee = Base Adjusted Fee + (Base Adjusted Fee * Compliance Cost Adjustment)