

City of La Pine



Final Report
WATER AND
WASTEWATER SYSTEM
DEVELOPMENT CHARGE
STUDY

January 2017

FCS GROUP

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January 27, 2017

Cory Misley, City Manager
La Pine City Hall
PO Box 2460
16345 Sixth Street
La Pine, Oregon 97739

Subject: Water and Wastewater System Development Charge Study

Dear Mr. Misley:

FCS GROUP is pleased to submit this report summarizing the results of the water and wastewater system development charges (SDCs) study for the City of La Pine. Our findings indicate that La Pine can adopt a water SDC of up to \$3,871 per 5/8-inch by 3/4-inch meter capacity equivalent (MCE) and a wastewater SDC of up to \$6,663 per 5/8-inch by 3/4-inch MCE.

It has been a pleasure to work with you and other La Pine staff on this effort. Please let me know if you have any questions or need additional information on this draft report. I can be reached at (425) 867-1802 ext. 225.

Yours very truly,



John Ghilarducci
Principal

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SECTION I: INTRODUCTION

The City of La Pine is a small but growing city with increasing demands for water and wastewater services. The purpose of this study is to provide defensible water and wastewater system development charges that serves to recover existing and future investments in capacity without unduly burdening existing or future customers.

Consistent with these objectives, the following general approach was used to update the system development charges (SDC).

- ◆ **Develop Policy Framework.** We worked with City staff to identify, analyze, and agree on key policy issues.
- ◆ **Technical Analysis.** In this step, we worked with La Pine staff to resolve technical issues, isolate the recoverable portion of existing and planned facility costs, and calculate fee alternatives. The most important technical consideration involves the inclusion of capacity upgrades as they relate to the Cagle and Glenwood developments. The complete technical analysis is included as **Appendix A**.
- ◆ **Documentation and Presentation.** In this step, we wrote the report describing the resulting charge and participated in La Pine meetings.

SECTION II: SYSTEM DEVELOPMENT CHARGE METHODOLOGY

A. LEGAL AUTHORITY AND CONCEPTUAL BASIS

A system development charge is a one-time fee imposed on new development (and some types of re-development) at the time of development. The purpose of this fee is to recover a fair share of the cost of existing and planned facilities that provide the necessary capacity to accommodate future users.

Oregon Revised Statute (ORS) 223.297 - 223.314 defines SDCs and specifies how they shall be calculated, applied, and accounted. By statute, an SDC is the sum of two components:

- ◆ a **reimbursement fee**, designed to recover costs associated with capital improvements *already constructed or under construction*.

According to ORS 223.304, the reimbursement fee methodology must be based on "the value of unused capacity available to future system users or the cost of the existing facilities", and must further consider prior contributions by existing users and gifted and grant-funded facilities. The calculation must also "promote the objective of future system users contributing no more than an equitable share to the cost of existing facilities."

Reimbursement fee proceeds may be spent on any capital improvements related to the systems for which the SDC is applied – i.e., water SDCs must be spent on water improvements.

- ◆ an **improvement fee**, designed to recover costs associated with capital improvements *to be constructed in the future*.

The improvement fee methodology must include only the cost of projected capital improvements or portions of improvements needed to increase system capacity for future users. In other words, the cost(s) of planned projects or portions of projects that correct existing deficiencies, or do not otherwise increase capacity for future users, may not be included in the improvement fee calculation.

Improvement fee proceeds may be spent only on capital improvements, or portions thereof, which increase the capacity of the systems for which they were applied.

B. REIMBURSEMENT FEE METHODOLOGY

The reimbursement fee is the dollar value of unused, available, system capacity divided by the capacity it will serve. The unit of capacity used becomes the basis of the fee – e.g., meter equivalents, water fixture units, or equivalent dwelling units. Important factors in this calculation include:

1. **Determining the appropriate reimbursement fee cost basis.** ORS 223.304 requires that the reimbursement fee calculation consider, among other things, “the value of unused capacity available to future system users or the cost of the existing facilities.” Within this framework, there are several alternative approaches for establishing the reimbursement fee cost basis:

We use an *original cost* approach towards calculating the cost basis. The original cost approach uses the original cost of existing facilities at the time they were constructed. This approach fully compensates existing customers for their investments that serve growth and clearly considers the cost of the existing facilities.

2. **Deductions from the reimbursement fee cost basis.** The reimbursement fee should not include gifted or grant funded portions of assets since they do not relate to a direct investment by the rate payer. As such, their costs should be deducted from the reimbursement fee cost basis. In addition, we deduct outstanding debt principal from the reimbursement fee cost basis. Once connected, new customers will pay their share of debt service in monthly rates.

C. IMPROVEMENT FEE METHODOLOGY

The improvement fee calculation is the total dollar cost of capacity-increasing capital projects divided by the capacity they will serve. Again, the unit of capacity used becomes the basis of the fee. The overriding issue to consider in the improvement fee calculation is the identification and separation of capacity-increasing capital costs.

For projects that serve existing and future capacity, it is important to allocate costs proportionately to the amount the project is related to growth. We use the most directly applicable measure of capacity demand as the basis for allocation (pumping capacity, treatment capacity, etc.).

D. CALCULATION SUMMARY

An SDC is calculated by adding the reimbursement fee component to the improvement fee component. Each separate component is calculated by dividing the eligible cost by the appropriate measure of growth in capacity. The unit of capacity used becomes the basis of the charge. A sample calculation is shown below.

Equation II – 1: Simplified SDC Equation

Reimbursement Fee		Improvement Fee		SDC
Eligible cost of unused capacity in existing facilities	+	Eligible cost of planned capacity-increasing capital improvements	=	SDC (\$ / unit)
Growth in system capacity demand		Growth in system capacity demand		

Overall, increasing the eligible costs for existing and planned capacity will increase the per unit SDC. Meanwhile, increasing expected growth capacity will serve to decrease the per unit SDC.

E. SDC IMPROVEMENT FEE CREDITS

The law requires that credits be provided against the improvement fee for the construction of qualified public improvements. Oregon Revised Statute 223.304 states that, at a minimum, credits shall be provided against the improvement 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.”

The law further states that credits “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 challenge is to design a credit approach that meets statutory requirements and assumed La Pine objectives for cash flow, prioritization of capital projects, and orderly but sustained development. We believe it is important for La Pine to retain as much control as possible over the prioritization and implementation of its capital plans. These plans are created to address total system needs – not just the needs of growth. Without control over how and when those needs are addressed, the re-prioritization of projects over time can leave important capacity needs unmet. To avoid this outcome, credits should:

- ◆ be only for the portion of the agreed-upon or planned cost of capacity *in excess of that needed to serve the particular development*;
- ◆ not be transferable to other developers;
- ◆ be for planned projects only; and
- ◆ be provided only upon completion of a “qualified public improvement”.

F. INDEXING CHARGE FOR INFLATION

Oregon law (ORS 223.304) allows for the periodic indexing of system development charges for inflation, as long as the index used is

“(A) A relevant measurement of the average change in prices or costs over an identified time period for materials, labor, real property or a combination of the three;

(B) Published by a recognized organization or agency that produces the index or data source for reasons that are independent of the system development charge methodology; and

(C) Incorporated as part of the established methodology or identified and adopted in a separate ordinance, resolution or order.”

We recommend that the City index its charges to the Engineering News Record (ENR) Construction Cost Index (CCI) for the City of Seattle, and adjust the charges annually as per that index. There is no comparable index for the Portland area.

SECTION III: SYSTEM DEVELOPMENT CHARGE CALCULATION

The calculation of the proposed water and wastewater SDC is summarized below and provided in detail in the technical analysis (Appendix A).

A. CAPACITY BASIS

Growth in system capacity demand is the denominator of the SDC calculation. We determined the growth in system capacity demand using Meter Capacity Equivalent units (MCEs)¹. We used the Wastewater and Water System Studies² to estimate growth.

- ◆ The Water and Wastewater System Studies shows current system demand at 1,061 MCEs.
- ◆ Cagle and Glenwood will add 275 MCEs to the system.
- ◆ The Studies estimates 2.2% customer growth per year over the next 20 years

Applying the annual customer growth rate to current MCEs with the addition of Cagle and Glenwood results in an estimate of 1,004 total future additional MCEs over the next 20 years.

B. REIMBURSEMENT FEE

The reimbursement fee takes the eligible cost of unused capacity in the existing system and divides it by the capacity basis of 1,004 MCEs.

The cost of unused capacity is equivalent to the portion of the cost of existing assets available for future users. Calculating the cost of unused capacity in the existing water and wastewater systems requires the following inputs:

- ◆ Original Cost of Utility Capital Assets
 - This provides the base value to calculate the reimbursement fee and includes construction work in progress. For water this is around \$5.9 million and wastewater it is around \$5.7 million.

¹ One MCE is equivalent to the flow capacity of one 5/8 x 3/4" meter.

² Anderson Perry & Associates, *City of La Pine, Oregon Wastewater System Study Update, Water System Study Update*. 2016.

- ◆ Utility Debt Principal Outstanding
 - Debt principal outstanding is subtracted from the original cost of fixed assets. Debt payment schedules show this to be about \$2.1 million for water and zero for wastewater.
- ◆ Contributions in Aid of Construction
 - Total contributed assets are deducted from the original cost of fixed assets as well since they do not represent a true cost to the current ratepayers. This is approximately \$1.3 million for water and wastewater each.
- ◆ Unused Capacity Available
 - This defines the percentage of assets not used to serve existing needs and thus available for the reimbursement fee. This is calculated by dividing total system capacity by the difference between existing demand and total capacity.
 - For water, this is based on storage capacity limitations as defined in the Water System Study. 0.8 million gallons (MG) of recommended necessary storage capacity divided by 1.2 MG of current capacity equates to 34.1% of capacity remaining
 - For wastewater, this is based on max day flow of 0.16 MG divided by flow capacity of 0.25 million gallons per day (MGD) for a remaining capacity of 35.6%.

Calculating the cost of unused capacity requires multiplying the unused capacity available by the allocable value of the existing system. A summary of the reimbursement fee cost basis calculation is provided below

Equation III-1: Cost of Unused Capacity Calculation for Water System

Description	Cost	% Unused	\$ Cost Basis
Land	\$33,500	34.1%	\$11,417
Water System	\$5,582,856	34.1%	\$1,902,823
Equipment	\$16,784	34.1%	\$5,721
Building	\$219,953	34.1%	\$74,967
Master Plan	<u>\$28,507</u>	34.1%	<u>\$9,716</u>
Subtotal	\$ 5,881,600		\$ 2,004,645
Debt Principal Outstanding	(\$2,121,864)	34.1%	(\$723,202)
Grants for Initial Water System	<u>(\$1,275,000)</u>	34.1%	<u>(\$434,563)</u>
Subtotal	<u>\$ (3,396,864)</u>		<u>\$ (1,157,765)</u>
Total	\$ 2,484,736		\$ 846,881

Equation III-2: Cost of Unused Capacity Calculation for Wastewater System

Description	Cost	% Unused	\$ Cost Basis
Collection	\$ 1,000,974	35.6%	\$ 356,347
Treatment	2,320,121	35.6%	825,963
Pumping	233,166	35.6%	83,007
General Plant	<u>2,138,176</u>	35.6%	<u>761,191</u>
Subtotal	\$ 5,692,437		\$ 2,026,508
Sewer Interfund Loan Principal	\$ (806,742)	35.6%	\$ (287,200)
EPA Grant for Lagoon Expansion	(433,700)	35.6%	(154,397)
Crescent Creek Lift grant (County)	<u>(117,000)</u>	<u>35.6%</u>	<u>(41,652)</u>
Subtotal	<u>\$ (1,357,442)</u>		<u>\$ (483,249)</u>
Total	\$ 4,334,995		\$ 1,543,258

Dividing the cost of unused capacity by the capacity basis of 1,004 MCE results in:

- ◆ Water – a reimbursement fee of \$844 per MCE
- ◆ Wastewater – a reimbursement fee of \$1,538 per MCE

C. IMPROVEMENT FEE CALCULATION

The improvement fee takes the cost of capacity-increasing capital improvements over the planning period and divides this by the capacity basis. This analysis incorporates the cost of capacity-increasing capital improvements defined in the Water and Wastewater System Studies respectively. Important here is the need to remove costs of projects unassociated with capacity as well as reduce the cost of capacity-based projects by anticipated contributions, grants and existing SDC fund balance.

Water System Capacity Improvements and Fee Calculation

The Water System Study identifies \$9.7 million in planned capital improvements. Of these, approximately \$6.5 million are related to growth in capacity. The existing SDC fund balance for the Water System is \$0.66 million. La Pine is applying for \$4.25 million in grants for future capital improvements; \$2.87 million of which can be attributed to growth. Subtracting this fund balance and identified growth-related grant contributions leaves an improvement fee cost basis of approximately \$3.03 million. Dividing this cost basis by the allocable customer base of 1,004 MCEs yields a recommended improvement fee of \$3,027 per MCE.

Wastewater System Capacity Improvements and Fee Calculation

The Wastewater System Study identifies \$13.2 million in planned capital improvements. Of these, \$11.8 million are attributable to growth. The existing SDC fund balance for the Wastewater System is \$1.1 million. La Pine is applying for \$6.25 million in grants for future capital improvements; \$5.6 million of which can be attributed to growth. Subtracting this fund balance and identified growth-related grant contributions leaves an improvement fee cost basis of \$5.14 million; this, divided by 1,004 MCEs yields a recommended improvement fee of \$5,125 per MCE.

SECTION IV: RECOMMENDATIONS

The recommended water and wastewater SDCs are the sums of the reimbursement fee and improvement fee for each service. This analysis shows the recommended fees based on an equivalent meter size of 5/8 inch x 3/4 inch, or one MCE. The final calculation is as follows:

Table IV-1: Total Water SDC per Meter Equivalent

	Water	Wastewater
Reimbursement Fee Component		
Total Costs	\$ 846,881	\$ 1,543,258
Allocable Customer Base	1,004	1,004
Reimbursement Fee per Unit	\$ 844	\$ 1,538
Improvement Fee Component		
Total Costs	\$ 3,037,526	\$ 5,142,863
Allocable Customer Base	1,004	1,004
Improvement Fee per Unit	\$ 3,027	\$ 5,125
SDC Per Unit	\$ 3,871	\$ 6,663

A. RECOMMENDED SDC SCHEDULE

The recommended SDC schedules are based on meter equivalents. These are calculated by multiplying the meter flow factors by the recommended MCE system development charge.

Table IV-2: SDC Schedule by Meter Size

Meter Size	Flow Factor	Water	Wastewater
5/8 x 3/4"	1	\$ 3,871	\$ 6,663
3/4"	1.5	\$ 5,807	\$ 9,995
1"	2.5	\$ 9,678	\$ 16,658
1.5"	5	\$ 19,355	\$ 33,315
2"	8	\$ 30,968	\$ 53,304
3"	16	\$ 61,936	\$ 106,608
4"	25	\$ 96,775	\$ 166,575

B. CREDITS AND INDEXING

We recommend that the City of La Pine provide credits against the improvement fee for future qualifying public improvements as described in **Section II** of this document. We also recommend that the City of La Pine annually adjust the SDCs recommended above as indexed by the Engineering News Record (ENR) Construction Cost Index (CCI) for the City of Seattle. There is no comparable index in the region.

APPENDIX A: TECHNICAL ANALYSIS

City of La Pine

System Development Charge Analysis - Sewer

	Prior Rate Study	Water Plan + C&G	Water Plan No C&G
Population		1670	
EDUs	1377	1336	1061
MCE	1077	1336	1061

Average Customer Growth Rate **2.2%** **MCE**

Existing Cost Basis	
Plant-In-Service Remaining Capacity:	35.6%
Remaining Capacity of Existing Utility Assets	\$ 2,026,508
less: Contributed Capital	(483,249)
less: Net Debt Principal Outstanding	\$ -
Reimbursement Fee Cost Basis	\$ 1,543,258
Future Cost Basis	
Capital Improvement Plan	
Total Future Projects	\$ 13,274,534
less: Identified Projects Funding Existing Needs	(1,473,660)
less: Existing Sewer SDC Fund Balance	(1,101,849)
less: Newly Identified Grants	(5,556,162)
Improvement Fee Cost Basis	\$ 5,142,863
Customer Base	
Existing Customer Base - # of Units	1,061 MCEs
Future Customer Base (Incremental # of Units)	1,004 MCEs
Total Customer Base	2,065 MCEs

City of La Pine

System Development Charge Analysis - Sewer

		MCE
Resulting Charges		
Reimbursement Fee Component		
Total Costs		\$ 1,543,258
Allocable Customer Base		1,004
Reimbursement Fee per Unit		\$ 1,538
Improvement Fee Component		
Total Costs		\$ 5,142,863
Allocable Customer Base		1,004
Improvement Fee per Unit		\$ 5,125
SDC per Unit		\$ 6,663

Asset Deductions

Sewer District Interfund Loan Principal	\$ 806,742
EPA Grant for lagoon expansion	433,700
Deschutes County grant for Crescent Creek Lift St	<u>117,000</u>
Total Deducted from Existing Cost Basis	\$ 1,357,442

City of La Pine

System Development Charge Analysis - Sewer

Capital Improvement Program

No	Description	2015 Raw Cost	2017 Raw Cost*	% Raw Cost	Permits & Engineering	Total Proj Cost	% Growth Related	% Existing Needs	Growth Related Costs	Existing Needs Costs
Collection System Improvements										
1	Cagle & Glenwood Collection System / Lift Station	\$ 5,876,000	\$ 6,478,290	64%	\$ 2,012,095	\$ 8,490,385	100%	0%	\$ 8,490,385	\$ -
Treatment and Disposal System Improvements										
2	Existing Pump Station Modifications	\$ 100,000	\$ 110,250	1%	\$ 34,243	\$ 144,493	100%	0%	\$ 144,493	\$ -
3	Septage Receiving Station	\$ 250,000	\$ 275,625	3%	\$ 85,606	\$ 361,231	100%	0%	\$ 361,231	\$ -
4	Storage Lagoon	\$ 550,000	\$ 606,375	6%	\$ 188,334	\$ 794,709	100%	0%	\$ 794,709	\$ -
5	Piping and Pivot Disposal System	\$ 2,411,000	\$ 2,658,128	26%	\$ 825,589	\$ 3,483,716	58%	42%	\$ 2,010,056	\$ 1,473,660
TOTAL CAPITAL PROJECTS			\$ 10,128,668			\$ 13,274,534	89%	11%	\$ 11,800,874	\$ 1,473,660
Less: Anticipated Grants						\$ 6,250,000	89%	11%	\$ 5,556,162	\$ 693,838
NET CAPITAL PROJECT COSTS						\$ 7,024,534			\$ 6,244,712	\$ 779,822

*5% escalation rate used

Permits and Engineering Cost Breakdown			
	Item	Cost	% Allocated
1	Legal	25,000	0%
2	Grant Administration	25,000	0%
3	Interim Financing Interest	110,000	0%
4	Bonding Authority and Related Costs	20,000	0%
5	Rural Development Funding Application	15,000	0%
6	Environmental Assessment	20,000	100%
7	Permitting	30,000	100%
8	Cultural Resource Evaluations	45,000	100%
9	Cultural Resource Monitoring	100,000	100%
10	Operation and Maintenance Manual	10,000	100%
11	Design Engineering	1,108,000	100%
12	Other Engineering	50,000	100%
13	Construction Engineering	720,000	100%
14	Land and Right-of-Way	50,000	100%
15	Construction Contingency	1,012,867	100%
Gross Sum		3,340,867	
Total w/ Applicable		3,145,867	

Existing Irrigation in MG (Figure 3-2)	49
New Irrigation in MG (Figure 3-4)	116
% Existing Pop. Use of New Facility	42%

City of La Pine

System Development Charge Analysis - Sewer Assets

Description	Plant Function	Useful Life	Original Cost	Remove?
Land				
Land - Newberry Bus Park (205450)	General Plant		\$ 37,750	
Land - Treatment Plan (198163)	General Plant		573,930	
Water System				
Pressure Sewer System	Collection	20	\$ 29,039	
Gravity Collection System	Collection	20	417,813	
On Site Tanks	Collection	20	354,035	
Pump Stations	Pumping	10	40,770	
Phone Dialers	General Plant	5	6,812	1
Fencing	General Plant	5	32,860	
Land Clearing	General Plant		166,178	
Lagoons	Treatment	20	236,972	
Lagoon Liners	Treatment	20	156,639	
Center Pivot Sprinklers	General Plant	10	43,598	
Road	General Plant		12,563	
Wells & Well Pumps	Collection	5	14,308	
Structures	General Plant	20	19,543	
Building	General Plant	20	268,160	
Main Sewer Piping	Collection	20	106,777	
Chlorination System	Collection	10	11,680	
Fresh Water Piping	Collection	20	35,423	
Power Lines	Collection	20	25,900	
Sewer Improvements	Collection	20	2,148	1
Hay Barn	Collection	20	5,999	
Sump Pump	Collection	5	450	1
Fencing	Collection	5	610	1
Pump Station and Dial	Pumping	5	3,226	1
School Security Phone	General Plant	5	825	1
Road	General Plant		3,988	1
BLM Land	General Plant		1,954	1
Land Clearing	General Plant		77	1
Fence Posts	General Plant	5	540	1
Cement Slab for Separation	General Plant	10	100	1
Flow Meter	General Plant	5	5,550	
Pumps for Wickiup	Pumping	5	430	1
Fence Posts	General Plant	5	304	1
Wickiup Expansion Pro	Treatment	20	279,737	
Fencing	General Plant	5	453	1

City of La Pine

System Development Charge Analysis - Sewer

O&M Building	General Plant	5	350	1
Pump Station #1	Pumping	5	4,015	1
Fencing	General Plant	5	400	1
Finley Butte Expansion	Treatment	20	36,354	
Concrete Slabs	General Plant	10	2,500	1
Elementary School Expansion	Treatment	20	1,175	1
Reed Road Expansion	Treatment	20	12,573	
Highway 97 Tie-In	General Plant	20	4,632	1
Hinkle Expansion	Treatment	20	1,370	1
Crescent Creek Pump Station	Pumping	10	137,396	
Lagoon Expansion	Treatment	20	1,597,846	
Ist St. System Improvements	General Plant	20	226,152	
Morrison Street System	General Plant	20	400,901	
Flow Meter - 395L	General Plant	5	7,468	
Equipment				
4-Drawer File Cabinet	General Plant	7	\$ 168	\$ 1
Table & 10 Chairs	General Plant	5	510	1
File Cabinet	General Plant	7	171	1
Pipe Rack	General Plant	7	363	1
Locater-Magnatometer	General Plant	7	685	1
Winch	General Plant	7	324	1
Electric Generator	General Plant	5	120	1
Generator	General Plant	7	750	1
Generator	General Plant	7	750	1
1985 JD Backhoe	General Plant	7	16,000	
1977 Chevy Truck	General Plant	5	8,000	1
3 Pumping Tanks	Pumping	10	2,500	
Separator	General Plant	10	4,950	
Pump	Pumping	7	678	1
Trailer	General Plant	7	800	1
Pump & Controls	Pumping	7	667	1
Valves	General Plant	7	649	1
Pumps	Pumping	7	1,335	1
Vacuum	General Plant	5	1,014	1
89 1/2 Ton GMC Pickup	General Plant	5	8,500	1
Washing Machine	General Plant	7	65	1
Pump	Pumping	7	850	1
Pump Truck	Pumping	7	52,500	
Septage Truck and Tank	Treatment	5	3,000	1
Tractor	General Plant	7	9,333	
Caselle Billing Software	General Plant	3	6,000	1
Bale Wagon	General Plant	7	18,000	
Baler	General Plant	7	7,500	
Mower Conditioner	General Plant	7	13,500	

City of La Pine

System Development Charge Analysis - Sewer

Hyster Forklift	General Plant	7	14,400	
Generator	General Plant	7	12,792	
Hay Rake	General Plant	7	2,300	1
Orenco 1 HP Pump	Pumping	5	555	1
Myers 1/2 HP Pump	Pumping	5	542	1
Side Delivery Rake	General Plant	7	520	1
1986 Ford Pickup	General Plant	5	3,800	1
Brush Cutter	General Plant	7	3,105	1
Snowplow	General Plant	7	3,895	1
1991 International Truck	General Plant	5	17,500	1
Concrete Ramp - Office	General Plant	15	540	1
Dump Truck	General Plant	7	3,800	1
Pivot Replacement	General Plant	10	1,796	1
Monitoring Wells	General Plant	7	5,950	
Lagoon Software	General Plant	3	3,830	1
Office Furniture	General Plant	7	1,965	1
Toolbox Unit	General Plant	7	5,092	
Air Compressor	General Plant	7	2,375	1
Software Upgrade	General Plant	5	1,148	1
Computer (Dell Optiplex)	General Plant	5	1,036	1
Computer (Dell Optiplex)	General Plant	5	925	1
Pump (Vehicle)	General Plant	7	4,041	1
Pump (Vehicle)	General Plant	7	4,315	1
Tank Pump	Pumping	7	2,878	1
100' 4' Hose	General Plant	5	1,288	1
Copier	General Plant	5	5,130	1
Backhoe	General Plant	7	37,500	
1989 Intl Vactor Truck	General Plant	7	20,002	
Building				
Shop Building	General Plant	20	\$ 156,312	
Master Plan				
Master Plan	General Plant	20	\$ 22,192	
CIAC				
[Extra]				
Totals			\$ 5,831,479	

City of La Pine

System Development Charge Analysis - Sewer

Capacity and Asset Analysis:

Plant Function	Total
Collection	\$ 1,000,974
Treatment	\$ 2,320,121
Pumping	\$ 233,166
General Plant	\$ 2,138,176
Totals:	\$ 5,692,437

2004 System

Max Day Flow	0.118
Flow Capacity	0.25

Remaining Capacity **52.8%**

2016 System

Max Day Flow	0.161 <i>Figure 2.4 WWSS</i>
Flow Capacity	0.25 <i>Appendix A WWSS</i>

Remaining Capacity **35.6%**

City of La Pine

System Development Charge Analysis - Water

	Prior Rate Study	Water Plan + C&G	Water Plan No C&G
Population		1670	
EDUs	1383	1336	1061
MCE	1085	1336	1061

Average Customer Growth Rate

2.2%

MCE

Existing Cost Basis		
Plant-In-Service	Remaining Capacity:	34.1%
Utility Capital Assets		\$ 2,004,645
less: Contributed Capital		(434,563)
less: Net Debt Principal Outstanding		\$ (723,202)
Reimbursement Fee Cost Basis		\$ 846,881
Future Cost Basis		
Capital Improvement Plan		
Total Future Projects		\$ 9,730,723
less: Identified Projects Funding Existing Needs		(3,160,275)
less: Existing Water SDC Fund Balance		(663,206)
less: Newly Identified Grants		(2,869,715)
Improvement Fee Cost Basis		\$ 3,037,526
Customer Base		
Existing Customer Base - # of Units		1,061 MCEs
Future Customer Base (Incremental # of Units)		1,004 MCEs
Total Customer Base		2,065 MCEs

City of La Pine

System Development Charge Analysis - Water

	MCE
Resulting Charges	
Reimbursement Fee Component	
Total Costs	\$ 846,881
Allocable Customer Base	1,004
Reimbursement Fee per Unit	\$ 844
Improvement Fee Component	
Total Costs	\$ 3,037,526
Allocable Customer Base	1,004
Improvement Fee per Unit	\$ 3,027
SDC per Unit	\$ 3,871

Asset Deductions

Grants for initial water system	<u>\$ 1,275,000</u>
Total Deducted from Existing Cost Basis	\$ 1,275,000

City of La Pine

System Development Charge Analysis - Water

No	Description	2015 Raw Cost	2017 Raw Cost*	% Raw Cost	Permits & Engineering	Total Proj Cost	% Growth Related	% Existing Needs	Growth Related	Existing Needs Costs
Supply System Improvements										
1	New Supply Well and Pump Station	\$ 814,000	\$ 897,435	12%	\$ 286,189	\$ 1,183,624	49%	51%	\$ 575,342	\$ 608,281
Storage Reservoir Improvements										
2	New Northside Reservoir and Transmission Line	\$ 1,881,000	\$ 2,073,803	28%	\$ 661,328	\$ 2,735,130	49%	51%	\$ 1,329,507	\$ 1,405,623
Distribution System Improvements										
3	Cagle and Glenwood Distribution System (Priority 1)	\$ 3,108,000	\$ 3,426,570	46%	\$ 1,092,720	\$ 4,519,290	100%	0%	\$ 4,519,290	\$ -
4	12-inch Highway 97 Connection Pipe (Priority 2)	\$ 207,000	\$ 228,218	3%	\$ 72,778	\$ 300,995	49%	51%	\$ 146,309	\$ 154,686
5	Miscellaneous Distrubtion System Improvements	\$ 682,000	\$ 751,905	10%	\$ 239,780	\$ 991,685	0%	100%	\$ -	\$ 991,685
TOTAL CAPITAL PROJECTS			\$ 7,377,930			\$ 9,730,723	68%	32%	\$ 6,570,448	\$ 3,160,275
Less: Anticipated Grants						\$ 4,250,000	68%	32%	\$ 2,869,715	\$ 1,380,285
NET CAPITAL PROJECT COSTS						\$ 5,480,723			\$ 3,700,733	\$ 1,779,990

*5% escalation rate used

Permits and Engineering Cost Breakdown			
	Item	Cost	% Allocated
1	Legal	25,000	0%
2	Grant Administration	25,000	0%
3	Interim Financing Interest	95,000	0%
4	Bonding Authority and Related Costs	20,000	0%
5	Rural Development Funding Application	15,000	0%
6	Environmental Assessment	20,000	100%
7	Permitting	30,000	100%
8	Cultural Resource Evaluations	45,000	100%
9	Cultural Resource Monitoring	100,000	100%
10	Operation and Maintenance Manual	10,000	100%
11	Design Engineering	750,000	100%
12	Other Engineering	50,000	100%
13	Construction Engineering	540,000	100%
14	Land and Right-of-Way	70,000	100%
15	Construction Contingency	737,793	100%
Gross Sum		2,532,793	
Total w/ Applicable		2,352,793	

Allocation by customer base	
Existing	New Growth
51%	49%

City of La Pine

System Development Charge Analysis - Water

Description	Plant Function	Acquisition Year	Useful Life	Original Cost	Remove?
Land					
Land	General Plant	2001		\$ 5,000	
Land - Industrial Park	General Plant	2002		28,500	
Land - Addition	General Plant	2004		3,500	1
Building - add'l costs	General Plant	2004	30	3,810	1
Water System					
Water System - Industrial Park	General Plant	2002	20	\$ 320,847	
Water System - Russel	General Plant	2002	20	60,000	
Water System	General Plant	2003	20	3,582,137	
Water System Addition	General Plant	2003	20	566,193	
Wickiup Junction Addition	General Plant	2005	20	847,339	
Water System - Addition	General Plant	2005	20	17,440	
Drafter Road Expansion	General Plant	2009	20	171,100	
Water System - School	General Plant	2010	20	17,800	
Misc. Adj.	General Plant			(220)	1
Equipment					
Computer	General Plant	2001	5	\$ 1,725	1
Billing Software	General Plant	2002	3	5,153	
Meter Reading Equipment	General Plant	2002	5	11,631	
Underground Locators	General Plant	2003	10	3,806	1
Tapping Drill	General Plant	2004	10	1,769	1
1995 GMC Truck	General Plant	2005	5	6,000	1
Steam Thawer	General Plant	2007	7	1,739	1
Office Furniture	General Plant	2007	7	1,965	1
Website	General Plant	2008	3	2,500	1
Computer	General Plant	2009	5	1,037	1
Radio Meters	General Plant	2009	7	61,813	1
Pump; press. Welder; comp	General Plant	2009	7	2,963	1
Elem. School Meter	General Plant	2009	7	2,857	1
Radio Meters	General Plant	2009	7	17,453	1
Touch Pad Radios	General Plant	2010	7	2,298	1
Building					
Building - Office/Shop	General Plant	2004	30	\$ 219,953	
Building - add'l costs	General Plant	2004	30	-	
Master Plan					
Master Plan	General Plant	2009	20	\$ 28,507	
Totals				\$ 5,996,615	

Description	Original Cost
Land	\$ 33,500
Water System	\$ 5,582,856
Equipment	\$ 16,784
Building	\$ 219,953
Master Plan	\$ 28,507
Total	\$ 5,881,600

City of La Pine

System Development Charge Analysis - Water

Capacity Analysis:

Supply Capacity (Well capacity)	1200 gpm	figure 2-3
Existing Water Rights	1000 gpm	figure 2-3
Maximum Day Demand (Pre C&G)	477	figure 2-3
Maximum Day Demand (Post)	812	figure 2-3
Storage Capacity	1.2 mg	figure 2-3
Recommended Storage Capacity (Pre C&G)	0.791 mg	figure 2-3
Recommended Storage Capacity (Post C&G)	1.108 mg	figure 2-3

New Analysis		
No C&G		
Flow (Pumping) Capacity	60.3%	
Storage Capacity	34.1%	
Water Rights	52.3%	
With C&G		
Flow (Pumping) Capacity	32.3%	
Storage Capacity	7.7%	
Water Rights	18.8%	

Supply Flow Requirements			
Supply Flow Pre	636	Supply Flow Pre	47.0%
Supply Flow Post	1082	Supply Flow Post	9.8%

City of La Pine

System Development Charge Analysis

Water - Sewer SDC Fund Balance

			Proj. Budget	% from Audit Total
	2013-14	2014-15	2015-16	2015-16
Sewer	\$967,742	\$1,013,342	\$1,038,042	\$1,101,849
Water	\$638,414	\$646,844	\$658,552	\$663,206
Total	\$1,606,156	\$1,660,186	\$1,696,594	\$1,765,055
Sewer Income	\$38,950	\$45,600	\$24,700	\$88,507
Water Income	\$9,861	\$8,430	\$11,708	\$16,362
% Income Sewer	80%	84%	68%	
% Income Water	20%	16%	32%	

City of La Pine
System Development Charge Analysis
Water Debt Summary

Debt Service Summary	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
EXISTING DEBT SERVICE								
Annual Interest Payments	\$ 97,346	\$ 93,020	\$ 88,498	\$ 83,772	\$ 78,834	\$ 73,674	\$ 68,282	\$ 62,647
Annual Principal Payments	<u>96,158</u>	<u>100,484</u>	<u>105,006</u>	<u>109,732</u>	<u>114,669</u>	<u>119,829</u>	<u>125,221</u>	<u>130,856</u>
Total Debt Service Payments	\$193,504	\$193,504	\$193,504	\$193,504	\$193,503	\$193,503	\$193,503	\$193,503

City of La Pine
System Development Charge
Water Debt Summary

Debt Service Summary	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	TOTAL
EXISTING DEBT SERVICE										
Annual Interest Payments	\$ 56,758	\$ 50,605	\$ 44,174	\$ 37,455	\$ 30,432	\$ 23,094	\$ 15,426	\$ 7,412	\$ 2,461	\$ 913,888
Annual Principal Payments	<u>136,745</u>	<u>142,899</u>	<u>149,329</u>	<u>156,049</u>	<u>163,071</u>	<u>170,410</u>	<u>178,077</u>	<u>105,833</u>	<u>17,495</u>	\$2,121,864
Total Debt Service Payments	\$193,503	\$193,504	\$193,503	\$193,504	\$193,503	\$193,504	\$193,503	\$113,245	\$19,956	\$3,035,753