



CITY OF EL PASO DE ROBLES
“The Pass of the Oaks”

**HOUSING CONSTRAINTS AND OPPORTUNITIES
COMMITTEE
AGENDA**

**Thursday
August 31, 2017
6:00 P.M.**

**MEETING LOCATION:
PASO ROBLES CITY HALL/LIBRARY CONFERENCE CENTER
1000 SPRING STREET
PASO ROBLES, CALIFORNIA 93446**

-
- 1. Call to Order**
 - 2. Public Comment**
 - 3. Reductions in Water and Sewer Capital Facility Charges (Connection Fees)**
 - 4. Roundtable Items**
 - 5. Adjourn**



Housing Constraints and Opportunities Committee Agenda Report

From: Dick McKinley, Public Works Director

Subject: Proposed Reductions in Water and Sewer Capital Facility Charges (Connection Fees)

Date: September 7, 2017

Facts

1. Water Capital Facility Charges (Connection Fees) were last updated in 2008 and adopted by the City Council in 2009. Sewer Capital Facility Charges (Connection Fees) were last updated and adopted by the City Council in 2011. Each utility used a different consultant and a different methodology. Connection fees are paid by new development.
2. The City Council appointed a Housing Constraints and Opportunity Committee (HCOC) to look for opportunities to make it easier to develop housing in Paso Robles. Some of the effort of the HCOC have been focused on development permit fees and connection fees. Staff identified an interest in reviewing the utility connection fees and putting them on the same system and the same timeline.
3. The HCOC appointed a sub-committee, including Larry Werner, Vince Vanderlip, Greg Haas, and Councilmember Steve Gregory, to work with staff on the review of utility connection fees..
4. The sub-committee helped lay out a path forward, identified and answered several policy questions related to the connection fee system, and served as a review board for the work of the consultant team (Water Consultancy and HDR – Lynn Takaichi and Roger Null respectively).
5. The consultant team, staff, and the sub-committee were able to complete the review of the connection fees in a relatively short time, resulting in significant reductions to the recommended fees and both utilities on the same system and assumptions.
6. A final report has been prepared and is attached to this staff report. The final methodology is a Buy-In Plus Growth system that is commonly used in California and across the country. This methodology has new growth paying a fair share for the pipes, pumps, water supply, and treatment capacity that was built for them, and a fair share of new capital improvement projects that provide added system capacity.

Options

1. Recommend the City Council adopting the report and implementing the recommended Water and Sewer Capital Facility Charges;
2. Recommend staff to make changes to the report and fee recommendations;
3. Recommend staff consider a completely different approach to setting the fees.

Analysis and Conclusions

Option 1, recommending the City Council adopt the report and new fees structures, will be of significant value to the efforts of the HCOC and will help the local economy in significant ways. Although not directly impacting housing prices (they will still sell for a market price) the housing industry may be better able to build workforce housing that fits the community. The new fees will be a significant reduction from current fees, and will help the overall effort at improving the housing industry.

Option 2, recommending changing the report and fee recommendation, would take some staff and consultant effort, and some additional consultant funding, with an unknown outcome.

Option 3, recommending a different approach, would take a new look at how the fees are established, also with an unknown outcome.

Fiscal Impact

Adopting the recommended fee schedule and report will make housing development significantly more affordable and help the local economy. The revised fees represent a savings of more than \$7,000 per single family residence. While the fee revenue may be reduced for each permit, the report shows that there will still be significant revenue from the fees as growth moves forward based on projected annual permit levels.

Recommendation

Option 1 - Recommend the City Council adopting the report and implementing the recommended Water and Sewer Capital Facility Charges.

Attachments

1. Water and Sewer Capital Facility Charge Report and fee schedule

Water Consultancy

3585 Maple Street, Suite 250
Ventura, CA 93003
805-404-1467

City of Paso Robles
Evaluation of Water and
Wastewater Capital Facility
Charges
Final Report

August 2017

City of Paso Robles
1000 Spring Street
Paso Robles CA 93446

WC Project No. WC-041

Table of Contents

<i>List of Tables</i>	<i>ii</i>
<i>Appendices</i>	Error! Bookmark not defined.
Section 1: Introduction	1
1.1 Background and Objectives	1
1.2 Report Organization	1
1.3 Scope of Services	1
1.4 Conduct of the Study.....	2
Section 2: Overview of Capital Facilities Charges	3
2.1 Purpose of Capital Facilities Charges.....	3
2.2 Regulatory Requirements.....	3
2.3 Overview of Methodology.....	4
2.4 Potential CFC Adjustments	7
Section 3: Water Capital Facilities Charge.....	8
3.1 Overview of the City’s Water System	8
3.2 Current Capital Facilities Charge.....	8
3.3 Basis of the Recommended Charge.....	9
3.4 Comparison with Neighboring Utilities	15
Section 4: Wastewater Capital Facilities Charge.....	16
4.1 Overview of the City’s Wastewater System	16
4.2 Current Capital Facilities Charge.....	16
4.3 Basis of the Recommended Charge.....	17
4.4 Comparison with Neighboring Utilities	25

Table of Contents (cont'd)

List of Tables

- 1 Meter Equivalent Ratios
- 2 Current Water Capital Facilities Charges
- 3 Project Number of Connections/EMUs by Customer Class
- 4 Valuation of Existing Water Assets Included in Prior Evaluation
- 5 Additions to Existing Water Assets Since Prior Evaluation
- 6 Adjustments to Valuation of Water Assets Since Prior Evaluation
- 7 Evaluation of Critical Factor for Supply Capacity
- 8 Net Asset Value per EMU
- 9 Summary of Water Capacity-Related CIP
- 10 Capacity-Related Value per EMU
- 11 Recommended Water CFC per EMU
- 12 Projected CFC Revenue at Recommended Rates
- 13 Comparison with Neighboring Water Utilities
- 14 Current Wastewater Capital Facilities Charges
- 15 Equivalent Residential Units by Customer Class in FY 14-15
- 16 Valuation of Existing Wastewater Assets Included in Prior Evaluation
- 17 Additions to Existing Wastewater Assets Since Prior Evaluation
- 18 Adjustments to Valuation of Wastewater Assets Since Prior Evaluation
- 19 Evaluation of Critical Factor for System Capacity
- 20 Net Asset Value per ERU
- 21 Wastewater Capacity-Related CIP
- 22 Capacity-Related Value per ERU
- 23 Recommended Wastewater CFC per ERU
- 24 Recommended Wastewater CFC per Non-Residential Meter Size
- 25 Projected CFC Revenue at Recommended Rates
- 26 Comparison with Neighboring Wastewater Utilities

Table of Contents (cont'd)

Appendices

A WATER CAPACITY-RELATED CIP

Section 1: Introduction

1.1 Background and Objectives

City of Paso Robles (City) provides water and wastewater service to approximately 10,000 residential, commercial, and industrial accounts in the City. Most of the accounts are residential. The City also receives wastewater from the Templeton Community Services District (Templeton CSD). The City levies a one-time charge on new or intensified development so that these developments pay an equitable share of the City's utility infrastructure. The water utility capital facilities charge (CFC) was last evaluated in 2009 and the wastewater utility CFC was last evaluated in 2011. Because the previous evaluations were not prepared at the same time, differing assumptions and approaches were utilized. In addition, the capital improvement programs of the utilities have been modified. Accordingly, the primary objective of this evaluation is to update the charges using comparable assumptions and methodologies.

1.2 Report Organization

This report documents the methodology, approach and technical analysis performed herein under the direction of the City to develop recommended water and wastewater CFCs. The report is divided into four sections. These are:

- Section 1 provides a brief introduction and overview of the study,
- Section 2 provides an overview of the development of CFCs and the criteria and general methodology that should be used to calculate and establish cost-based fees, and
- Section 3 reviews the City specific calculations of the cost-based water CFC.
- Section 4 reviews the City specific calculations of the cost-based wastewater CFC.

1.3 Scope of Services

Based on an understanding of the scope of the requested evaluation, the following scope of services was developed:

Task 1: Collect and Review Available Background Information

Task 2: Identify and Evaluate Key Assumptions and Policy Issues Related to the Establishment of Equitable Charges

Task 3: Water Utility CFC Evaluation

- Subtask 3.1 Evaluation of Incremental Cost Elements
- Subtask 3.2 Evaluation of Capacity Buy-In Cost Elements
- Subtask 3.3 Survey of CFCs of Comparable Utilities
- Subtask 3.4 Draft and Final Reports

Task 4. Wastewater Utility CFC Evaluation

Subtask 4.1 Evaluation of Incremental Cost Elements

Subtask 4.2 Evaluation of the Capacity Buy-In Cost Elements

Subtask 4.4 Survey of CFCs of Comparable Utilities

Subtask 4.5 Draft and Final Reports

Task 5 Project Management and Meetings.

1.4 Conduct of the Study

The information developed in this study is a result of a review of existing sources of information, contact with City staff, and office analysis. Initial phases of the study focused on data collection, interaction with the City's Housing Constraints and Opportunities Committee and City staff, and the development of consistent policies and assumptions for the evaluation. Subsequent phases focused on utilizing the agreed upon policies and assumptions to develop the recommended CFCs. Based on this evaluation, water and wastewater CFCs are recommended.

Section 2: Overview of Capital Facilities Charges

An important starting point in establishing capacity fees is to have a basic understanding of the purpose of these charges, along with the regulatory requirements and general methodology that is used to establish cost-based charges. This section provides an overview of capital facilities charges, regulatory requirements, and evaluation methodology.

2.1 Purpose of Capital Facilities Charges

The establishment of CFCs is authorized by California Government Code Section 66000 et seq. At some utilities, CFCs may be referred to as system development charges, impact fees, capacity charges, connection fees, infrastructure investment fees, or other labels. Regardless of the label used to identify them, their objective is the same. Charges or fees authorized under this code section are intended to provide a contribution of capital to both reimburse existing customers for the available capacity in the existing system, or help finance planned future growth-related capacity improvements which must be implemented prior to the actual need for the capacity. That is, these charges are intended to provide funds to the utility to finance all or a part of the existing or new capital improvements needed to serve and accommodate new customer growth. Absent those fees, many utilities would likely be unwilling to build growth-related facilities as this would overburden existing ratepayers with the entire cost of growth-related capacity expansion.

2.2 Regulatory Requirements

California Government Code Sections 66000, 66006, 66013, 66022, and 66023 are the primary government code sections applicable to the development and recovery of CFCs. The focus of these sections is summarized below:

- The City must establish that the capacity charge does not exceed the estimated reasonable cost of capacity in facilities in existence or to be constructed for the benefit of the customer charged.
- CFC revenues must be segregated from operating and maintenance funds and deposited in a separate fund.
- The City may only expend the revenues for the purpose for which the charges were collected.
- The City must annually provide a report which describes the type and amount of the charge, beginning, and ending balances of the fund, amount collected and interest accrued, improvements for which funds were expended, and other accounting information.

In summary, these sections of the Government Code suggest that the basis for facility charges be consistent with the new development's impact on the cost of capacity in the City's water and wastewater systems. It should be noted however, that the documentation and supporting nexus for deriving the level of fair and equitable charges are not limited to a single criterion, acknowledging the fact that individual agencies may have unique circumstances that would result in charges that are fair and reasonable. Because the courts have approved assorted charge structure and methods over the years, there is a wide variation in the approach and method behind the development of these charges throughout California.

2.3 Overview of Methodology

There are “generally-accepted” methodologies that are used to establish capacity fees. Nelson describes eight different methodologies that may be used to establish new development fees. “They include:

1. Market capacity method
2. Prototypical system method
3. Growth-related cost allocation method
4. Recoupment value method, also known as the buy-in method
5. Replacement cost method
6. Marginal cost method
7. Average cost method
8. System-wide and growth-related cost-attribution method”¹

As Nelson notes, each of these methods may have certain advantages and disadvantages and should be applied in a manner that reflects circumstances and conditions of the utility. As an example, a utility which has significant capacity in its existing system and can accommodate future growth would likely use the recoupment (buy-in) method. In contrast to this, a utility with no existing capacity which requires expansion of capacity to accommodate growth could potentially use the growth-related cost allocation method or the marginal cost (also called incremental) method. For utilities that have some existing capacity available to serve a portion of new development, but must build additional capacity to serve all future development, the system-wide and growth-related attribution method may be appropriate. For its water and wastewater CFCs, the City is utilizing a combination of the Buy-In and Growth methodologies which is a blending of # 4 and 8 above.

Regardless of the overall methodology selected, there are various uniform or common technical analysis steps that must be undertaken to document the cost and benefit nexus of the basis of charge. These steps are as follows:

- Determination of system planning criteria
- Determination of units of capacity
- Calculation of existing system costs
- Determination of any adjustments

¹ Arthur C. Nelson, System Development Charges for Water, Wastewater, and Stormwater Facilities, Lewis Publishers, New York, 1995, p. 1,

The first step in establishing capacity fees is the determination of the system planning criteria. This implies calculating the amount of water or wastewater capacity required by a single-family residential customer.

For water systems, water demand per equivalent meter is most often used, since this represents the basis for system design, and subsequent customer demands that are placed on the system. The number of existing customers is expressed in equivalent meter units (EMUs). **Error! Reference source not found.** provides a summary of the meter equivalency factors used to support the development of the City’s recommended water capacity fees.

**TABLE 1
METER EQUIVALENT RATIOS**

Meter Size (inches)	Operating Capacity (gpm)	Meter Equivalent Ratio
5/8	20	1.00
3/4	30	1.00
1	50	1.67
1 1/2	100	3.33
2	160	5.33
3	300	10.00
4	500	16.67
6	1000	33.33
8	1600	53.33

For wastewater systems, both wastewater flow and strength must be considered in determining the service requirements of new customers, the Equivalent Residential Unit (ERU) is most often used for wastewater systems because it represents the basis for system design, and subsequent customer demands that are placed on the system. This metric equates the requirements of the new customer to the current requirements of a single family residential customer. The estimated wastewater flow of each customer class is based on its water consumption. The estimated wastewater strength, expressed as Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS), of each customer class is based on guidelines provided by the State Water Resources Control Board for a wide variety of customer types. These assumptions can then be reconciled with actual monitoring data at the City’s wastewater treatment plant. However, because the City limits the strength of wastewater discharges to that of an ERU, only the discharge flow needs to be considered when performing the ERU assessment.

Once the number of EMUs (water) or ERUs (wastewater) is derived, an assessment of each utility system asset is performed to establish the individual assets and group of assets that should be included in the CFC analysis. In this process, the existing assets must be valued. Existing assets may be valued in several ways, including:

- Original Cost (OC)
- Original Cost Less Depreciation (OCLD)
- Reproduction Cost New (RCN)
- Reproduction Cost New Less Depreciation (RCNLD)

Given these four different methods for valuing the assets, the selection of the valuation method certainly arises. The American Water Works Association M-1 manual, "Principles of Water Rates, Fees, and Charges," notes the following concerning these various generally accepted valuation methods:

"Using the OC and OCLD valuations, the [capacity fee] reflects the original investment in the existing capacity. The new customer "buys in" to the capacity at the OC or the net book value cost (OCLD) for the facilities and as a result pays an amount similar to what the existing customers paid for the capacity (OC) or the remaining value of the original investment (OCLD).

Using the RCN and the RCNLD valuations, the [capacity fee] reasonably reflects the cost of providing new expansion capacity to customers as if the capacity was added at the time the new customers connected to the water system. It may be also thought of as a valuation method to fairly compensate the existing customers for the carrying costs of the excess capacity built into the system in advance of when the new customers connect to the system. This is because, up to the point of the new customer connecting to the system, the existing customers have been financially responsible for the carrying costs of that excess capacity that is available to development."²

As discussed with City staff, the RCNLD methodology will be used in the capacity fee analysis for all assets as it most correctly reflects the City's position for the fair and equitable recovery of water and wastewater system capital investments. Using this approach, the City's existing assets are escalated to current dollars using a cost index (e.g., the Engineering News Record, Construction Cost Index; ENR CCI) and then depreciated using a simple straight-line method based on the useful life of each historical asset, respectively. Because the previous CFC analyses included extensive analyses of the City's existing assets, the results of these analyses are escalated and adjustments to the results are applied to reflect the current asset value and to make the evaluation methodologies consistent for both utilities and with the policy guidance provided by the City's Housing Constraints and Opportunities Committee. The total existing asset values are allocated to existing and future customers to determine the portion of the CFC based on existing assets. To evaluate the portion of the CFC attributable to future capacity-related assets, the cost of the City's planned capital improvement program is allocated between existing and future customers. The existing asset component and future capacity component are combined to establish the City's water and wastewater CFCs.

² Ibid., p. 268

2.4 Potential CFC Adjustments

Discussions with City staff and the City's Housing Constraints and Opportunities Committee identified several policy and evaluation issues that were either not incorporated into the previous evaluations or were not consistent between the water and wastewater CFC evaluations. The issues included:

1. Depreciation was not included in the previous water CFC evaluation.
2. Assets acquired since the prior evaluation should be included.
3. Not all previous valuations utilized the RCNLD methodology.
4. Differing methodologies and assumptions were utilized in the prior CFC evaluations.

Based on discussions with City staff and the Committee, the general approach to be utilized in this study is to include asset depreciation in the CFC analysis (RCNLD) but to exclude previous developer contributions due to the difficulty in assessing these assets. Furthermore, to the extent possible, the methodologies utilized and assumptions applied should be consistent between the water and wastewater analyses. Using the RCNLD methodology, rather than developer contributed assets will result in a more consistent, reliable and accurate valuation of the system assets and can result in lower CFC rates.

Section 3: Water Capital Facilities Charge

This section of the report presents the key assumptions and calculation of the recommended CFC for the City's water utility. The calculation of the CFC is based upon financial and utility information provided by the City. Specifically, the recommended charge is based upon the City's fixed asset records; the current capital improvement program plans; existing EMUs; and projection of future EMUs. In the event that the cost and timing of future capital improvements change, the recommended charge presented in this section of the report should be updated to reflect these new conditions.

3.1 Overview of the City's Water System

The City provides water service to approximately 9200 residential, 800 commercial, and 400 irrigation accounts in the City. Most of the accounts are residential. The City's water system is made up of nearly 172 miles of water mains, 19 water wells, 2 arsenic removal treatment systems, one microfiltration water treatment plant, and four reservoirs with a combined capacity of 12 million gallons. Through over 10,000 service connections, the City's water system serves a population of approximately 30,000. The Public Works Water Division has a staff of 11 operators. These operators are responsible for the operation and maintenance of the entire water system.

3.2 Current Capital Facilities Charge

Based on the 2009 Water Capacity Charge Study prepared for the City by HF&H Consultants, LLC, capacity charges were recommended for calendar years 2010 to 2014. The charges have not been updated since this study was completed and the current charges effective since January 1, 2016 remain those recommended in the study for 2014. These charges are summarized in Table 2. The charges are based on EMUs which are discussed in Section 2.

**TABLE 2
CURRENT WATER CAPITAL FACILITIES CHARGES**

All Type of Development	Water Connection Fees
<u>Meter Size</u>	
3/4"	\$23,500
1"	\$39,250
1 1/2"	\$78,260
2"	\$125,260
3"	\$235,000
4"	\$391,750
6"	\$783,260
8"	\$1,253,260
10"	\$1,801,750

(Resolution 09-032)

3.3 Basis of the Recommended Charge

The first step in establishing the recommended CFC is the determination of the system planning criterion to be utilized to calculate the amount of capacity required by a new customer. Because the potential demand of a connection must be considered in applying connection fees, the Equivalent Meter Unit (EMU) is most often used for water systems because it represents the basis for system design, and subsequent customer demands that are placed on the system. This metric equates the requirements of the new customer to the current requirements of a single family residential customer. The estimated water demand of each customer class is based on its water meter size and expressed as EMUs. The results of this analysis are presented in Table 3.

TABLE 3
CURRENT NUMBER OF CONNECTIONS/EMUs BY CUSTOMER CLASS

Customer Class ¹	Billing Code	Number of Connections by Meter Size ³								Total By Class	Estimated Number of Equivalent Meter Units
		1/2, 5/8 or 3/4	1	1 1/2	2	3	4	6	8		
EMUs Per Meter Size ⁴		1	1.67	3.33	5.33	10	16.67	33.33	53.33		
Water Church	CC	31	4	1	1					37	46
City Facility	CF	36	28	8	25		3		1	101	346
City Landscape	CL	27	27	18	21	1				94	254
Commercial/Retail	CR	383	123	63	62	4	3			638	1219
Industrial/Manufacturing	IM	16	19	11	28	1				75	244
Landscape	LS	97	71	35	36	1	1			241	551
Motels	M	3		5	18	4	1			31	172
Public Agencies ²	PA									0	0
Schools	S	6	3	3	9	5	4	1	2	33	326
Single Family Residential	SF	8432	378	9	8		1			8828	9153
School Landscape	SL	2			12	5	7			26	233
Water Duplex	W2	132	16							148	159
Water Triplex	W3	28	74	2	2					106	169
Water 4 or More	W4	16	76	17	32	3	4		2	150	573
Total		9209	819	172	254	24	24	1	5	10508	13443

Notes:

¹ Excludes Construction Water and Hydrant Classes.

² No accounts were identified.

³ Based on 12 months of billing data to June 2017.

⁴ See Table 1

To establish the CFC component attributable to existing assets, an assessment of the utility system assets is performed to establish the assets that should be included in the capacity charge analysis. In this process, the existing assets must be valued. Existing assets may be valued in several ways. For the purpose of this analysis the reproduction new less depreciation (RCNLD) method of valuation was utilized. Because considerable effort to establish the valuation of the existing assets was expended in the prior water CFC evaluation, this valuation was utilized as the starting point for this CFC update. The prior valuation (2008 dollars) is summarized in Table 4. The prior valuation was indexed to 2017 using the ENR construction cost index

TABLE 4
VALUATION OF EXISTING WATER ASSETS INCLUDED IN PRIOR EVALUATION¹

Component	Cost in 2008 Dollars
Existing Facilities	
Supply	\$3,033,386
Treatment	\$4,232,183
Conveyance	\$104,763,623
Existing Facilities Total	\$112,029,192

Notes:

¹ From Figure 3 of Revised Final Report of Water Capacity Charge Study dated January 23, 2009.

To the updated 2017 value, adjustments which reflect the City's current policies, including depreciation and assets acquired since the prior evaluation, are applied. The assets acquired since the prior evaluation are updated by applying 2017 unit costs to individual asset categories. Accumulated depreciation was obtained the City's most recent (2016) Comprehensive Annual Financial Report. The assets acquired since the prior evaluation is summarized in Table 5.

**TABLE 5
ADDITIONS TO EXISTING WATER ASSETS SINCE PRIOR EVALUATION**

Source	Units	Number ²	Pipe Size (inches)	Year Constructed	Unit Cost (2017)	Value (2017 Dollars)
Fire Hydrants	No.	25		2011	\$2800 ¹	\$70,000
		57		2012	\$2800 ¹	\$159,600
		19		2013	\$2800 ¹	\$53,200
		8		2014	\$2800 ¹	\$22,400
		37		2015	\$2800 ¹	\$103,600
		3		2016	\$2800 ¹	\$8,400
Water Treatment Plant ²	MGD	2.4		2015	\$4,896,000	\$11,750,000
Nacimiento Regional Pipeline (principal and interest)	No.	1		2011	\$144,190,000	\$144,190,000
Water Mains ³	Lineal Feet	45	4	2011	\$29.34	\$5,281
		6	6	2011	\$29.34	\$1,056
		889	8	2011	\$29.34	\$208,666
		44	4	2012	\$29.34	\$5,164
		2078	10	2012	\$29.34	\$609,685
		30	4	2013	\$29.34	\$3,521
		441	6	2013	\$29.34	\$77,634
		435	8	2013	\$29.34	\$102,103
		363	10	2013	\$29.34	\$106,504
		3	4	2014	\$29.34	\$352
		290	6	2014	\$29.34	\$51,052
		4891	8	2014	\$29.34	\$1,148,016
		84	10	2014	\$29.34	\$24,646
		1932	12	2014	\$29.34	\$680,219
		1887	8	2015	\$29.34	\$442,917
		1014	16	2015	\$29.34	\$476,012
9	4	2016	\$29.34	\$1,056		
637	8	2016	\$29.34	\$149,517		
198	10	2016	\$29.34	\$58,093		
1400	12	2016	\$29.34	\$492,912		
Total Value Added						\$160,301,083

Notes:

¹ Unit cost from data submitted by City Engineer to Finance Department for 2016 CAFR.

² Based on information provided by City staff

³ Estimated 2017 cost based on \$29.34/foot/diameter-inch.

The adjustments to the prior evaluation and the valuation of existing assets are summarized in Table 6. The percentage of the asset value allocated to growth is the same percentage as the 2009 evaluation which was based on a detailed analysis of the City's water assets.

**TABLE 6
ADJUSTMENTS TO VALUATION OF WATER ASSETS SINCE PRIOR EVALUATION**

Component	Cost in 2017 Dollars	Costs Allocated to Growth	
		Percentage	2017 Dollars
Escalation to 2017¹			
Supply	\$3,885,073	41	\$1,592,880
Treatment	\$5,420,457	41	\$2,222,387
Conveyance	\$134,178,201	41	\$55,013,063
Existing Facilities Total	\$143,483,731	41	\$58,828,330
Adjustment for Including Depreciation²			
Existing Facilities Total	(\$24,060,843)	41	(\$9,864,946)
Adjustment for Assets Added Since 2008			
Existing Facilities Total	\$160,301,083	41	\$65,723,444
Total Valuation for CFC	\$279,723,971	41	\$114,686,828

Notes:

¹ Based on the most recent available ENR Index for San Francisco of 11696 for April 2017.

² Accumulated depreciation of water assets as of June 30, 2016 as reported in the City's 2016 CAFR

To establish the number of EMUs available in the existing system, the critical system planning criterion must be evaluated. Based on information provided by City staff, the estimated build-out supply capacity is 16.90 million gallons per day (mgd). Based on the 2014 Water System Master Plan, the estimated 2017 maximum day demand is 10.05 mgd. Based on an evaluation of 12 months of billing data to June 2017, the average monthly water consumption is 10.23 hundred cubic feet (hcf). After applying a 30 percent contingency to account for dry hydrologic conditions and mandatory water restrictions, as well as a peaking factor of 2.0, the number of EMUs currently available for growth is 10,471. This evaluation is summarized in Table 7.

**TABLE 7
EVALUATION OF CRITICAL FACTOR FOR SUPPLY CAPACITY**

Parameter	Value
Existing Supply Capability (mgd) ¹	
Wells	10.50
Nacimiento Treatment Plant	2.4
Future Supply Expansion (mgd)	
Nacimiento Treatment Plant	4.0
Total Supply Capability (mgd)	16.90
2017 Maximum Day Demand (mgd) ¹	10.05
Available Capacity (mgd)	6.85
Capacity Available to Growth (%)	41
EMUs Available to Growth ²	10,471

Notes:

¹ Provided by City staff

² Based on 10.23 hundred cubic feet per month (251.6 gpd) per EMU, plus a 30% increase for normal hydrologic conditions, and maximum day peaking factor of 2.0.

Based on the adjusted valuation and the available EMUs, the net asset value per EMU is \$10,952 as shown in Table 8.

**TABLE 8
NET ASSET VALUE PER EMU**

Evaluation Parameter	Value
RCNLD Evaluation	
2017 RCNLD Attributable to Growth ¹	\$114,686,828
Available EMUs ²	10,471
Net Asset Value per EMU	\$10,952

Notes:

¹ See Table 6

² See Table 7

In addition to the existing asset component of the CFC, the capacity-related future asset component of the CFC must be added. A summary of the City's current water capacity-related capital improvement program (CIP) and the portion allocated to future users are presented in Table 9. A detailed list of the City's CIP is presented in Appendix A which is located at the end of this report.

**TABLE 9
SUMMARY OF WATER CAPACITY-RELATED CIP**

Future Projects	Original Cost	Year of Cost Estimate	Escalation Factor ¹	2017 Cost	Allocation to Future Users	
					%	Dollars
Nacimiento Water Project	\$45,450,272	2008	1.28	\$58,176,348	71.96%	\$41,861,468
Corporation Yard	\$0			\$0		\$0
Wells	\$15,434,563	2008.00	1.28	\$19,756,241	50.00%	\$9,878,120
Tank, Booster Station and Metering Projects	\$24,590,458	Various	1.18	\$28,915,785	47.68%	\$13,787,570
Pipeline Improvements	\$48,949,000	2014.00	1.08	\$52,864,920	36.76%	\$19,435,151
Total - Future Projects	\$134,424,293			\$159,713,294	53.20%	\$84,962,310

Notes:

¹ Based on escalation from 2008 (ENR CCI SF=9132) to 2017 (ENR CCI SF=11696) or 2014 (ENR CCI-20=9870) to 2017 (ENR CCI-20=10703)

Based on this CIP and the allocation to future users, the capacity-related component of the CFC is \$8,114 per EMU as shown in Table 10.

**TABLE 10
CAPACITY-RELATED VALUE PER EMU**

Evaluation Parameter	Value
CIP Evaluation	
2017 CIP Attributable to Growth ¹	\$84,962,310
Available EMUs ²	10,471
Capacity-Related CIP per EMU	\$8,114

Notes:

¹ See Table 9

² See Table 7

Based on this methodology, the determination of the recommended CFC is \$19,066 as presented in Table 11 and the projected connection fee revenue at the recommended rates is presented in Table 12.

**TABLE 11
RECOMMENDED WATER CFC PER EMU**

CFC Component	CFC Value
Net Asset Value per EMU ¹	\$10,952
Capacity Related CIP per EMU ²	\$8,114
Recommended Capital Facility Charge per EMU	\$19,066

Notes:

¹ See Table 8

² See Table 10

**TABLE 12
PROJECTED CFC REVENUE AT RECOMMENDED RATES**

Customer Class	Projected Connection Fee Revenue		
	FY 2017-2018	FY 2018-2019	FY 2019-2020
Projected EMU Growth ¹	229	306	469
Projected CFC Revenue	\$4,366,127	\$5,834,213	\$8,941,980

Notes:

¹ From the growth projections included in the City's October 2015 Water Rate and Revenue Analysis.

3.4 Comparison with Neighboring Utilities

To establish a comparison of the City's recommended water CFC to that of other neighboring utilities, a survey was performed. In this survey, each utility was asked both their fee and their methodology in the development of the adopted fee. The results of the survey are summarized in 13.

**TABLE 13
COMPARISON WITH NEIGHBORING WATER UTILITIES**

Customer Class	Meter Size	Current CFC	Recommended CFC	Atascadero MWC	Templeton CSD	Nipomo CSD	City of Grover Beach	City of Pismo Beach ¹	City of Morro Bay	City of San Luis Obispo
SFR 3/4" WM	3/4-inch	\$23,500	\$19,066	\$19,600	\$24,478	\$11,450	\$1,737.64	\$13,548	\$6,951	\$10,775

Notes:

¹ Also imposes a recycled water development fee of \$11,967 for single family detached units.

Section 4: Wastewater Capital Facilities Charge

This section of the report presents the key assumptions and calculation of the recommended CFC for the City's wastewater utility. The calculation of the CFC is based upon financial and utility information provided by the City. Specifically, the recommended charge is based upon the City's fixed asset records; the current capital improvement program plans; existing connections; projection of future connections; and existing and projected wastewater flows and strength. In the event that the cost and timing of future capital improvements change, the recommended charge presented in this section of the report should be updated to reflect these new conditions.

4.1 Overview of the City's Wastewater System

Like the City's water system, the City's wastewater system is made up of 140 miles of sewers and 14 lift stations that collect wastewater from the City and east Templeton that is served by the Templeton Community Services District (Templeton CSD). However, Templeton CSD is pursuing a project which would allow it to disconnect from the City's wastewater system. This scenario is incorporated into the CFC analysis.

Wastewater is delivered to the City's wastewater treatment plant located near the Salinas River. The plant currently provides a secondary of level treatment with nutrient removal but filtration and ultraviolet light disinfection are currently under construction, which will provide tertiary treatment. The Public Works Wastewater Division has a staff of 16. These operators are responsible for the operation and maintenance of the wastewater collection and treatment system.

4.2 Current Capital Facilities Charge

Based on the 2011 Wastewater Facility Charge Study prepared for the City by Kennedy/Jenks Consultants, facility charges were recommended for fiscal years 2011-12 to 2013-14. The charges have not been updated since this study was completed and the current charges effective since January 1, 2016 remain those recommended in the study for 2013-14. These charges are summarized in Table 14. The charges are based on the number of units for residential developments and water meter size for non-residential developments.

**TABLE 14
CURRENT WASTEWATER CAPITAL FACILITIES CHARGES**

Type Of Development	Wastewater Facility Fees	
<u>Residential Charges - Per Unit</u>		
Single Family Residence	\$10,900	(including Condominiums, Mobile Home, Pre-fabricated Homes)
Multi-Family Residence	\$9,800	
<u>Non-Residential - All Types</u>		<u>Based on Water Meter Size</u>
3/4"	\$10,900	
1"	\$18,200	
1.5"	\$36,300	
2"	\$58,100	
3"	\$109,000	
<small>Non-Residential accounts requiring water meters larger than 3-inches will be based on plumbing fixture requirements of the most current edition of the California Plumbing Code and the wastewater generation factors in the most current edition of Metcalf & Eddy's <i>Wastewater Engineering</i> per Resolution 11-133.</small>		

4.3 Basis of the Recommended Charge

The first step in establishing capacity fees is the determination of the system planning criterion to be utilized to calculate the amount of capacity required by a new customer. Because both wastewater flow and strength must be considered in determining the service requirements of new customers, the Equivalent Residential Unit (ERU) is most often used for wastewater systems because it represents the basis for system design, and subsequent customer demands that are placed on the system. This metric equates the requirements of the new customer to the current requirements of a single family residential customer. The estimated wastewater flow of each customer class is based on its water consumption. The estimated wastewater strength, expressed as Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS), of each customer class is based on guidelines provided by the State Water Resources Control Board for a wide variety of customer types. These assumptions are then reconciled with actual monitoring data at the City's wastewater treatment plant. However, because the City limits the strength of wastewater discharges to that of an ERU, only the discharge flow needs to be considered when performing the ERU assessment.

The results of this analysis are presented in Table 15.

**TABLE 15
EQUIVALENT RESIDENTIAL UNITS BY CUSTOMER CLASS IN FY 14-15**

Customer Class ¹	Billing Code	Estimated Wastewater Flow					
		Number of Connections	Annual Water Use (hcf)	Annual Water Use per Connection	Assumed Return to Sewer Ratio	Estimated Average Daily Wastewater Flow (gpd)	Estimated Average Daily Flow per Connection
Sewer Service -Church	CC	37	4,109	111	30%	2,526	68
City Facility	CF	22	17,086	777	50%	17,507	796
Commercial/Retail	CR	708	283,104	400	75%	435,127	615
Motels	M	31	52,737	1701	75%	81,056	2,615
Schools	S	1	643	643	30%	395	395
Single Family Residential	SF	8,452	1,045,124	124	50%	1,070,894	127
Sewer Duplex	S2	151	22,864	151	60%	28,113	186
Sewer 3-4 Units	S3	150	37,680	251	65%	50,192	335
Sewer 5 or More Units	S4	116	168,910	1456	70%	242,305	2,089
Reported Flow Data ³		3				94,997	31,666
HAULED WASTE SEWER ONLY ⁴		4				3527	882
TCSD ⁵		1				232,000	232,000
Total		9676				2,258,640	
Reported 2016 Data ²						2,300,000	

Notes:

¹ Includes customers in and out of the City

² From the City's 2016 WWTP Annual Report to the Regional Water Quality Control Board.

³ Based on billing data from June 2016 to May 2017 provided by the City, except one customer from October 2016 to May 2017, and monitoring data from May to July 2017 for one customer.

⁴ Based on billing data from July 2016 to June 2017 provided by the City.

⁵ Based on monitoring data from August 2007 to October 2012 provided by the City.

To establish the CFC component attributable to existing assets, an assessment of the utility system assets is performed to establish the assets that should be included in the capacity charge analysis. In this process, the existing assets must be valued. Existing assets may be valued in several ways. For the purpose of this analysis the reproduction new less depreciation (RCNLD) method of valuation was utilized. Because considerable effort to establish the valuation of the existing assets was expended in the prior water CFC evaluation, this valuation was utilized as the starting point for this CFC update. The prior valuation and the allocation to growth is summarized in Table 16.

TABLE 16
VALUATION OF EXISTING WASTEWATER ASSETS INCLUDED IN PRIOR EVALUATION ¹

Description	Reproduction Cost New	Accumulated Depreciation	Reproduction Cost New Less Depreciation
Collection System	\$189,617,900	\$56,528,100	\$133,089,700
Pumping System	3,570,100	1,501,100	2,069,000
WWTP Cash-based Assets	1,215,400	996,700	218,700
WWTP Debt-based Assets	11,579,081		11,579,081
Subtotal	205,982,481	59,025,900	146,956,481

Notes:

¹ From September 2011 Wastewater Facility Charge Study.

The prior valuation was indexed to 2017 using the ENR construction cost index. To this updated value, adjustments which reflect the City's current policies, including depreciation, assets acquired since the prior evaluation, and developer contributed assets, are applied. Accumulated depreciation was obtained from the City's most recent (2016) Comprehensive Annual Financial Report. The assets acquired since the prior evaluation are summarized in Table 17.

TABLE 17
ADDITIONS TO EXISTING WASTEWATER ASSETS SINCE PRIOR EVALUATION ¹

Source	Units	Number ³	Year Constructed	Unit Cost (2017)	Value (2017 Dollars)
Sanitary Sewers	Miles	2.93	2009	\$174,240 ²	\$510,523
WWTP Upgrade Project (including principal and interest)	LS	1	2016	\$56,730,000	\$56,730,000
Total Value Added					\$57,240,523

Notes:

¹ Unit cost from data submitted by City Engineer to Finance Department for 2016 CAFR.

² Assumes 8-inch size

³ Data from water utility to Finance Department for 2016 CAFR.

The adjustments to the prior evaluation and the valuation of existing assets are summarized in Table 18.

**TABLE 18
ADJUSTMENTS TO VALUATION OF WASTEWATER ASSETS SINCE PRIOR
EVALUATION**

Description	Cost in 2017 Dollars	Costs Allocated to Growth	
		Percentage	2017 Dollars
Escalation to 2017 ¹			
Collection System	\$156,259,221		
Pumping System	2,429,191		
WWTP Cash-based Assets	256,773		
WWTP Debt-based Assets	13,594,878		
Subtotal	172,540,063	57.23%	\$98,744,678
Adjustment for Assets Added Since 2011 ²	\$57,240,523	57.23%	\$32,758,751
Subtotal			
Total Valuation for CFC	\$229,780,586	57.23%	\$131,503,430

Notes:

¹ See Tables 16 and 19. Based on escalation from 2011 (ENR CCI-20=9116) to 2017 (ENR CCI-20=10703).

² See Tables 17 and 19.

To establish the number of ERUs available in the existing system, the critical system planning criterion must be evaluated. Based on the City's 2014 Wastewater Treatment Plant Upgrade Facility Plan, the build-out wastewater flow requirement is 4.84 million gallons per day (mgd) and the 2017 average day flow excluding Templeton CSD discharges is 2.07 mgd. Accordingly, the available capacity for growth is 2.77 mgd. Based on the estimated discharge rate of 127 gallons per day (gpd) per ERU and a 10 percent increase for normal hydrologic conditions, the number of ERUs currently available for growth is 19,828. This evaluation is summarized in Table 19.

TABLE 19
EVALUATION OF CRITICAL FACTOR FOR SYSTEM CAPACITY
(excluding Templeton CSD discharges)

Parameter	Value
Total Build-Out Flow Requirement (mgd) ¹	4.84
2017 Average Day Flow (mgd) excluding Templeton CSD Discharges ²	(2.07)
Available Capacity (mgd)	2.77
Capacity Available to Growth (%)	57.23%
ERUs Available to Growth ³	19,828

Notes:

¹ From City of Paso Robles Wastewater Treatment Plant Upgrade Facility Plan, July 2009

² Based on data provided by City staff.

³ Based on a discharge of 127 gpd per ERU (See Table 15) plus a 10% increase for normal hydrologic conditions

Based on the adjusted valuation and the available ERUs, the net asset value per ERU is \$6,632 as shown in Table 20.

TABLE 20
NET ASSET VALUE PER ERU
(excluding Templeton CSD discharges)

Evaluation Parameter	Value
RCNLD Evaluation	
2017 RCNLD Attributable to Growth ¹	\$131,503,430
Available ERUs ²	19,828
Net Asset Value per ERU	\$6,632

Notes:

¹ See Table 18

² See Table 19

In addition to the existing asset component of the CFC, the capacity-related future asset component of the CFC must be added. The City's current wastewater capacity-related capital improvement program (CIP) and the portion allocated to future users are presented in Table 21.

TABLE 21
WASTEWATER CAPACITY-RELATED CIP ¹

Future Projects	Feb 2015 Cost Estimate	2017 Cost ²	Allocation to Future Users	
			%	Dollars
Wastewater Collection System Projects:				
Phase I, Sewer Service Expansion to Dry Creek Road, including replacement of Lift Station No. 6.	\$3,700,000	\$3,970,000	70%	\$2,779,000
Phase II Sewer Service Expansion to Mill Road, Lift Station on Airport Rd or at Erskine Commercial Tract	\$750,000	\$805,000	100%	\$805,000
Phase II Sewer Service Expansion to Mill Road, Sewer Pipelines to Mill Road (per 2015 Conceptual Plan by WSC)	\$6,000,000	\$6,438,000	100%	\$6,438,000
LS 1, Upsize Lift Station #1 Pumps, to coincide with completion of sewer service expansion to Mill Rd (see above)	\$600,000	\$644,000	100%	\$644,000
W3.2 - 10" Relief Sewer in 32nd St. from Spring to Park	\$300,000	\$322,000	60%	\$193,000
E.1, E.2.1, E.2.2, E.3, E.5, and E6 - Upsize Flag Way, Scott St, and Commerce Way Sewers, to provide capacity for	\$2,850,000	\$3,058,000	100%	\$3,058,000
New sewer from Almendra Ct to Arciero Ct, Eliminate Lift Station No. 14 (facilitates subdivisions on Prospect and Arciero)	\$750,000	\$805,000	60%	\$483,000
Rehabilitate or replace various old sewer lines and manholes when part of a pipeline expansion project ³	\$7,500,000	\$8,048,000	40%	\$3,219,000
Lift station rehabilitation to upgrade obsolete pumps, rails, and motors and to provide longer response time ³	\$750,000	\$805,000	40%	\$322,000
Re-coating of north/south pipe bridges	\$175,000	\$188,000	40%	\$75,000
Replace north and south pipe bridges over Salinas River with subsurface force mains	\$2,000,000	\$2,146,000	40%	\$858,000
Collection System Subtotal	\$25,375,000	\$27,229,000	69%	\$18,874,000
Wastewater Treatment Plant Improvements:				
Equip BNR Basin No. 3 to fulfill plant capacity	\$1,000,000	\$1,073,000	100%	\$1,073,000
Add side-stream nutrient harvesting equipment	\$400,000	\$429,000	40%	\$172,000
Tertiary Treatment Facilities (including principal and interest)		\$17,690,000	50%	\$8,840,000
Wastewater Treatment Plant Subtotal	\$1,400,000	\$19,182,000	53%	\$10,085,000
Total Planned Capital Expenditures		\$46,411,000	62%	\$28,959,000

Notes:

¹ Based on projected CIP and allocations provided by the City

² Based on escalation from 2015 (ENR CCI-20=9972) to 2017 (ENR CCI-20=10703)

³ Projected 10-year cost of annual project expenditures.

Based on this CIP and the allocation to future users, the capacity-related component of the CFC is \$1,460 per EDU as shown in Table 22.

TABLE 22
CAPACITY-RELATED VALUE PER ERU
(excluding Templeton CSD discharges)

Evaluation Parameter	Value
CIP Evaluation	
2017 CIP Attributable to Growth ¹	\$28,959,000
Available ERUs ²	19,828
Capacity-Related CIP per ERU	\$1,460

Notes:

¹ See Table 21

² See Table 19

Based on this methodology, the determination of the recommended CFC is presented in Table 23 and the recommended CFC for non-residential development based on meter size is presented in Table 24.

TABLE 23
RECOMMENDED WASTEWATER CFC PER ERU
(excluding Templeton CSD discharges)

CFC Component	CFC Value
Net Asset Value per ERU ¹	\$6,632
Capacity Related CIP per ERU ²	\$1,460
	\$8,093

Notes:

¹ See Table 20.

² See Table 22 .

TABLE 24
RECOMMENDED WASTEWATER CFC PER NON-RESIDENTIAL METER SIZE
(excluding Templeton CSD discharges)

Meter Size	Value ¹
3/4	\$8,093
1	\$13,515
1 1/2	\$26,948
2	\$43,134
3	\$80,926
4	See Note 2.
6	See Note 2.
8	See Note 2.

Notes:

¹ See Tables 1 and 23.

² Facility charges for Non-Residential accounts requiring water meters larger than 3-inches will be based on plumbing fixture requirements of the most current edition of the California Plumbing Code and the wastewater generation factors in the most current edition of Metcalf & Eddy's Wastewater Engineering. The facility charge will be based on the resulting estimate of wastewater generation, expressed in terms of equivalent residential unit (ERUs) times the charge per ERU in effect at the time. However, in no case shall the facility charge be less than that associated with a 3-inch water meter. Currently, 140 gallons of wastewater generation per day (127 gallons per day in 2017 plus 10% increase for normal hydrologic conditions) equates to one equivalent residential unit.

The projected CFC revenue at the recommended rates is presented in Table 25.

**TABLE 25
PROJECTED CFC REVENUE AT RECOMMENDED RATES
(excluding Templeton CSD discharges)**

Customer Class	Projected Connection Fee Revenue		
	FY 2017-2018	FY 2018-2019	FY 2019-2020
Projected ERU Growth ¹	176	235	361
Projected CFC Revenue	\$1,424,304	\$1,901,769	\$2,921,442

Notes:

¹ From the growth projections included in the City's 2015 Wastewater Financial Forecast.

4.4 Comparison with Neighboring Utilities

To establish a comparison of the City's recommended wastewater CFC to that of other neighboring utilities, a survey was performed. In this survey, each utility was asked both their fee and their methodology in the development of the adopted fee. The results of the survey are summarized in Table 26.

**TABLE 26
COMPARISON WITH NEIGHBORING WASTEWATER UTILITIES**

Customer Class	Meter Size	Current CFC	Recommended CFC	City of Atascadero	Templeton CSD	Nipomo CSD	City of Grover Beach ¹	City of Pismo Beach ²	City of Morro Bay	City of San Luis Obispo ³
SFR 3/4" WM	3/4-inch	\$10,900	\$8,093	\$2,259	\$5,441	\$9,306	\$4,084.88	\$3,611	\$6,976	\$3,729

Notes:

¹ Includes pass-thru fee for the South San Luis Obispo County Sanitation District.

² Also imposes a recycled water development fee of \$11,967 for single family detached units.

³ Additional fees are levied for specific catchment areas.

APPENDIX A
WATER CAPACITY-RELATED CIP

Future Projects	Original Cost	Year of Cost Estimate	Escalation Factor ¹	2017 Cost	Allocation to Future Users		Component
					%	Dollars	
Nacimiento Water Project							
New Phased Water Treatment Plant	\$32,704,272	2008	1.28	\$41,861,468	100.00%	\$41,861,468	Treatment
Phased Water Treatment - Plant Expansion	\$12,746,000	2008	1.28	\$16,314,880	0.00%	\$0	Treatment
Additional 2,000 AFY Nacimiento Entitlement ²		2008	1.28	\$0	100.00%	\$0	Supply
Subtotal - Nacimiento Water Project	\$45,450,272			\$58,176,348	71.96%	\$41,861,468	
Corporation Yard							
Replace Corporation Yard ²		2008	1.28	\$0		\$0	
Wells							
New Sherwood Well #11 Installation	\$1,002,887	2008	1.28	\$1,283,695	50.00%	\$641,848	Supply
Ronconi Filtration Relocation ²		2008		\$0	50.00%	\$0	Treatment
Annual Well Rehabilitation	\$6,220,534	2008	1.28	\$7,962,284	50.00%	\$3,981,142	Supply
New Well Drilling Program	\$8,211,142	2008	1.28	\$10,510,262	50.00%	\$5,255,131	Supply
Subtotal - Wells	\$15,434,563			\$19,756,241	50.00%	\$9,878,120	
Tank, Booster Station and Metering Projects							
FE7 - 21st Reservoir Construction	\$8,400,000	2014	1.08	\$9,072,000	33.00%	\$2,993,760	Storage
Acquire Water Tank Site	\$2,851,811	2008	1.28	\$3,650,318	100.00%	\$3,650,318	Storage
Water Tanks - Coating Repairs	\$622,053	2008	1.28	\$796,228	0.00%	\$0	Storage
W16 - Fire Pump & 8" Water Line at HP Booster Station	\$253,221	2008	1.28	\$324,123	0.00%	\$0	Conveyance
Remote Read Meter System	\$5,978,731	2008	1.28	\$7,652,776	31.25%	\$2,391,492	Conveyance
C3 Future Main East New Main East Zone 2.0 MG Storage	\$4,400,000	2014	1.08	\$4,752,000	100.00%	\$4,752,000	Storage
Water Meter Replacement	\$2,084,641	2008	1.28	\$2,668,340	0.00%	\$0	Conveyance
Subtotal - Tank, Booster Station & Metering	\$24,590,458			\$28,915,785	47.68%	\$13,787,570	
Pipeline Improvements							
A2 Main West 14th St. and 21st St. between Pine St. and Riverside Ave	\$334,000	2014	1.08	\$360,720	33.00%	\$119,038	Conveyance
A3 24th St. West Fairview Ln.	\$59,000	2014	1.08	\$63,720	33.00%	\$21,028	Conveyance
A4 Main West/ 12th St. 12th St. Zone Expansion near 4th St.	\$366,000	2014	1.08	\$395,280	33.00%	\$130,442	Conveyance
A5 12th St/ Highland Park Highland Park Dr.	\$473,000	2014	1.08	\$510,840	33.00%	\$168,577	Conveyance
A6 Main West 2nd St. and 3rd St. between Olive St. and Spring St.	\$574,000	2014	1.08	\$619,920	33.00%	\$204,574	Conveyance
A7 Main West 15th St. and Railroad St., east of Pine St.	\$133,000	2014	1.08	\$143,640	33.00%	\$47,401	Conveyance
A8 Main West 26th St. between Vine St. and Spring St.	\$197,000	2014	1.08	\$212,760	33.00%	\$70,211	Conveyance
A9 Main West Spring St. north of 36th St.	\$164,000	2014	1.08	\$177,120	33.00%	\$58,450	Conveyance
A10 Main West 5th St. and 6th St. between Oak St. and Spring St.	\$177,000	2014	1.08	\$191,160	33.00%	\$63,083	Conveyance
A11 Main West 19th St. and 20th St. between Park St. and Spring St.	\$199,000	2014	1.08	\$214,920	33.00%	\$70,924	Conveyance
A12 Main West 9th St. between Olive St. and Spring St.	\$293,000	2014	1.08	\$316,440	33.00%	\$104,425	Conveyance
A13 Main West 8th St. between Olive St. and Spring St.	\$280,000	2014	1.08	\$302,400	33.00%	\$99,792	Conveyance
A14 Main West 17th St. between Olive St. and Spring St.	\$297,000	2014	1.08	\$320,760	33.00%	\$105,851	Conveyance
A15 0-5 Year Main Replacement	\$4,780,000	2014	1.08	\$5,162,400	33.00%	\$1,703,592	Conveyance
B1 Main East Creston Rd., Sante Fe Ave. and San Augustin Dr.	\$900,000	2014	1.08	\$972,000	33.00%	\$320,760	Conveyance
B2 Main West 20th St. between Olive St. and Spring St.	\$305,000	2014	1.08	\$329,400	33.00%	\$108,702	Conveyance
B3 Main West Olive St. and Spring St. between 19th St. and 36th St.	\$2,084,000	2014	1.08	\$2,250,720	33.00%	\$742,738	Conveyance
B4 12th St. Hillcrest Dr. between 15th St. and West 17th St.	\$380,000	2014	1.08	\$410,400	33.00%	\$135,432	Conveyance
B5 12th St. Merry Hill Rd. between 12th St. and Hillcrest Dr.	\$227,000	2014	1.08	\$245,160	33.00%	\$80,903	Conveyance
B6 12th St. 15th, 16th, Filbert, Terrace Hill	\$247,000	2014	1.08	\$266,760	33.00%	\$88,031	Conveyance
B7 12th St. Pacific Ave. between Merry Hill Rd. and Olive St.	\$778,000	2014	1.08	\$840,240	33.00%	\$277,279	Conveyance
B8 Main West Oak St. between 4th St. and 7th St.	\$288,000	2014	1.08	\$311,040	33.00%	\$102,643	Conveyance
B9 Main West 12th St. between Spring St. and Riverside Ave.	\$367,000	2014	1.08	\$396,360	33.00%	\$130,799	Conveyance
B10 Main West 18th St. between Filbert St. and Chestnut St.	\$185,000	2014	1.08	\$199,800	33.00%	\$66,934	Conveyance
B11 Year Main Replacement Various	\$7,560,000	2014	1.08	\$8,164,800	33.00%	\$2,694,384	Conveyance
C1 Main East Airport loop between Tower 25 well and Aerotech Center Wa	\$3,266,000	2014	1.08	\$3,527,280	100.00%	\$3,527,280	Conveyance
C2 Main East Dry Creek Rd. and Golden Hill Rd.	\$3,148,000	2014	1.08	\$3,399,840	100.00%	\$3,399,840	Conveyance
C4 Main East Thunderbird well field to South River Rd.-Charolais Rd.	\$4,438,000	2014	1.08	\$4,793,040	100.00%	\$4,793,040	Conveyance
C5 Main Replacement Various	\$16,450,000	2014	1.08	\$17,766,000	0.00%	\$0	Conveyance
Subtotal - Pipeline Improvements	\$48,949,000			\$52,864,920	36.76%	\$19,435,151	
Total - Future Projects	\$134,424,293			\$159,713,294	53.20%	\$84,962,310	

Notes:

¹ Based on escalation from 2008 (ENR CCI SF=9132) to 2017 (ENR CCI SF=11696) or 2014 (ENR CCI=9870) to 2017 (ENR CCI=20=10703)

² No longer planned or needed.