

**Environmental Utilities
2014 Water Connection Fee Adjustment Analysis**

Staff Report

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Business Services Administrator**

March 10, 2015

Introduction

The City of Roseville (City) Environmental Utilities Department (Department) maintains community-owned water, wastewater, and solid waste utilities that provide customers with high quality and reliable service. As an enterprise fund, the Department is self-sufficient and must assess appropriate rates and fees to cover the cost of operations, maintenance and infrastructure. This report outlines the findings of an analysis of the City's water connection fee (authorized by Roseville Municipal Code §14.08.025) which essentially funds costs related to expansion or construction of water facilities. Specifically, two viable options in establishing adequate water connection fees were reviewed. The first option provides for establishing water connection fees using the same methodology that was established in 2008. The second option evaluates connection fees under an alternative, cost of service, density-based methodology.

Connection Fee Methodologies

For purposes of this study, two different methodologies were used to evaluate appropriate water connection fee levels. Each methodology provides a different means for calculating the number of Equivalent Dwelling Units (EDU) to be used in the analysis. The first, the "baseline-case" methodology, calculates EDU's based on the current connection fee methodology while the second, the "density-based" methodology calculates EDUs based on a pro-rata share of residential water system needs. Information on each methodology follows.

Baseline-case Connection Fee Methodology

The City's last non-inflationary water connection fee adjustment consisted of a two stage increase implemented in July of 2008 and July 2009.¹ At that time, the City continued to collect connection fees for single family (SF) dwellings on an EDU basis, but modified the manner in which fees were assessed to multi-family, higher density dwellings. A single family EDU continued to be equal to the associated demands placed on the water system by a single-family residence with a ¾" meter. The catalyst for modifying the fees assessed to multifamily (MF) dwellings was based on projected increases in high density projects and the use of private on-site water systems (serviced through master meters) that support them. The private systems had historically been treated as commercial connections and the fees assessed were based on the water meter size. It was determined that high-density multi-family unit projects would require less water demand on a per dwelling unit basis than single-family unit projects, and that it was not appropriate to treat high density residential projects the same as commercial projects. This created the need for a new methodology to address multi-family connection fees. The result was the City-adopted per-living unit fee of 45% of an EDU for each multi-family residential unit to account for the reduced demands and the collection of 1 EDU for all other residential units.

Density-Based Connection Fee Methodology

With the completion of the meter retrofit program in July 2011, most of the City's water services are now metered. The meters provide access to a large set of water usage data that was unavailable in the past and the ability to analyze water usage based on development density. Using this data, the City, at the request of the development community, has evaluated the feasibility of developing a more equitable tiered water connection fee for residential units based upon planned land use density rather than meter capacity as is currently used. The premise was essentially the same as it was in 2008 in that higher density projects have less of a system impact

¹ In addition to implementing non-inflationary adjustments, adjustments are typically made annually based on the Engineering News Record, Construction Cost Index. These adjustments are usually put in place on July 1st of each year.

on a per unit basis than lower density projects. This is primarily due to larger landscape areas in lower density projects. As such, this methodology assumes that lower density residential connections should fund a greater share of growth related water infrastructure than higher density housing products using less water. Using planned land use density as a basis for assessing residential connection fees provides a means to more equitably share system needs amongst different residential user categories.

To establish a density-based methodology, staff prepared the Density Based Water Connection Fee Report, included as Appendix A. Additionally, the City obtained the services of Public Financial Management, Inc. (PFM) to review the methodology for reasonableness, included as Appendix B. PFM's review states:

“Based on the data provided, and discussions with staff, PFM suggests that the methodology for changing DUEs proposed by staff is reasonable. This approach protects the City’s interest to collect enough impact fee revenue to build the needed water system, while being fair to developers in allocating the costs of the system needed to reliably serve these developments in the future. Importantly, the City’s approach balances equity, consistency (land use zoning designations), and ease of administration.”

The City's analysis establishes the relationship between density categories for use in the water connection fee analysis. It further confirms the premise that lower density parcels use more water on an average per unit basis than higher density parcels. Table 1 summarizes the findings of the report.

Table 1: Density-Based Usage Allocation

RESIDENTIAL CATEGORY (Assigned Density in Dwelling Units per Acre)	NUMBER OF DATA POINTS IN ANALYSIS	AVERAGE 2-YR WATER USAGE (Gallons per day per unit)	PERCENT OF WATER USE (Based on LDR water usage)
Low Density Residential (LDR) (0 to 6.99)	31,359	420	100%
Medium Density Residential (MDR) (7.0 to 12.99)	9,173	250	60%
High Density Residential (HDR) (13.0 and greater)	4,872	170	40%

The Capital Improvement Plan

A key component of the connection fee analysis under both methodologies is the underlying Capital Improvement Plan (CIP) containing needed capital projects to accommodate planned growth. The City regularly evaluates and updates its infrastructure plans for the water utility, forming the basis for the CIP. The current plan includes a number of projects, each of which can be categorized as follows:

- **Water Distribution Projects.** Projects that allow the City to efficiently distribute water throughout its service area and primarily include planning, design and construction of new pipelines and pumping stations.
- **Water Production Projects.** Projects that allow the City to continue to efficiently and effectively treat raw water supplies to levels that meet federal and state clean water standards, including treatment facilities, on-site pipelines and in some instances, pumping stations required to pump water to the distribution system. Additionally, though the City does not use groundwater as a primary source of daily water supply, it has added groundwater projects to infrastructure plans as a redundant supply for increased reliability and to facilitate conjunctive use efforts. This includes drilling new wells and installation of pumping facilities.
- **Water Storage Projects.** Projects that will allow the City to store treated water in various places throughout the water utility system's service area to meet operational, fire flow and emergency needs.
- **Water Resources.** Projects dedicated to the new development of water supply projects and other generally required studies.

Connection Fee Analysis

Environmental Utilities contracted with Raftelis Financial Consultants, Inc. (RFC) for financial advisory services related to a connection fee nexus study, and Public Financial Management, Inc. (PFM) for the same services related to updating the water cash flow model and restructuring of the utility's existing debt. The work performed by each consultant considered each of the aforementioned methodologies (baseline-case and density-based).

RFC – Nexus Study

The purpose of the nexus study was to determine the maximum allowable water connection fees in accordance with AB1600, Government Code Sections 66000-66025 (also known as the "Mitigation Fee Act"). Allowable capital included for the purposes of the nexus study includes both the City's long-term water utility CIP and water system projects and infrastructure that has been completed in advance of new growth where excess capacity is available to be utilized by new development. Specifically, their update includes: 1) projects within the 2007 capital plan; 2) new projects to accommodate growth; 3) existing and future debt; and, 4) the current water construction fund balance. As outlined later in this report, the allowable connection fees established within the nexus study results in higher revenue than is necessary within the cash flow model. As such the cash flow model results become the basis for establishing an appropriate water connection fee. A copy of the RFC Water Connection Fee Nexus Study is included as Appendix C of this report.

PFM – Cash Flow Model

The purpose of the cash flow model was to evaluate the City's revenue requirements and whether the level of connection fees is sufficient to meet these requirements. The PFM cash flow model includes only prospective capital costs for construction of projects required to support growth; in other words, a smaller set of projects than what was included in the nexus study. The cash flow model also includes estimated future annual equivalent dwelling units (EDUs) under both the existing baseline-case methodology and the density based methodology, projected revenue needs and current water construction fund balances. The annual assumptions being used in this analysis included the following:

- Average increases of 3.0% based on the Construction Cost Index for escalation of capital costs;
- Inflation rate of 2% through 2018 and 3% annual inflation rate thereafter for escalation of the connection fee;
- Revenue amounts sufficient enough to cover 120% of the annual debt coverage; and
- Maintaining a minimum construction fund balance of \$5 million.

PFM considered the following cases:

- Baseline Case: CIP based on current Roseville General Plan and 100% of projected equivalent dwelling units (EDUs) using the current connection fee methodology;
- Baseline Case Scenario 1, Strong Growth: same method as baseline case, but uses CIP based on current Roseville General Plan, at 120% of projected EDUs analyzed as a stronger projection for connection fee collection;
- Baseline Case Scenario 2, Low Growth: same method as baseline case, but uses CIP based on current Roseville General Plan, at 90% of projected EDUs analyzed as a conservative projection for connection fee collection; and,
- Density-Based Case: CIP based on current Roseville General Plan, at 100% of projected EDUs using the density-based methodology for connection fee collection.

Consideration of each case and related scenarios allowed PFM to assess the need for connection fee adjustments and future debt and evaluate any special financial issues under a variety of circumstances. The Baseline Case used EDUs as calculated under the baseline-case methodology, while the Density-Based Case used growth calculated under the density-based methodology. The anticipated growth in quantity of units under both the density based and the baseline case is essentially the same, but is significantly different on an EDU basis due to the manner in which medium density and high density units are weighted (see Table 1 above). For example, medium density residential (MDR) parcels previously calculated at 1 EDU are recalculated at 60% of an EDU under the density approach. Likewise, high density residential (HDR) parcels previously calculated at 45% of an EDU are now calculated at 40% of an EDU. On a gross level, 100% growth under the baseline-case calculation methodology is 55,898 EDUs vs. 48,860 EDUs under the density-based approach.

The existing General Plan encompasses all adopted specific plans through 2025. The cash flow CIP was based on historical water demands used to anticipate needed facilities to support growth. The baseline case represents 100% growth of existing General Plan. It is important to note that while the baseline case incorporated 100% growth, 120% and 90% growth did not substantially change nominal CIP needs; they only changed the timing of them, delaying or advancing projects in the schedule due to slower or faster increases in water demands to support slower or faster growth.

PFM furthered its analysis by exploring financial structures that would not only provide financial stability for the City, in terms of fund balance adequacy, but would also have the least impact on the development community by amortizing the cost of a portion of the CIP over the remaining development period. The financial model includes anticipated bond funds, current City construction fund balances and both current year and projected future water connection fee revenues. A copy of the PFM Connection Fee Cash Flow Model Report is included as Appendix C.

The total cost of implementing the CIP needed for the City's existing General Plan from fiscal year 2013-14 through fiscal year 2024-25 is approximately \$116 million in 2014 dollars and is summarized in Table 2. The connection fee financial analysis assumed development based on the City's existing General Plan; the capital costs associated with this plan are anticipated to be

financed in part from available City construction fund balances and future water connection fee revenues.

Table 2: Cash Flow Based Water Capital Improvement Plan

WATER UTILITY SYSTEM CAPITAL PLAN PROJECTS	
(In 2014 Dollars)	
	FY14 - FY25 Costs
Capital Projects	(in millions)
Distribution	
Cook Riolo to Baseline Waterline	\$ 7.0
5 mg Tank and Pump Station (Sierra Vista)	15.1
Zone 4 to Zone 1 Pump Station - Pleasant Grove	0.9
Zone 4 to Zone 1 Pump Station - Baseline	1.5
Pump Station at PFE/City-County boundary	0.9
Industrial Parallel Waterline	1.0
Other Distribution Projects	1.2
Production	
Water Supply Reliability	27.9
Wells, Sierra Vista, Qty - 2	4.0
Wells, Westbrook and Creekview	4.0
Wells, WRSP (2)	3.3
WTP Floc/Sed	3.0
Del Webb Well	2.8
Well, Woodcreek West	2.8
Well, HP	2.8
WRSP Hayden Parkway Well Bldg	2.4
Well, Fiddymment	1.7
Other Production Projects	0.8
Resources	
Metering Facility at Cook Riolo and PFE	1.0
Other Resource Projects	0.9
Storage	
West Side Tank and Pumpstation	27.1
NE Tank (6 mg)	6.8
Other Storage Projects	(2.9)
Total	\$ 116.0

A review of the CIP needs for the existing General Plan shows that a large amount of the costs are within the first five years. The CIP costs within this time frame are projected to be approximately \$45.9 million as shown in Table 3 below.

Table 3: Five Year Capital Investment Program

CITY OF ROSEVILLE WATER UTILITY SYSTEM FIVE YEAR CIP (in millions)						
	FY14	FY15	FY16	FY17	FY18	TOTALS
Water Distribution Costs	\$ 1.0	\$ 1.0	\$ 2.0	\$ 3.4	\$ 2.3	\$ 9.7
Water Production Costs	1.5	4.4	2.0	0.3	5.1	13.3
Water Resources Costs	0.1	0.1	0.1	0.2	1.0	1.5
Water Storage Costs	0.1	6.9	6.8	6.8	-	20.6
Totals	\$ 2.7	\$ 12.4	\$ 10.9	\$ 10.7	\$ 8.4	\$ 45.1

Connection Fee Results Summary

Connection fees were developed using two methodologies to determine the amount that would achieve a capital fund balance sufficient to satisfy funding needs and credit quality standards necessary to borrow funds in the future. The funding needs generated using the cash flow model under both methodologies were compared to results of the nexus study to ensure fee levels are compliant with AB1600. Although RFC's Water Connection Fee Nexus Study establishes justification for connection fees in the amount of \$7,676 using the baseline-case methodology or \$8,779 using the density-based methodology, the findings within the PFM Connection Fee Cash Flow Model Report provide substantiation for fees of \$7,444 (estimated July 1, 2015 fees) or \$8,559, for each of the respective methodologies. Tables 4 and 5 provide a comparison of the connection fee level generated by the cash flow model as compared to the nexus study results for each of the methodologies used. Commentary regarding the PFM findings with each methodology is also provided.

Table 4: Baseline-Case Methodology (100% Growth)

PFM Cash Flow Model Fee Requirements (For one EDU)	RFC Nexus Study Maximum Fee Level (AB1600 Compliant Fee)
\$7,444	\$7,676

Under the baseline-case methodology, PFM's report concludes that a lower fee as compared to the nexus study generates sufficient revenue to pay for the capital program, the debt service associated with bonds to bridge the funding gap, and provides for a minimum construction fund balance of \$5 million each year.

Table 5: Density-Based Methodology (100% Growth)

PFM Cash Flow Model Fee Requirements (For one EDU)	RFC Nexus Study Maximum Fee Level (AB1600 Compliant Fee)
\$8,559	\$8,779

Under the density-based methodology, PFM's report concludes that a lower fee as compared to the nexus study generates sufficient revenue to pay for the capital program, the debt service associated with bonds to bridge the funding gap, provides for a minimum balance of \$5.0 million each year.

In order to recommend an appropriate connection fee, it is important to understand how each of the methodologies used in the analysis compare in actual implementation. Under the baseline-case methodology, connection fees would not increase under the cash flow analysis and would increase by 3.0% under the nexus study analysis. Under the density based methodology, low density residential and non-residential projects would see an increase in water connection fees of 15.0%, medium density residential would see a reduction in fees by 31.0% and high-density residential projects would see an increase of 2.2%. Tables 6 through 9 shows how the PFM and RFC generated connection fee for one EDU established by each methodology translates for residential and commercial customers and as well as how it compares to current water connection fee levels.

Table 6: Baseline-Case Connection Fee Adjustment - Residential

CURRENT FEE METHODOLOGY			PFM BASELINE CASH FLOW DEVELOPED FEES			RFC BASELINE NEXUS STUDY DEVELOPED FEES		
Current Connection Fee Designation	EDU's	Estimated Connection Fee 7-1-15 ¹	Cash Flow Adj.	% CHG	Cash Flow Dev. Fee	Nexus Study Adj.	% CHG	Nexus Study Dev. Fee
SF	1	\$7,444	\$0	0.0%	\$7,444	\$232	3.1%	\$7,676
MF	0.45	\$3,350	\$0	0.0%	\$3,350	\$104	3.1%	\$3,454

¹ Connection fees are adjusted annually on July 1st of each year by the higher of 3% or the Engineering News Record - Construction Cost Index. Estimate is based on the minimum of 3%.

Table 7: Baseline-Case Connection Fee Adjustment - Nonresidential

CURRENT FEE METHODOLOGY			PFM BASELINE CASH FLOW DEVELOPED FEES			RFC BASELINE NEXUS STUDY DEVELOPED FEES		
Water Meter Size	EDUs	Estimated Connection Fee 7-1-15 ¹	Cash Flow Adj.	% CHG	Cash Flow Developed Fee	Nexus Study Adj.	% CHG	Nexus Study Dev. Fee
¾ inch	1.0	\$7,444	\$0	0.0%	\$7,444	\$232	3.1%	\$7,676
1 inch	1.7	\$12,655	\$0	0.0%	\$12,655	\$394	3.1%	\$13,049
1.5 inch	3.3	\$24,565	\$0	0.0%	\$24,565	\$766	3.1%	\$25,331
2 inch	5.3	\$39,453	\$0	0.0%	\$39,453	\$1,230	3.1%	\$40,683
3 inch	11.7	\$87,095	\$0	0.0%	\$87,095	\$2,714	3.1%	\$89,809
4 inch	20.0	\$148,880	\$0	0.0%	\$148,880	\$4,640	3.1%	\$153,520
6 inch	41.7	\$310,415	\$0	0.0%	\$310,415	\$9,674	3.1%	\$320,089
8 inch	60.0	\$446,640	\$0	0.0%	\$446,640	\$13,920	3.1%	\$460,560
10 inch	96.7	\$719,835	\$0	0.0%	\$719,835	\$22,434	3.1%	\$742,269
12 inch	143.3	\$1,066,725	\$0	0.0%	\$1,066,725	\$33,246	3.1%	\$1,099,971

¹ Connection fees are adjusted annually on July 1st of each year by the higher of 3% or the Engineering News Record - Construction Cost Index. Estimate is based on the minimum of 3%.

Table 8: Density Based Connection Fee Adjustment - Residential.

CURRENT FEE METHODOLOGY			DENSITY-BASED CASE METHODOLOGY			PFM DENSITY-BASED CASH FLOW DEVELOPED FEES ²			RFC DENSITY-BASED NEXUS STUDY DEVELOPED FEES		
Curr. Des.	Curr. EDU's	Estimated Connection Fee 7-1-15 ¹	Proposed City Planned Density	Res. Units Per Acre	Alt. EDUs	Cash Flow Adj.	% CHG	Cash Flow Dev. Fee	Nexus Study Adj.	% CHG	Nexus Study Dev. Fee
SF	1.0	\$7,444	LDR	0-6.99	1.0	\$1,115	15.0%	\$8,559	\$1,335	17.9%	\$8,779
SF	1.0	\$7,444	MDR	7.0-12.99	.60	(\$2,308)	-31.0%	\$5,135	(\$2,176)	-29%	\$5,267
MF	.45	\$3,350	HDR	13.0+	.40	\$74	2.2%	\$3,424	\$162	4.8%	\$3,512

¹ Connection fees are adjusted annually on July 1st of each year by the higher of 3% or the Engineering News Record - Construction Cost Index. Estimate is based on the minimum of 3%.

² Density Based Cash Flow Developed Fees Proposed

Table 9: Density- Based Connection Fee Adjustment - Nonresidential

CURRENT FEE METHODOLOGY			PFM DENSITY-BASED CASH FLOW DEVELOPED FEES ²			RFC DENSITY BASED NEXUS STUDY DEVELOPED FEES		
Water Meter Size	EDUs	Estimated Connection Fee 7-1-15 ¹	Cash Flow Adj.	% CHG	Cash Flow Developed Fee	Nexus Study Adj.	% CHG	Nexus Study Developed Fee
3/4 Inch	1.0	\$ 7,444	\$1,115	15.0%	\$8,559	\$1,335	17.9%	\$8,779
1 Inch	1.7	\$ 12,654	\$1,896	15.0%	\$14,550	\$2,270	17.9%	\$14,924
1.5 Inch	3.3	\$ 24,565	\$3,680	15.0%	\$28,245	\$4,406	17.9%	\$28,971
2 Inch	5.3	\$ 39,452	\$5,911	15.0%	\$45,363	\$7,077	17.9%	\$46,529
3 Inch	11.7	\$ 87,093	\$13,048	15.0%	\$100,140	\$15,622	17.9%	\$102,714
4 Inch	20.0	\$ 148,876	\$22,304	15.0%	\$171,180	\$26,704	17.9%	\$175,580
6 Inch	41.7	\$ 310,407	\$46,503	15.0%	\$356,910	\$55,677	17.9%	\$366,084
8 Inch	60.0	\$ 446,629	\$66,911	15.0%	\$513,540	\$80,111	17.9%	\$526,740
10 Inch	96.7	\$ 719,816	\$107,839	15.0%	\$827,655	\$129,113	17.9%	\$848,929
12 Inch	143.3	\$ 1,066,698	\$159,807	15.0%	\$1,226,505	\$191,333	17.9%	\$1,258,031

¹Connection fees are adjusted annually on July 1st of each year by the higher of 3% or the Engineering News Record - Construction Cost Index. Estimate is based on the minimum of 3%.

²Cash Flow Developed Fees Proposed

Fee Adjustment Recommendation

The City values the strong relationship it shares with the development community and desires to maintain and strengthen the viability of present and future development processes. At the same time the City seeks to establish fees that are fair and equitable. To that end, staff recommends the City proceed with a fee adjustment using the density-based methodology. This provides for a more equitable share of future water system improvement needs based upon water usage. It would result in an increase of \$1,115 for a single EDU and would provide needed stability within the water construction fund.

With these anticipated adjustments, Roseville's water connection fees remain very competitive within the greater Sacramento region. The following table, Table 10, illustrates how the proposed water connection fee would compare to other water providers in the region.

Table 10: Connection Fee Comparison

Municipality/Agency	Connection Fee per EDU¹
City of Sacramento	\$1,488
City of Davis	\$2,740
City Folsom	\$3,023
Sacramento Suburban Water District ²	\$4,122
Elk Grove Water District	\$4,132
City of West Sacramento	\$7,455
City of Roseville, Proposed	\$8,559
Sacramento County Water Agency	\$13,447
San Juan Water District	\$14,236
City of Lincoln Water Connection	\$18,467
Placer County Water Agency	\$25,960
<p>1. 3/4" Meter Size, Single Family EDU</p> <p>2. Base cost shown. Does not include cost of inspections, meter cost, and hydrant permit cost.</p>	

Appendix

Appendix A: Density Based Water Connection Fee Report, June 20, 2014

Appendix B: Public Financial Management, Inc., Memo, Water Connection Fee Density Methodology, February 11, 2015

Appendix C: Public Financial Management, Inc., Draft Connection Fee Cash Flow Model Report as of October 2014

Appendix D: Raftelis Financial Consultants, Inc., Draft Water Connection Fee Nexus Study as of October 2014

Density Based Water Connection Fee Report

Examining the Relationship Between Parcel Density and Water System
Demand as a Basis for Residential Water Connection Fee Assessment

Environmental Utilities: Business Services

6/20/2014

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Objective

The City of Roseville (City) collects water connection fees as part of the permitting process for new water connections. These fees are used to fund expansion of water supplies, supply reliability and related infrastructure to service new connections. The city periodically reviews its water connection fees to ensure they are appropriately aligned with current growth projections and will provide adequate funding levels to meet expanding water utility supply and infrastructure needs.

Residential water connection fees are currently assessed on an Equivalent Dwelling Unit (EDU) basis with an equivalency based on either meter capacity for single family dwellings or units for multifamily dwellings. Every new single family residential connection is assessed one (1) EDU and each multi-family dwelling unit is assessed 0.45 EDU.

The city is currently evaluating its connection fees. Development interests have requested the city review its current residential connection fee methodology and consider a tiered water connection fee for residential units based upon planned density, as opposed to meter capacity. The premise behind this concept is that water use is higher in low density residential areas, primarily due to more landscape irrigation, than in higher density areas. A connection fee based on planning density would ensure that lower density residential connections would contribute a greater share to funding utility system expansions than higher density housing products that impact the water system less.

Background

The most recent water connection fee review and adjustments were implemented in July 2008 and July 2009. At that time, the city modified the manner in which water connection fees were assessed to multi-family projects. The modification addressed projected increases in high density projects and the use of private on-site water systems (serviced through master meters) to support them. Private systems have historically been treated as commercial connections and fees were assessed based on connection/master meter size, resulting in lower fees collected than when assessed on a per unit basis. Land use plans at the time included a significant increase in high density projects, so the fee assessment methodology was reviewed for these high density projects only and resulted in a change. The adopted change consisted of a per-living unit fee of 45% of an EDU for each multi-family residential unit to account for the reduced demands associated with increased density development.

A cash flow model maintained by one of the city's financial advisors, Public Financial Management, Inc. (PFM), is used to calculate the water connection fee based on cash flow needs. The PFM model requires the following information: water system expansion

and reliability-related capital costs, timing of the costs, estimated revenues required to maintain sustainable capital fund balances, and growth projections on an EDU basis.

Since completion of the city's water meter installation program in July 2011, 100% of the city's water services have been metered for over two years. The city now has access to a large set of water usage data that wasn't available in the past and is able to perform more detailed analyses of water demands based on development density. This expanded data set, combined with the city's land use data in its Graphical Information System (GIS) allows for a better review of average residential water usage on a land use density basis. The following density analysis was prepared to evaluate the concept of a tiered residential water connection fee for inclusion in the PFM connection fee model.

Density Analysis Overview

Average annual water usage within the city's standard land use planning categories were examined to evaluate the appropriateness of modifying the current methodology used for residential connection fees. The city assigns residential density into one of three categories as a function of residential units per acre: low density residential (LDR): 0 to 6.99 units to the acre, medium density residential (MDR): 7.0 to 12.99 units to the acre, and high density residential (HDR): over 13 units to the acre.

The Data

Data from the city's GIS was used to obtain density information for over 30,000 residential parcels. The parcels were then divided into the three planning land use density groups (LDR, MDR and HDR). Two years of water usage for the residential parcels was then extracted. The water consumption data includes the period from May 2010 through April 2012. Table 1 provides the density ranges associated with each of the land use density groups along with the number of water usage data points used within the analysis.

Table 1: Residential Land Use Groups

LAND USE	DENSITY RANGE (DWELLING UNIT PER ACRE)	NUMBER OF DATA POINTS IN ANALYSIS
LDR	0 to 6.99	31,359
MDR	7 to 12.99	9,173
HDR	13.0 and greater	4,872

The Results

Average two-year water usage was calculated for each of the residential density groupings. The resultant usage reflects the aggregate average water use on a gallon

per-day-per-unit basis for each grouping. Table 2 provides the 2-year average annual water usage for each density group and the percent of water usage for each density category as a function of the LDR category.

Table 2: Usage within Density Groups

ASSIGNED DENSITY	NUMBER OF DATA POINTS IN ANALYSIS	AVERAGE 2-YR WATER USAGE (Gallons per day per unit)	RELATIVE WATER USE (Based on LDR water usage)
LDR	31,359	420	100%
MDR	9,173	250	60%
HDR	4,872	170	40%

Examining water consumption within the density groups confirms the premise that lower density parcels use more water on an average per unit basis when compared to higher density units. MDR units use, on average, 60% of the water LDR units use and HDR units use, on average, 40% of the water LDR units use. This correlation demonstrates that it would be reasonable to use density groupings as a basis for calculating residential connection fees.

Recommendation and Next Steps

City staff requested PFM modify the connection fee cash flow model to include a scenario calculating connection fees under the following residential unit strategy for further review and consideration.

- LDR zoned parcels – 1 EDU
- MDR zoned parcels – 0.6 EDU (currently 1 EDU)
- HDR zoned parcels – 0.4 EDU (currently 0.45 EDU)

City staff evaluated capital improvement needs, timing of costs and growth projections to establish a new connection fee or confirm the existing connection fee. Under a new residential density based connection fee strategy, costs for various land use categories are re-proportioned. The resulting water connection fees per unit for LDR parcels will increase while, the fee for MDR parcels will decrease and the fee for HDR parcels will remain close to the current rate.



The PFM Group

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Appendix B

February 11, 2015

VIA EMAIL

DATE: February 11, 2015

TO: Carol Margetich, *Roseville*

FROM: Brian Thomas, Russ Branson, *Public Financial Management, Inc.*

SUBJECT: Water Connection Fee Density Methodology

The City of Roseville Environmental Utilities (EU) staff is proposing a change to the City's water-connection fee methodology for residential development to better align fees with actual demands on the water system. This methodology will change how residential dwelling unit equivalents (DUEs) are calculated. Developers in Roseville pay a water connection fee (or water impact fee) based on the number of DUEs that will fund the new development's share of growth-related infrastructure costs. PFM was engaged to review EU staff's proposed methodology and provide comments and observations regarding the methodology. This memo reflects the findings of that review.

CURRENT WATER CONNECTION FEE METHODOLOGY

The City currently charges water impact fees at the rate of \$7,227 per DUE. A single DUE (1.0 DUE) is equal to a typical single-family unit (low and medium density residential) with a ¾" or 1" service size. A multi-family residential unit (high density residential) is charged a rate of 0.45 DUEs per dwelling unit regardless of service size to the multi-family parcel. All other non-residential land uses are charged based on water service size. The table below lists the DUEs assigned to each service size under the current fee program. As shown below, larger water service connections pay a larger fee. For example, a 2-inch connection pays a fee equal to \$38,303 (equal to the factor of 5.3 times the fee of \$7,227 for a single DUE).

Service Size	DUE
¾" and 1" residential	1.0
1.0"	1.7
1.5"	3.3
2.0"	5.3
3.0"	11.7
4.0"	20.0
6.0"	41.7
8.0"	60.0
10.0"	96.7
12.0"	143.3



PROPOSED METHODOLOGY CHANGE

Over the last decade, the City of Roseville has installed water meters on residential and commercial water service in the City. This has provided the City detailed water-usage data by customer class and land-use types. This data allows the City to evaluate water usage trends that can influence the design of future water systems and better allocate costs between land uses based on average water consumption.

Utilizing the water-usage data, EU staff is proposing to change the basis of the water connection fee for residential properties to reflect the different demands placed on the system as a function of land use zoning. In particular, Roseville is contemplating a change in DUEs across the three major residential zoning categories used by the City – Low Density Residential (LDR – 0 to 6.99 dwelling units (DUs) per acre), Medium Density Residential (MDR – 7.0 to 12.99 DUs per acre), and High Density Residential (HDR – greater than 13.0 DUs per acre). Non-residential projects will still be charged a water connection fee based on DUEs assigned to the water service connection size.

The ¾” connection is the smallest connection that the City allows. While other connection sizes are based on expected water flows to a site, the ¾” connection provides an upper-limit use, but does not adjust for lesser water users. In analyzing water usage data from over 45,000 residential units, the City now has the ability to evaluate these differences independent of water-line size.

While the City water-usage data is available on a per-parcel basis, as noted above, the proposed DUE factors (shown in the table below) are applied to the City’s three residential categories, LDR, MDR, and HDR. These are the equivalent land-use designations and densities used by the City when establishing land use zoning. Matching these zoning designations allows for consistency in the application of fees across all residential land uses and allows the City to better project the number of DUEs anticipated in the future.

Proposed Residential DUE Fee Factors

Land Use	DUE Factor
LDR (0-6.99 units per acre)	1.0 per unit
MDR (7-12.99 units per acre)	0.6 per unit
HDR (13 + units per acre)	0.4 per unit

To establish the residential DUE water connection fee factors, the City evaluated water usage data from a significant number of units in each of the three categories, and calculated the average water usage by unit in each zoning category. The calculation was done by summing the amount of water used by each residential category (based on existing billing data), and dividing it by the number of units in that residential category. The factor for the MDR and HDR residential units were based on the ratio of the average usage in those categories to the average use in the LDR category.

Methodology Considerations

In making the changes in connection fee methodology, the City had to consider the best way to align connection fees to impacts on the water system. There are residential parcels of varying densities ranging from one dwelling unit per acre to more than 16 dwelling units per acre. Theoretically, each of these categories could have a different DUE. In choosing to match land-use zoning density groupings, the City



simplifies the calculation of fees and allows a developer to easily calculate fees based on the actual zoning of the parcel, and retains the nexus between the need for facilities and the water use imposed on the system by these new developments.

IMPACTS OF THE PROPOSED IMPACT FEE CHANGE

Any change in fee methodology will have an impact on the overall application of impact fees to future development. The rationale for this change is this will result in a more equitable distribution of costs and DUEs, reflective of water demands and impacts on the water system.

Based on water-usage data, MDR development and HDR development will be charged water connection fees commensurate with their impact on the water system. Introducing connection fees for MDR refines the existing system, and results in a series of charges more reflective of usage by these different land uses. The use of average water usage to allocate the impact of different residential developments based on zoning is a reasonable way to allocate costs among new residential development categories.

The redistribution of DUEs for LDR, MDR, and HDR units, while not changing the total number of units expected to be developed, lowers the total DUEs over which to spread capital costs for new development. The effect of lower total DUEs is an increase in the connection fee per DUE. This in turn shifts costs to those land uses that have a greater system impact, namely LDR and non-residential development.

RESULTS OF PFM REVIEW

Based on the data provided, and discussions with staff, PFM suggests that the methodology for changing DUEs proposed by staff is reasonable. This approach protects the City's interest to collect enough impact fee revenue to build the needed water system, while being fair to developers in allocating the costs of the system needed to reliably serve these developments in the future. Importantly, the City's approach balances:

- equity,
- consistency (land use zoning designations), and
- ease of administration

cc: Thomas Toepfer, *Public Financial Management, Inc*

**City of Roseville,
California**

Final

Connection Fee Cash Flow Model Report

October 2014

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The PFM Group

Public Financial Management, Inc.
PFM Asset Management LLC
PFM Advisors

City of Roseville – Cash flow model

Introduction

Public Financial Management (“PFM”) was engaged by the City of Roseville (the “City”) to provide a third party evaluation of the City’s water connection fee levels and the City’s ability to pay for water infrastructure to serve new residents and business in the City. PFM developed a financial forecasting model to evaluate the City’s revenue requirements and whether the level of connection fees are sufficient to meet these requirements. This memo outlines the major assumptions and describes the results of the baseline case cash flow projections and sensitivity analysis.

Current Connection Fee Level

During fiscal year 2015, the City charges \$7,227 per Equivalent Dwelling Unit (EDU). The City evaluates the connection fee level every three to five years. It is the City’s policy to increase the connection fee by the greater of (a) 3% or (b) the Construction Cost Index (the “CCI”) as published by the Engineering News Record. This annual adjustment is intended to account for price increases and to mitigate large fee hikes.

The fee per EDU is then multiplied by the EDU equivalent for different meter sizes. The EDU for the different meter sizes are listed in Table 1 below. For example a 1” meter connection will cost \$12,286 which is 1.7 times \$7,227.

Table 1. EDUs by Meter Size

Meter Size	EDU
3/4"	1.0
1.0"	1.7
1.5"	3.3
2.0"	5.3
3.0"	11.7
4.0"	20.0
6.0"	41.7
8.0"	60.0
10.0"	96.7
12.0"	143.3

Source: City of Roseville – Residential Development Fee Booklet

For multi-family housing, the connection fee is based on the number of units in a multi-family building, and the fee is 45% of the single family EDU fee per unit.

The connection fee is calculated at such a level that the revenues generated given the City’s forecast of growth will be sufficient to pay for the growth related capital expenditures. However, there are periods in which larger capital projects are financed through the issuance of debt which is repaid from connection fees, as the timing of capital expenditures and connection fee revenue can differ. For this purpose PFM, on behalf of the City, developed a cash flow model (the “Cash Flow Model”) to project the revenues generated from connection fees and the City’s expenditures related to new developments. The City and PFM review the connection fee periodically to update growth projections.



“Density” based connection fees

The City is considering changing the basis for connection fees to reflect a relationship between land use density and water system demand. The City has written a comprehensive report that describes the methodology (please refer to the City’s “Density Based Water Connection Fee Report” dated June 20, 2014). Using the new density approach, the City has determined three major categories: (1) low density residential (LDR) reflecting 0 to 6.99 units per acre, (2) medium density residential (MDR) reflecting 7 to 12.99 units per acre and (3) high density residential (HDR) reflecting over 13 units per acre. The conversion is such that one unit on a LDR zoned parcel is equal to one EDU, one unit on a MDR zoned parcel counts for 0.6 EDU and one unit on an HDR zoned parcel counts for 0.4 EDU. The connection fee per density unit is set to collect the same revenues as under the current EDU approach when multiplied by the expected growth in density units.

Cash Flow Model and Connection Fees

The City currently collects a connection fee from each new equivalent dwelling unit. Recently, the City engaged Raftelis Financial Consultants, Inc. (RFC) to complete an AB1600 connection fee study (the “Nexus Study”) to ensure that the connection fee meets the requirements of the California code. RFC concluded that a connection fee of \$7,676 per EDU reflects the cost of growth related capital projects and the number of benefiting equivalent dwelling units (“EDUs”). In essence this is the maximum level of connection fee that the City could consider collecting to maintain compliance with AB1600 under the base-case EDU calculation method. Under the density-based connection fee approach, the RFC nexus study concludes a connection fee of up to \$8,779 is appropriate.

Public Financial Management (“PFM”) developed a financial forecasting model to evaluate if the City’s current level of connection fees is sufficient in both timing and revenue level to meet the capital requirements; and if not, what options are available to provide funding for the needed capital at the needed time. The analysis looked at a Baseline Case Model and a Density Based Model.

The following sections outline the major assumptions used for the analysis and also describe the results of the baseline case cash flow projections and associated sensitivity analysis.

Forecast Assumptions

This analysis focused on the water utility construction fund in which connection fees are deposited and from which growth related expenditures are paid. The City capital plan includes a ten year project update with growth included through build out of the City’s current General Plan. The City expects construct expansion related projects through 2025. Those projects are estimated to have sufficient capacity for expected growth through 2050.

EDU growth models

The City of Roseville provided projections for new developments in terms of additional EDUs through build out. Connection Fee revenues are driven by EDU growth and the price per connection. In the baseline case model the City grows at an average pace of 1.57% through 2050 and increases the existing connection fee of \$7,227 by 3% inflation annually. The detailed projected additional EDU’s through



2025 are shown in Table 2 below, projected new EDU's through 2050 are provided in the Appendix. Later in this report are the cash flow model results for (A) lower growth at 90% of the baseline case assumptions and (B) more aggressive growth at 120%.

Table 2. Projected EDU Growth – Baseline Case Model

New EDU Connections	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Single Family EDUs	486	308	330	352	374	396
Multi Family EDUs	164	177	190	202	215	228
Non-Residential EDUs	146	146	146	146	146	146
Total - Roseville Service Area New EDUs	796	631	666	700	735	770

New EDU Connections	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Single Family EDUs	418	747	785	785	785	785
Multi Family EDUs	240	253	266	266	266	266
Non-Residential EDUs	146	146	146	146	146	146
Total - Roseville Service Area New EDUs	804	1,146	1,197	1,197	1,197	1,197

For the Density Based Model and as noted previously, the City evaluated the use of “density” based connection fees that reflect the different water usage patterns on different land uses (low density, medium density, and high density). In the Density Based Model, the estimated EDUs are revised to reflect the three residential land use categories as opposed to only two in the Baseline Case Model. The estimate of growth in EDUs under this more detailed analysis is shown in Table 3.

Table 3. Projected EDU Growth - Density Based Model

New Units Connections	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Single Family Units - LDR (1.0 EDU)	286	308	330	352	374	396
Single Family Units - MDR (0.6 EDU)	200	215	231	246	261	277
Multi Family Units - HDR (0.4 EDU)	164	177	190	202	215	228
Non-Residential Units (1 Unit = 3,000 SqFt = 1 EDU)	146	146	146	146	146	146
Total - Roseville Service Area New Units	796	846	896	946	996	1,046

New EDU Connections	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Single Family Units - LDR (1.0 EDU)	418	440	462	462	462	462
Single Family Units - MDR (0.6 EDU)	292	307	323	323	323	323
Multi Family Units - HDR (0.4 EDU)	240	253	266	266	266	266
Non-Residential Units (1 Unit = 3,000 SqFt = 1 EDU)	146	146	146	146	146	146
Total - Roseville Service Area New Units	1,096	1,146	1,197	1,197	1,197	1,197

Capital Program – Timing and Cost

Given the projected growth rates, the City estimates the timing needs of the total capital expenditures of \$122.1 million from 2014 to 2025. For purposes of the analysis a 2% annual inflation rate through 2018 and a 3% annual inflation rate thereafter is assumed. These inflation rates are used within the models to escalate the capital costs to current year (nominal) dollars within the models. The escalated costs total \$144.5 million.



Connection Fee Level

The cash flow projection models assume that the connection fee increases by 3.0% per year. It is the City's policy to increase the connection fee by the greater of (a) 3% or (b) the Construction Cost Index (the "CCI") as published by the Engineering News Record. The City's existing 2014 single family connection fee per EDU is \$7,227. Therefore, assuming a 3% increase the connection fee would increase to \$7,444 starting July 1, 2015 for fiscal year 2016. In the following analysis, this report will refer to the \$7,444 as the baseline case fee level for the upcoming rate adjustment starting fiscal year 2016. By 2025, at 3% per year, the single-family connection fee would grow to \$9,712. Under the City's current policies and as used in the Baseline Case Model, multi-family connection fees are set at 45% of the single family connection fee and the non-residential connection fee per EDU is the same as for single family residential.

Reserves

The City's outstanding Series 2007 Certificates of Participation ("Series 2007 COPs) funded a debt service reserve fund of \$4.2 million. This debt service reserve fund is part of the security for bondholders of the Series 2007 COPs. However, the interest earnings on this reserve can be applied to pay debt service and provide additional income for the water utility. The debt service reserve fund has an Investment Agreement with FSA Capital Management with a rate of 5.031 % per annum. The City's target minimum fund balance is \$5 million for the water utility's construction fund. Although not used for debt service payments, the water utility's operating fund is separately funding an economic reserve equal to at least 10% of operating expenditures and making contributions to a rate stabilization fund in support of bond covenants. The economic reserve and the rate stabilization reserve funds are not included as part of the connection fee review.

Interest Earnings on Fund Balance

The fund balance is assumed to earn interest at 0.5% through 2019 and then revert to the 10-year average yield of 1-Year U.S. Treasury bonds of 1.77%. This earnings rate is conservative in a historical context, but produces higher earnings than are currently achieved at today's low short-term interest rates.

Debt Funding

The cash flow projection model allows for supplemental debt issuance if funding from existing fund balances and revenues are insufficient to pay for the capital program, debt service and administrative cost. The new debt is assumed to bear interest at 5.00%. The cash flow projections also include the water utility's existing debt. The existing debt consists of \$42.635 million of fixed rate debt which was used to fund needed capital projects.

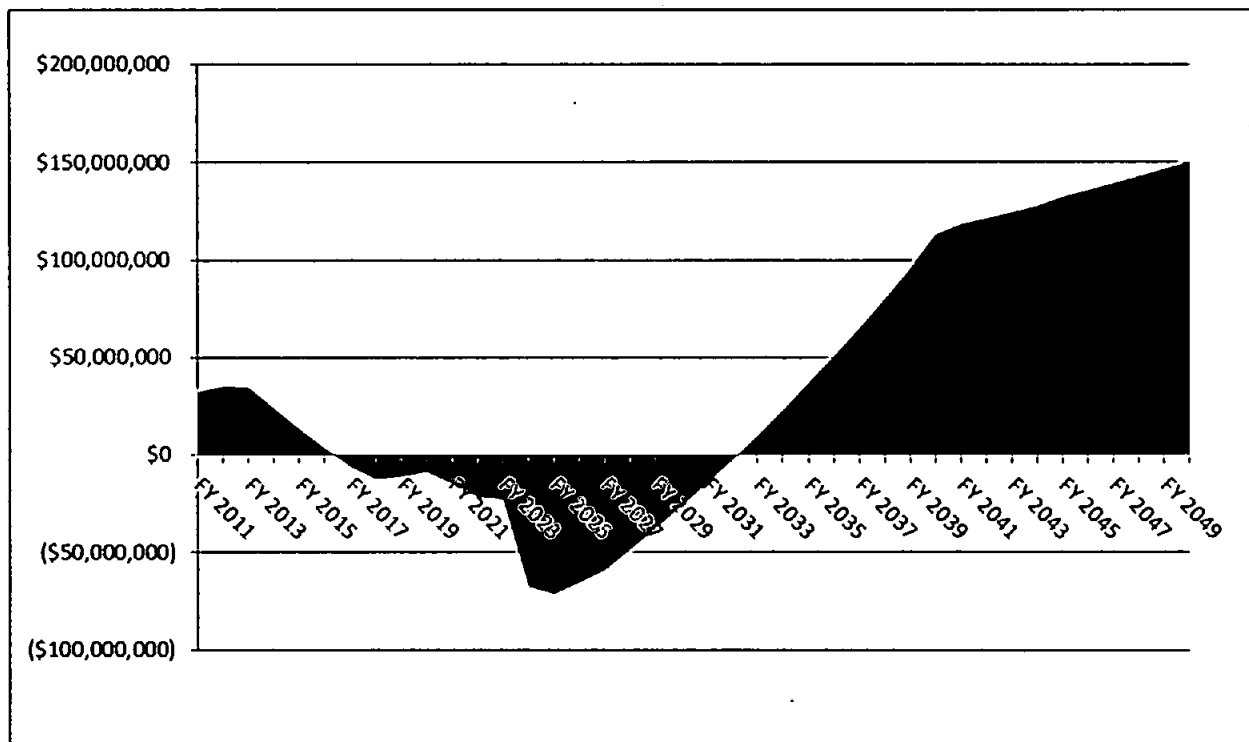
Baseline Case Model Projections

Figure 1 below depicts the water construction fund balance over the forecast period using the assumptions described above and increasing the current connection fee of \$7,227 per EDU by 3%



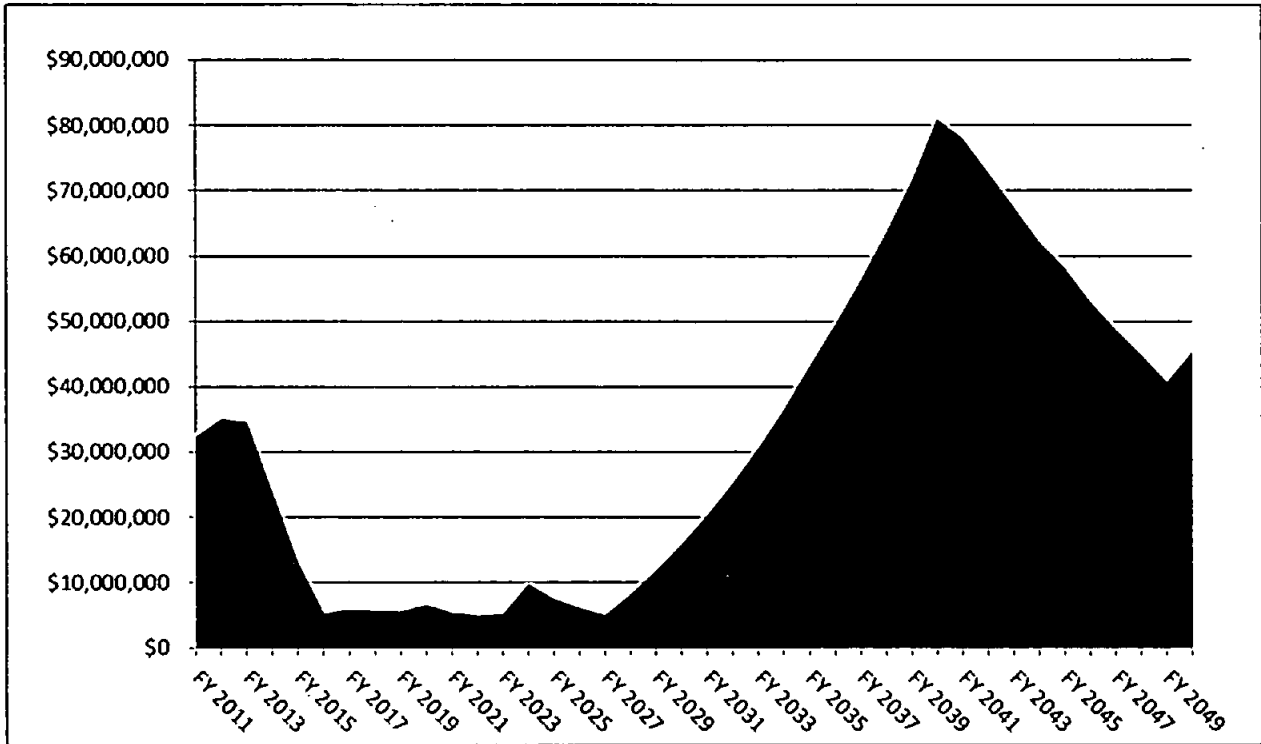
annually. The cash flow model projects insufficient funds starting fiscal year 2017, resulting in a negative fund balance of \$88 million in 2026. This is because expenditures (cash outflow) for the capital projects are planned to occur between 2014 and 2025, while the revenues in the model are projected through 2050. The revenues collected over the entire projection horizon would be sufficient if the utility could bridge the cash flow gaps in the earlier years without incurring any interest cost.

Figure 1. Water Construction Fund Balance
\$7,444 Fee starting Fiscal Year 2016 and No Debt Financing



In order for the City to fund the capital projects in the amount and timing as provided, the City may choose to fund a portion of the project cost with proceeds from debt issuances. Figure 2 below depicts the fund balance over time if debt is issued to pay for capital cost while preserving the City's minimum fund balance of \$5 million. The model shows debt issuances totaling \$110.2 million to fund \$97.0 million in capital projects, \$11.0 million debt service reserve funds and approximately \$2.2 million cost of issuance. The additional debt is modeled at 5% interest cost and to be repaid over 26 to 30 years such that the repayment falls within the projection horizon, ending fiscal year 2050. Additionally, the last debt issuance occurs in 2025 the same year the capital expenditure projections end. Due to the additional debt, the City would incur interest cost and cost of issuance. The additional interest cost over the projection horizon totals approximately \$93.4 million. Figure 2 below, shows that at connection fee of \$7,444 at the beginning of fiscal year 2016 and increasing at 3% annually fund balances are projected to remain above the targeted \$5 million level.

Figure 2. Water Construction Fund Balance
\$7,444 Fee starting Fiscal Year 2016 and Debt Financing

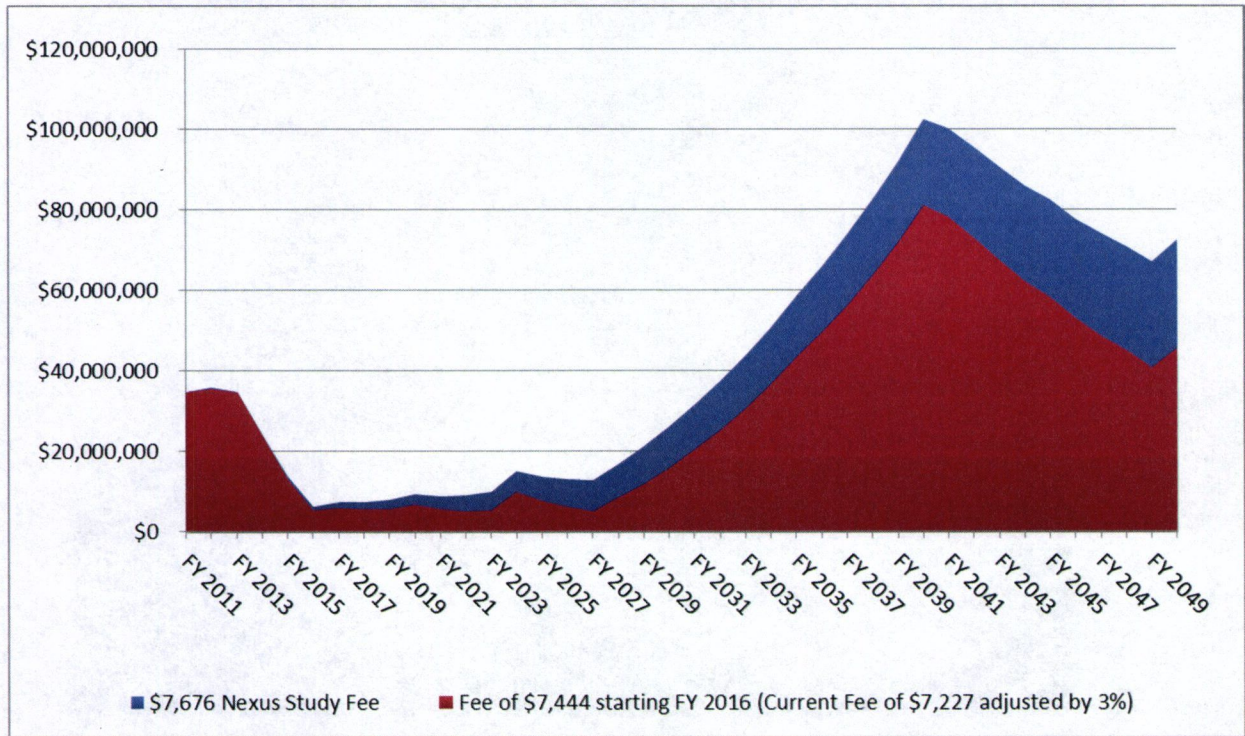


Comparison to Raftelis Nexus Study

The Nexus Study conducted by Raftelis Financial Consultants, Inc. dated January 2015 concluded that a connection fee of \$7,676 per EDU reflected the cost of growth related capital projects and the number of EDUs benefiting under the Baseline Case Model assumptions for the number of EDUs. This level of connection fee was inserted into to the cash flow model to analyze how revenues would generate over time to fund the capital program. The Cash Flow Model projected revenues based on the Nexus Study fee level of \$7,676 per EDU with 3% annual inflation adjustments would generate sufficient revenues to pay for the capital program, the debt service associated with bonds to bridge the funding gap and would also result in a minimum fund balance of \$6.0 million and build a fund balance of approximately \$72.4 million by 2050. By way of comparison and as described above, the fee in the Cash Flow Model of \$7,227 per EDU would maintain a minimum balance of \$5 million in every year, and reduce the fund balance to \$45.5 million by 2050. Figure 4 below shows the projected fund balance for connection fee levels of (1) \$7,676 per EDU as shown in the Nexus Study adjusted by 3% to 7,906 at the beginning of fiscal year 2016 and (2) at the current fee level of \$7,227 adjusted by 3% to \$7,444 at the beginning of fiscal year 2016, and in both cases increasing by 3% annually thereafter. Note that the Nexus study calculates a fee which would be sufficient to pay for all capital projects in today's dollars, assuming all revenues would be collected at once today. The cash flow approach takes the timing of revenues and expenditures into account.



Figure 4. Comparison in Fund Balance under Baseline Case EDU Customer Categories

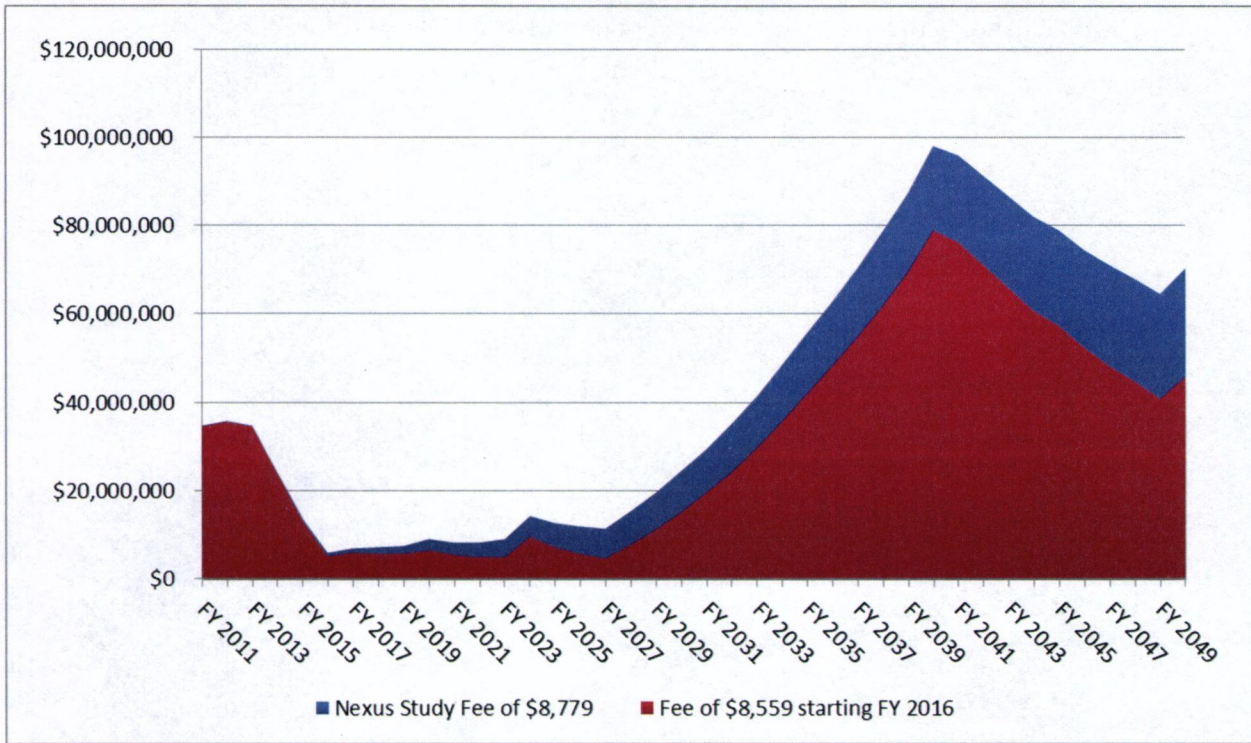


Density Based Model Projections

As mentioned previously, this analysis also used a Density Based Model as the City is contemplating changing the existing EDU customer categories to new EDU density categories. Under the new categories the connection fee calculated in the Nexus Study is \$8,779 per low-density single family EDU. In the Cash Flow Model, using the new density EDU categories, a fee of \$8,559 per low-density single family EDU generates approximately the same revenue over the projection horizon as the fee of \$7,227 per EDU under the current categories. A fee equal to \$8,559 per EDU under the new density categories results in a minimum fund balance of \$4.6 million and an ending fund balance \$45.8 million by 2050.

Figure 5 below shows the projected fund balance applying the Density Based Model assumptions using the new density categories and for connection fee levels of (1) \$8,779 per EDU as shown in the Nexus Study and (2) at the fee level of \$8,559, and increasing both by 3% annually thereafter.

Figure 5. Comparison in Fund Balance under Density Based Model for EDU Customer Categories



Sensitivity to Realized Growth

The actual connection fee revenues generated will depend on actual timing of growth. While the number and timing of connections in the projection horizon of 35 years from 2015 to 2050 represent the best estimate at this time, the actual timing and number of connections may not be realized as projected. If growth occurs faster, revenue is generated earlier but capital projects may also need to be advanced earlier. On the other hand, slower growth would result in lower revenues, but may also result in delaying capital expenditures. Therefore, the cash flow requirements should be reviewed periodically and adjustments to the connection fee may be necessary.

Figure 6 below shows the Low Growth Scenario at 90% of the baseline case growth with a Connection Fee of \$7,444 starting FY 2016, and the \$110 million debt funding. The revenue would be insufficient in several years to support the capital program at the current anticipated pace expenditure, however, slower growth could allow to defer certain capital projects.

Figure 6 – Low Growth Scenario – 90%

Fund Balance with Debt Issuances and Connection Fee of \$7,444 starting FY 2016

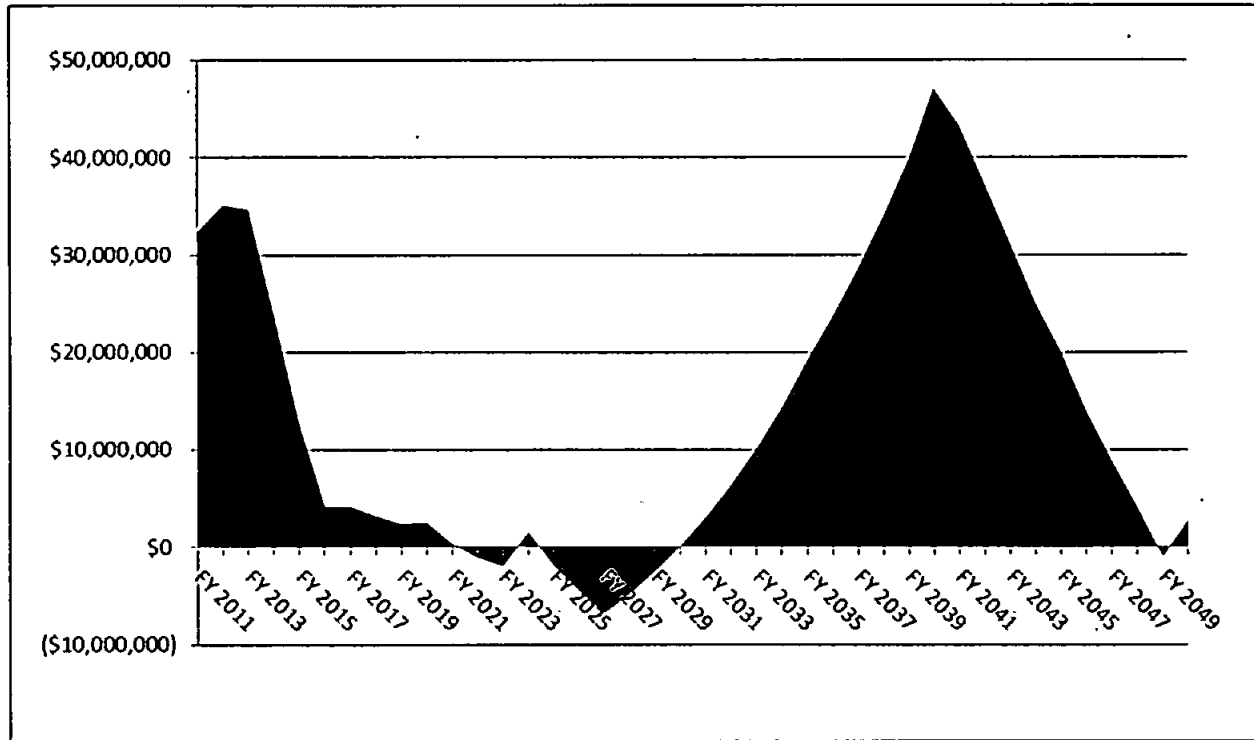
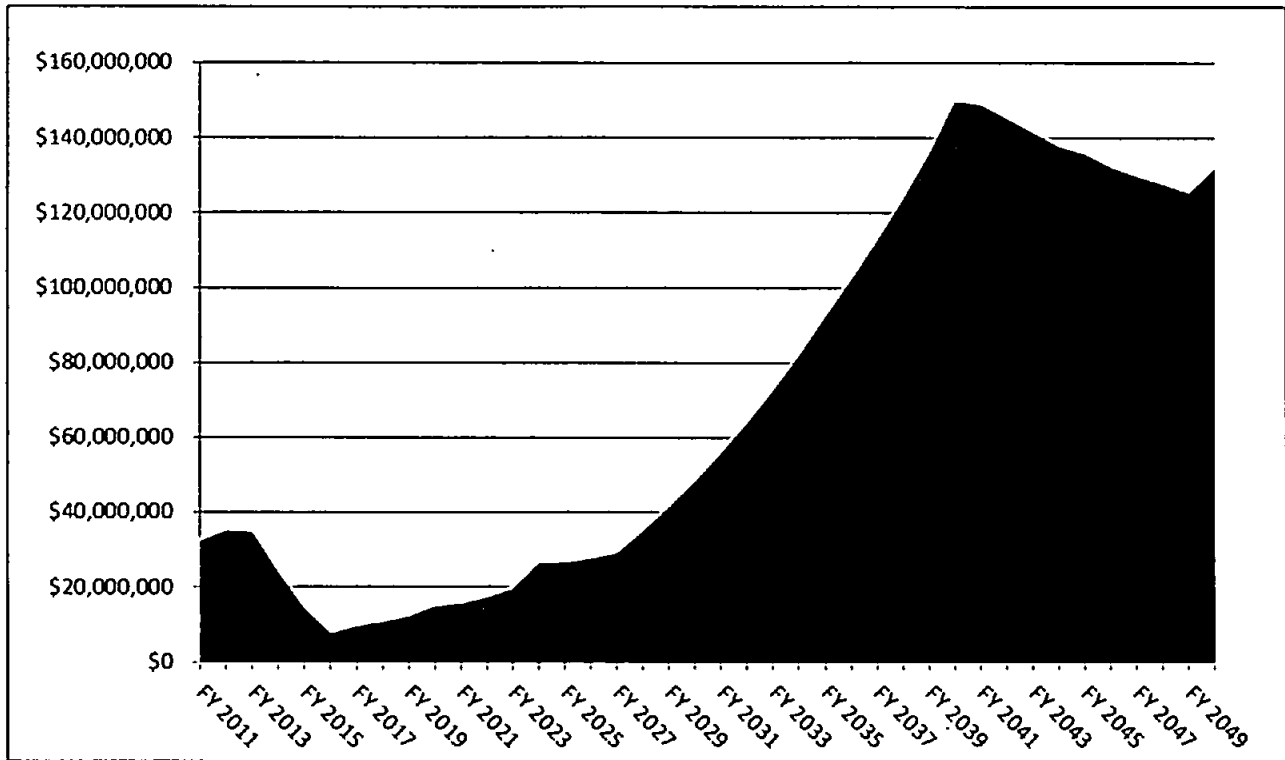


Figure 7 below shows the Strong Growth Scenario at 120% of the baseline case growth with a Connection Fee of \$7,444 starting FY 2016, and the \$110 million debt funding. Higher growth would generate more revenue but it may also require additional capital expenditures.

Figure 7 – Strong Growth Scenario – 120%
Fund Balance with Debt Issuances and Connection Fee of \$7,444 starting FY 2016



As seen in Figure 6 and Figure 7, the actual realized growth impacts the level of connection fees necessary to fund the water utility's growth related cost. The City should continue to monitor and update expected growth and adjust the connection fee if needed.

Summary

The City's Water Utility revised capital plan includes approximately \$122 million of growth related projects between 2014 and 2025. PFM has updated the cash flow model to reflect the new capital requirements and projected revenues under both a Baseline Case Model and a Density Based Model for estimating total EDUs. In addition to a cash flow model, Raftelis Financial Consultants completed an analysis that generated a connection fee that could be considered by the City that would be compliant with AB 1600 requirements (the Nexus Study).

Baseline Case Model

The Nexus Study conducted by Raftelis Financial Consultants, Inc. calculated a connection fee of \$7,676 under the Baseline Case EDU projections to reflect the cost of growth related capital projects and the number of EDUs benefiting. The Cash Flow Model projected revenues based, on the Nexus Study fee level, results in sufficient revenues to pay for the capital program, but also results in a significantly high fund balance of approximately \$72.4 million by 2050. The connection fee required based on the Baseline Case cash flow model however can be reduced to \$7,227 per EDU, which would maintain a minimum fund balance of \$5 million in every year, and reduce the 2050 fund balance to \$45.5 million.

Density Based Model

The City is contemplating changing the existing EDU customer categories to new EDU density categories. Both the Raftelis Nexus Study and the cash flow analysis analyzed connection fee needs under this new density based model. Under the new density categories the connection fee calculated in the Nexus Study is \$8,779 per EDU. In the Cash Flow Model, using the new density EDU categories, a fee of \$8,559 per EDU would generate the same total revenue over the projection horizon. At this fee level, given the new density EDU structures, the minimum fund balance and ending fund balance (by 2050) would be \$4.3 million and \$44.7 million, respectively. The results are summarized below.

Baseline Case Model - Existing EDU Structure with \$97 million of capital debt funded:

- At Nexus Study fee of \$7,767 per EDU, sufficient revenues, minimum fund balance of \$6.0 million and accumulated fund balance of \$72.4 million by 2050
- Cash Flow Model sufficient fee at \$7,227 per EDU, sufficient revenues, minimum fund balance of \$5.0 million and accumulated fund balance of \$45.5 million by 2050

Density Based Model - New EDU Structure with \$97 million of capital debt funded:

- At Nexus Study fee of \$8,779 per EDU, sufficient revenues, minimum fund balance of \$5.9 million and accumulated fund balance of \$70.3 million by 2050
- Cash Flow Model sufficient fee at \$8,559 per EDU, sufficient revenues, minimum fund balance of \$4.6 million and accumulated fund balance of \$45.8 million by 2050



Appendix

Projected EDU Growth – Baseline Case Model 2014-2050

New EDU Connections	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Single Family EDUs	486	523	560	598	635	672	710
Multi Family EDUs	164	177	190	202	215	228	240
Non-Residential EDUs	146	146	146	146	146	146	146
Total - Roseville Service Area New EDUs	796	846	896	946	996	1,046	1,096

New EDU Connections	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family EDUs	747	785	785	785	785	785	785
Multi Family EDUs	253	266	266	266	266	266	266
Non-Residential EDUs	146	146	146	146	146	146	146
Total - Roseville Service Area New EDUs	1,146	1,197	1,197	1,197	1,197	1,197	1,197

New EDU Connections	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034
Single Family EDUs	785	785	785	785	785	785	785
Multi Family EDUs	266	266	266	266	266	266	266
Non-Residential EDUs	146	146	146	146	146	146	146
Total - Roseville Service Area New EDUs	1,197	1,197	1,197	1,197	1,197	1,197	1,197

New EDU Connections	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041
Single Family EDUs	785	785	785	785	785	785	134
Multi Family EDUs	266	266	266	266	266	266	46
Non-Residential EDUs	165	100	100	100	100	170	93
Total - Roseville Service Area New EDUs	1,216	1,151	1,151	1,151	1,151	1,221	273

New EDU Connections	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
Single Family EDUs	0	0	0	0	0	0	0
Multi Family EDUs	0	0	0	0	0	0	0
Non-Residential EDUs	93	93	93	175	92	92	92
Total - Roseville Service Area New EDUs	93	93	93	175	92	92	92

New EDU Connections	FY 2049	FY 2050
Single Family EDUs	0	0
Multi Family EDUs	0	0
Non-Residential EDUs	92	92
Total - Roseville Service Area New EDUs	92	92



Projected EDU Growth - Density Based Model 2014-2050

New Units Connections	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Single Family Units - LDR (1.0 EDU)	286	308	330	352	374	396	418
Single Family Units - MDR (0.6 EDU)	200	215	231	246	261	277	292
Multi Family Units - HDR (0.4 EDU)	164	177	190	202	215	228	240
Non-Residential Units (1 Unit = 3,000 SqFt = 1 EDU)	146	146	146	146	146	146	146
Total - Roseville Service Area New Units	796	846	896	946	996	1,046	1,096

New EDU Connections	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Single Family Units - LDR (1.0 EDU)	440	462	462	462	462	462	462
Single Family EDUs - MDR (0.6 EDU)	307	323	323	323	323	323	323
Multi Family EDUs - HDR (0.4 EDU)	253	266	266	266	266	266	266
Non-Residential Units (1 Unit = 3,000 SqFt = 1 EDU)	146	146	146	146	146	146	146
Total - Roseville Service Area New Units	1,146	1,197	1,197	1,197	1,197	1,197	1,197

New EDU Connections	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034
Single Family Units - LDR (1.0 EDU)	462	462	462	462	462	462	462
Single Family EDUs - MDR (0.6 EDU)	323	323	323	323	323	323	323
Multi Family EDUs - HDR (0.4 EDU)	266	266	266	266	266	266	266
Non-Residential Units (1 Unit = 3,000 SqFt = 1 EDU)	146	146	146	146	146	146	146
Total - Roseville Service Area New EDUs	1,197	1,197	1,197	1,197	1,197	1,197	1,197

New EDU Connections	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041
Single Family Units - LDR (1.0 EDU)	462	462	462	462	462	462	79
Single Family EDUs - MDR (0.6 EDU)	323	323	323	323	323	323	55
Multi Family EDUs - HDR (0.4 EDU)	266	266	266	266	266	266	46
Non-Residential Units (1 Unit = 3,000 SqFt = 1 EDU)	165	100	100	100	100	170	93
Total - Roseville Service Area New EDUs	1,216	1,151	1,151	1,151	1,151	1,221	273

New EDU Connections	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048
Single Family Units - LDR (1.0 EDU)	0	0	0	0	0	0	0
Single Family EDUs - MDR (0.6 EDU)	0	0	0	0	0	0	0
Multi Family EDUs - HDR (0.4 EDU)	0	0	0	0	0	0	0
Non-Residential Units (1 Unit = 3,000 SqFt = 1 EDU)	93	93	93	175	92	92	92
Total - Roseville Service Area New EDUs	93	93	93	175	92	92	92

New EDU Connections	FY 2049	FY 2050
Single Family Units - LDR (1.0 EDU)	0	0
Single Family EDUs - MDR (0.6 EDU)	0	0
Multi Family EDUs - HDR (0.4 EDU)	0	0
Non-Residential Units (1 Unit = 3,000 SqFt = 1 EDU)	92	92
Total - Roseville Service Area New EDUs	92	92

The table below summarizes the cost and timing of the expenditures in 2014 dollars and inflation adjusted.

Capital Expenditures

Capital Expenditure	2014 (1)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Cost Estimates (2014 dollars)	\$8.7 Million	\$12.1 Million	\$10.8 Million	\$10.5 Million	\$8.1 Million	\$1.5 Million
Escalated Dollars	\$8.7 Million	\$12.4 Million	\$11.3 Million	\$11.2 Million	\$8.9 Million	\$1.8 Million

Capital Expenditure	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Cost Estimates (2014 dollars)	\$1.2 Million	\$8.7 Million	\$9.6 Million	\$5.4 Million	\$38.7 Million	\$6.9 Million
Escalated Dollars	\$1.6 Million	\$10.4 Million	\$11.8 Million	\$6.9 Million	\$50.2 Million	\$9.3 Million

(1) Based on 2014 Mid-Year Budget



City of Roseville, California
WATER CONNECTION FEE
NEXUS STUDY

October, 2014 – FINAL REPORT

Prepared By:



RAFTELIS
FINANCIAL CONSULTANTS, INC.

Executive Summary

Raftelis Financial Consultants, Inc. ("RFC") was retained by the City of Roseville ("City") to complete a connection fee nexus study for its water enterprise. The purpose of this report was to determine water connection fee in accordance with AB1600, Government Code Sections 66000-66025 (also commonly referred to as the "Mitigation Fee Act"). The report provides the technical documentation to support modification to the water connection fees within the City.

Currently, the City's connection fee is \$7,227 per Single-Family Residence or one Equivalent Dwelling Unit (EDU). Based on the existing approach, an EDU is equal to the demands placed on the water system associated with a single-family residence with a 3/4" inch meter/connection. For a multi-family residential unit, the City's water connection fee is 0.45 EDUs or \$3,252 (rounded).

For residential customers, The City recently conducted an analysis on the appropriateness of tiered water connection fees based upon residential planned density as opposed to meter capacity. The results of the analysis are contained in the City Residential Density Based Water Connection Fee Report. Doing so provides a means to more equitably charge residential customers based on the typical demand that is experienced and placed on the system versus the maximum demand that may occur from the flow potential by meter size. This approach reflects the reality of the relationship between parcel density and water demand. The analysis used the City's three separate residential density categories used for planning purposes. These density designations are: Low Density Residential (LDR): 0 – 6.99 units per acre, Medium Density Residential (MDR): 7.0 – 12.99 units per acre, and High Density Residential (HDR): over 13 units per acre.

The analysis contained in this report is based on the newly created density designations and supports a Water Connection Fee of \$8,779 per EDU to fully recover new development's share of capital water facilities costs through "buildout" (expected full development of the City). Based on the new tiered residential structure, an EDU is equal to the demands placed on the water system associated with a LDR unit with a 3/4" inch meter/connection. In addition, due to the broad ranges of commercial uses and potential water demand placed on the system, the connection fees for non-residential shall continue to be based on meter capacity ratios derived from gallons per minute (GPM) of flow. Table 1 displays the proposed connection fees.

TABLE 1: PROPOSED WATER CONNECTION FEES

Residential	
Low Density Residential (LDR)	\$8,779
Medium Density Residential (MDR) (per Unit)	\$5,267
High Density Residential (HDR) (per Unit)	\$3,512
Non-Residential *	
3/4" (1EDU)	\$8,779
1" (1.7 EDUs)	\$14,632
1.5" (3.3 EDUs)	\$29,264
2" (5.3 EDUs)	\$46,822
3" (11.7 EDUs)	\$102,423
4" (21.0 EDUs)	\$184,362
6" (43.33 EDUs)	\$380,429

Overview

The City is located in the metropolitan area of Sacramento and is the largest city in Placer County with a population of approximately 125,000. The City's water service area encompasses most of its residents with the exception of a few areas around the border that are served by neighboring water agencies. In general, the City's boundaries extend to the east to the cities of Rocklin and Granite Bay and to the south area to the Sacramento County line and the Dry Creek West Placer Community Plan Area. The north and west City boundaries are bordered by mostly undeveloped and unincorporated Placer County land that has the potential for future development.

The City's primary water supply is surface water from Folsom Lake, which is treated at a City owned and operated water treatment plant in the Granite Bay Community of Placer County. The City also maintains six ground water wells which are used as backup emergency supply to the surface water source.

Connection fees are one-time fees, collected as a condition of establishing a connection to the City's water system, to pay for a new development's share of the costs of new and existing water facilities that are of proportional benefit to demand placed on the system by the new connection. The recommended connection fees for the City do not exceed the estimated reasonable costs of providing the facilities for which they are collected and are of proportionate benefit to the property being charged. This report documents the data, methodology, and results of the connection fee study.

Objective and Regulatory Requirements

The primary objective of establishing a full cost-recovery connection fee is to provide an equitable means by which new system users can pay for the costs of the potable water facilities required to serve them.

Connection fees on new development must be established based on a reasonable relationship to the needs and benefits brought about by the development. Courts have long used a standard of reasonableness to evaluate the legality of connection fees. The basic statutory standards governing water and wastewater connection fees are embodied by California Government Code Sections 66013, 66016, 66022 and 66023. Government Code Section 66013, in particular, contains requirements specific to determining water and wastewater connection fees:

"Notwithstanding any other provision of law, when a local agency imposes fees for water connections or sewer connections, or imposes capacity charges, those fees or charges shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed, unless a question regarding the amount the fee or charge in excess of the estimated reasonable cost of providing the services or materials is submitted to, and approved by, a popular vote of two-thirds of those electors voting on the issue."

Section 66013 also includes the following general requirements:

- ❖ Local agencies must follow a process set forth in the law, making certain determinations regarding the purpose and use of the fee; they must establish a nexus or relationship between a development project and the public improvement being financed with the fee.
- ❖ The connection fee revenue must be segregated from the general fund in order to avoid commingling of connection fees and the general fund.

Calculation Methodologies

The process of calculating connection fees has two primary steps: determining the cost of capital improvements related to new service connections, and allocating those costs equitably to various types of connections.

A combination of two widely-used methods was employed to calculate the components of the City's connection fees. The methodologies are used to determine the best measure of the unit cost of water capacity needed to serve the demand created by new connections to the City's water system.

- ❖ The **incremental costs methodology** uses the City's long-term capital improvement plan (CIP) to determine new development's share of planned projects. Projects that do not add capacity, such as routine maintenance or replacement of existing facilities, are not included in the fees. Projects that add capacity or additional water supplies are further evaluated as to the proportionate share attributable to existing development versus new development. Only the portion of projects attributable to new development should be included in the connection fees.
- ❖ In instances where infrastructure has been built in advance of new development and there is excess capacity available to be utilized by new development, the **buy-in methodology** is used. Under this methodology, new development funds its share of project costs that were previously funded by existing customers or financed through the issuance of debt. In the case of City, debt is issued - periodically - for growth-related projects as part of the City's financial policies.

Based on the project data received by the City, a hybrid approach was employed, in which, the incremental cost method and buy-in method are both used. The incremental cost is determined for existing and future capital projects and the buy-in component is utilized for existing debt.

Development & Demand Data

The City's most recent capital plan and expected growth projections were updated and provided by City staff and provides the best estimates of planned project costs and total potential demand. Both existing and planned connections were used in this analysis to support the updated connection fees. The information in this section forms a basis for establishing levels of service, analyzing facility needs, and appropriately allocating capital facilities costs between existing and future development.

The City's current connection fees were based on the City's 2007 capital plan and; therefore, this update includes: 1) the projects within the 2007 capital plan, 2) new projects to accommodate growth and, 3) existing and future debt. As such, future development's share of cost has been determined based on

three separate allocation methods identified as: "Remaining Growth," "Growth from 2008," and "Existing plus Growth." Below is a summary of these terms and how the percentage of cost allocated to new connections was determined for each allocation method. In all cases, "Water EDUs" are used as the basis for determining the allocations. For more information on how "Water EDUs" were developed, see the City Residential Density Based Water Connection Fee Report.

- **Remaining Growth** – Projects costs are allocated **100%** to new connections as these specific projects would not be constructed without the need to meet future demand.
- **Growth from 2008** – Because the current capital plan was updated based on the City's 2007 capital plan, a majority of the projects listed were included as part of the 2007 connection fees. Therefore, to ensure that costs for these projects are shared by the appropriate number of connections and are not 100% funded by remaining connection, only **82.60%** of the associated costs were allocated to new connections. Doing so accounts for the connections that have come online since Calendar Year 2007 that also benefit from these projects.

$$\text{Remaining Growth} / (\text{Growth (2008-2013)} + \text{Remaining Growth}) = 24,218 / 29,321 = 82.60\%$$

- **Existing plus Growth** – Certain projects within the City's capital plan will not only benefit new connections, but will also provide a benefit to existing customers. In these cases, the project cost was spread over all existing and potential connections. This resulted in a cost allocation percentage equal to **30.98%** to new connections.

$$\text{Remaining Growth} / (\text{Project Build-Out}) = 24,218 / 78,180 = 30.98\%$$

Table 2 lists existing and proposed accounts/units and equivalent dwelling units (EDUs) by land use classifications and the percentage calculation for "Growth from 2008" and "Existing plus Growth." It also shows how EDUs are converted to "Water EDUs" based upon an EDU Adjustment Factor developed through the residential tiered rate study.

Table 2: Equivalent Dwelling Units through Build-Out

Accounts/Units	Existing (2007)	Growth (2008-2013)	Remaining Growth (2014-2050)	Projected Build-out	% of Buildout	
Single Family Residential (LDR)	33,119	2,798	11,764	47,681	51.0%	
Single Family Residential (MDR)	1,678	1,213	8,223	11,114	11.9%	
Multi-Family Residential (HDR)	10,612	781	6,762	18,155	19.4%	
Non-Residential (3,000 SqFt = 1 LDR)	10,489	1,264	4,816	16,569	17.7%	
Total Accounts	55,898	6,056	31,565	93,519	100%	
EDU Adjustment Factor						
Water EDUs						
Single Family Residential (LDR)	1.00	33,119	2,798	11,764	47,681	61.0%
Single Family Residential (MDR)	0.60	1,007	728	4,934	6,669	8.5%
Multi-Family Residential (HDR)	0.40	4,245	312	2,705	7,262	9.3%
Non-Residential (3,000 SqFt = 1 LDR)	1.00	10,489	1,264	4,816	16,569	21.2%
Total EDUs		48,860	5,102	24,218	78,180	100%
Percentage of Total EDUs		62.50%	6.53%	30.98%	100.00%	

Notes:

[a] Allocation percentage for "Growth from 2008" = Remaining Growth / (Growth (2008-2013) + Remaining Growth) = 24,218 / 29,321 = 82.60%

[b] Allocation percentage for "Existing plus Growth" = Remaining Growth / (Project Build-Out) = 24,218 / 78,180 = 30.98%

Capital Improvement Plan

Connection fees can only recover costs directly attributable to new connections. Accordingly, with the assistance of City staff, Raftelis reviewed the City's current capital improvement plan (CIP) and determined which projects would directly serve new development, and allocated the proportionate share of costs to new development. Project costs not attributable to growth are allocated to existing users and are funded through water rates.

Each capital project undertaken by the City is necessary for one of three reasons: 1) to fix an existing system deficiency that has resulted from system age or environmental requirements; 2) to provide additional capacity for future users; or 3) to serve both existing and future users. Project costs related to reasons 1 and 2 are directly allocated to existing or future users, respectively. For item 1, projects that are to fix an existing deficiency are categorized as a Repair and Replacement Project (R&R Capital) and are funded through monthly water rates. Capital projects that fall under reason 2 and 3 are allocated to new development in proportion to the demand associated with new demand, relative to total demand at buildout as identified in Table 2. The CIP information presented herein represents the capital projects that the City finds necessary to meet the demands of projected future growth. Projects rectifying existing deficiencies have been excluded. All costs are shown as present value and are listed by asset system components of Water Distribution, Water Production, Water Resources, and Water Storage.

Water Distribution

Table 3 presents the total cost, and the proportionate cost allocation to new development of each water distribution project.

Table 3: Water Distribution Projects and Cost Allocation to New Development

Water Distribution CIP Allocated to New Growth					
Project Name	Project Cost	Allocation Method	Percent Allocated to Growth	Amount Allocated To Growth	
North Central Water Lines	\$ 2,748,272	Growth from 2008	82.60%	\$ 2,270,041	
Industrial Parallel Waterline	1,000,000	Remaining Growth	100.00%	1,000,000	
Cirby Pipeline @ Rocky Ridge	500,000	Growth from 2008	82.60%	412,994	
Upsizing Northridge Water Line	5,102,677	Existing + Growth	30.98%	1,580,694	
Riverside Pipe Replacement Project	289,885	Remaining Growth	100.00%	289,885	
Douglas Pipe Replacement Project - Upsizing (Downtown Spec	226,455	Remaining Growth	100.00%	226,455	
RMOU - 5 mg Tank and Pumpstation (Sierra Vista)	15,100,000	Remaining Growth	100.00%	15,100,000	
Zone 4 to Zone 1 Pump Station - Pleasant Grove	928,750	Remaining Growth	100.00%	928,750	
Zone 4 to Zone 1 Pump Station - Baseline	1,500,000	Remaining Growth	100.00%	1,500,000	
Cook Riolo to Baseline Waterline	7,000,000	Remaining Growth	100.00%	7,000,000	
Pump Station at PFE/City-County boundary	928,750	Remaining Growth	100.00%	928,750	
Equipment and Vehicles	367,500	Remaining Growth	100.00%	367,500	
Berry Street	290,000	Existing + Growth	30.98%	89,835	
Hydrologic Model	250,000	Remaining Growth	100.00%	250,000	
Historic District	180,000	Remaining Growth	100.00%	180,000	
Enterprise Asset Management	2,178,778	Existing + Growth	30.98%	674,936	
Total -Distribution	\$ 38,591,067			\$ 32,799,840	

Water Production

Table 4 presents the total cost and the cost allocation to new development for the water production projects.

Table 4: Water Production Projects and Cost Allocation to New Development

Water Production CIP Allocated to New Growth					
Project Name	Project Cost	Allocation Method	Percent Allocated to Growth	Amount Allocated To Growth	
Wtr Trtmnt Exp 03 (60 to 100 mgd)	\$ 34,714,621	Growth from 2008	82.60%	\$ 28,673,875	
Water System Security	1,031,146	Existing + Growth	30.98%	319,426	
Regional Water Supply Reliability Wells, WRSP (Qty: 2)	500,000	Existing + Growth	30.98%	154,889	
Well, Woodcreek West	4,060,000	Growth from 2008	82.60%	3,353,513	
Well, HP	2,800,000	Remaining Growth	100.00%	2,800,000	
Well, Blue Oaks/Del Webb	2,800,000	Remaining Growth	100.00%	2,800,000	
Well Building, WRSP Hayden Parkway	2,860,000	Remaining Growth	100.00%	2,860,000	
Well, Fiddymnt	2,860,000	Growth from 2008	82.60%	2,362,327	
Well, Woodcreek North	2,030,000	Growth from 2008	82.60%	1,676,757	
Pre-Drill Design Boreholes	3,250,000	Remaining Growth	100.00%	3,250,000	
Pressure Zone 4 Pump Station	500,000	Remaining Growth	100.00%	500,000	
Wells, Sierra Vista (Qty: 2)	787,000	Remaining Growth	100.00%	787,000	
Well, West Brook	4,060,000	Remaining Growth	100.00%	4,060,000	
Water Supply Reliability	2,030,000	Remaining Growth	100.00%	2,030,000	
WTP Floc/Sed	90,000,000	Existing + Growth	30.98%	27,879,958	
Well, Creekview	3,000,000	Remaining Growth	100.00%	3,000,000	
Aquifer Storage and Recovery (ASR)	2,030,000	Remaining Growth	100.00%	2,030,000	
Folsom Dam Imp	3,581,001	Existing + Growth	30.98%	1,109,313	
San Juan Improvements	4,297,384	Existing + Growth	30.98%	1,331,232	
San Juan Improvements	1,404,405	Growth from 2008	82.60%	1,160,022	
Total -Production	\$ 168,595,557			\$ 92,138,311	

Water Resources

Table 5 presents the total cost, and the proportionate cost allocation to new development for Water Resource projects.

Table 5: Water Resource Projects and Cost Allocation to New Development

Water Resources CIP Allocated to New Growth					
Project Name	Project Cost	Allocation Method	Percent Allocated to Growth	Amount Allocated To Growth	
Utility Exploration Center	\$ 821,667	Existing + Growth	30.98%	\$ 254,534	
Process Control Standards	150,000	Existing + Growth	30.98%	46,467	
Water Conn Fee Model (PFM)	220,000	Existing + Growth	30.98%	68,151	
Reconnaissance Wtr Supply Std	3,000	Growth from 2008	82.60%	2,478	
Sac River Wtr Reliability	236,650	Existing + Growth	30.98%	73,309	
Groundwater Management Plan	464,023	Existing + Growth	30.98%	143,744	
Rsvl/PCWA Water Model Development	260,299	Existing + Growth	30.98%	80,635	
Metering Facility at Cook Riolo and PFE	1,000,000	Remaining Growth	100.00%	1,000,000	
Demand Factor Study	394,346	Growth from 2008	82.60%	325,725	
Total -Resources	\$ 3,549,985			\$ 1,995,042	

Water Storage

Table 6 presents the total cost and the cost allocation to new development for water storage projects.

Table 6: Water Storage Projects and Cost Allocation to New Development

Water Storage CIP Allocated to New Growth					
Project Name	Project Cost	Allocation Method	Percent Allocated to Growth	Amount Allocated To Growth	
NE Reservoir Replacement (1.25 mgd)	\$ 1,249,282	Growth from 2008	82.60%	\$ 1,031,892	
West Side Tank and Pumpstation	24,850,000	Growth from 2008	82.60%	20,525,812	
West Side Tank and Pumpstation (Phase II)	8,000,000	Remaining Growth	100.00%	8,000,000	
Stoneridge Tank 3 mg	5,982,510	Existing + Growth	30.98%	1,853,246	
NE tank 6 mg	6,750,000	Remaining Growth	100.00%	6,750,000	
Total - Storage	\$ 46,831,792			\$ 38,160,951	

Capital Financing Through Debt

As part of the City's financial policies, the City utilizes bond financing to fund growth-related capital and the corresponding annual debt service payments are funded 100% by connection fees. Therefore, as part of updating the connection fee, existing debt and proposed future debt are included as part of the fee calculation. For existing debt, there are three distinct elements: 1) Cost of Issuance (COI), 2) Interest Paid through 2013, and 3) Remaining Interest. The cost of issuing the 2007 bond series and interest paid to date is a cost shared by all new connections since 2008; therefore, these incurred costs were spread over all EDUs from 2008 through buildout (Growth from 2008). In addition, since debt is fully funded by connection fees, the net present value (NPV) of remaining interest is also included (3% discount factor was used for the NPV calculation). It is important to note that principal is not included as part of the connection fee because the cost of the facilities are included within the capital improvement plan and have been appropriately allocated to new development. Including principal would cause duplication in these costs. Table 7 provides a summary of the three buy-in components associated with existing debt.

Table 7: Existing Debt Allocation

Existing Debt Summary		
Principal		N/A
COI		\$636,396
<u>Interest Paid (through 2013)</u>		<u>\$13,564,166</u>
Total		\$14,200,563
 <u>Total EDUs (2008-2050)</u>		 <u>29,321</u>
COI + Share of Interest (through 2013)		\$ 484.32
Remaining Interest of Existing Debt	Discount Factor	<u>\$18,528,506</u>
NPV of Existing Debt Interest	3%	\$15,694,041
 <u>Total EDUs (2014-2050)</u>		 <u>24,218</u>
Rate per EDU		\$ 648.02
 Rate per EDU for Existing Debt		 \$ 1,132.34

Proposed future debt is also included as part of the connection fee as the City plans to utilize debt to fund a portion of the capital plan. Using a similar logic as with existing debt, only the proposed Cost of Issuance and future interest payments are to be collected through the connection fee as principal is captured through the inclusion of the City's capital improvement plan. For future debt, the net present values are calculated for both interest and the cost of issuance since connection fees paid today are paid in advance of the bond issue. Table 8 provides a summary of the two components associated with future debt.

Table 8: Future Debt Allocation

Future Debt - COI	Discount Factor	<u>\$2,204,592</u>
NPV of Future Debt - COI	3%	\$1,676,729
Future Debt Interest		<u>\$93,455,439</u>
NPV of Future Debt Interest		\$53,096,099
 Total		 \$54,772,828
 <u>Total EDUs (2014-2050)</u>		 <u>24,218</u>
 Rate per EDU (EDUs: 2014-2050)		 \$2,262

Existing Funds

Another consideration when updating connection fees is to identify existing funds on hand; including available connection fee revenue from recent collection and any remaining bond proceeds. In compliance with Section 66013 of the Government Code, the City has a separate account for connection fee deposits. This revenue will be used to fund future capital as projects are scheduled and, therefore, will reduce the total amount of outstanding capital costs as well as future connection fees. The City currently has \$34,675,644 of funds available and these monies are reflected as a credit within the updated connection fee calculation identified in Table 9.

Water Connection Fee Schedule

Table 9 displays the proposed connection fees for a single-family low-density residential dwelling unit (LDR), single family medium-density residential dwelling unit (MDR), and multi-family, high-density, residential dwelling unit (HDR). For each component, the unit cost is per EDU (1 single-family residential LDR unit with a 3/4" meter). CIP component costs are summarized in Tables 3 through 6 and existing and future debt are identified in Tables 7 through 8.

Due to the broad ranges of commercial uses and potential water demand placed on the system, the connection fees for non-residential shall be based on meter capacity ratios derived from gallons per minute (GPM) of flow.

Table 9: Water Connection Fee Schedule

Water Capacity Fees

	Resources	Production	Storage	Distribution	Existing Debt	Future Debt	Fund Balance Credit
Total Cost	\$ 1,995,042	\$ 92,138,311	\$ 38,160,951	\$ 32,799,840	\$ 27,423,541	\$ 54,772,828	\$ 34,675,644
Cost per EDU	\$ 82.38	\$ 3,804.47	\$ 1,575.70	\$ 1,354.33	\$ 1,132.34	\$ 2,261.62	\$ (1,431.79)

Land Use	EDUs	Resources	Production	Storage	Distribution	Existing Debt	Future Debt	Fund Balance Credit	Total
Single Family Residential	1.00	\$ 82.38	\$ 3,804.47	\$ 1,575.70	\$ 1,354.33	\$ 1,132.34	\$ 2,261.62	\$ (1,431.79)	\$ 8,779
Single Family Residential (MDR)	0.60	49.43	2,282.68	945.42	812.60	679.40	1,356.97	(859.07)	5,267
Multi-Family Residential *	0.40	32.95	1,521.79	630.28	541.73	452.94	904.65	(572.71)	3,512
Non-Residential (3/4" Meter) **	1.00	82.38	3,804.47	1,575.70	1,354.33	1,132.34	2,261.62	(1,431.79)	8,779

* The MFR Capacity Fee is charged on a per unit basis.

** Non-Residential capacity fees shall be based on size of meter.

Non-Residential

Water Meter Size	GPM	Capacity Ratio	Total
3/4"	30	1.0	\$ 8,779
1"	50	1.7	\$ 14,632
1 1/2"	100	3.3	\$ 29,263
2"	160	5.3	\$ 46,822
3"	350	11.7	\$ 102,422
4"	630	21.0	\$ 184,360
6"	1300	43.33	\$ 380,425

Connection Fee Program Administration

In conjunction with adopting an updated water connection fee schedule, RFC recommends that the City maintain its exiting practice of applying the Engineering News Record Construction Cost Index for adjusting the fees in subsequent years to keep pace with inflation. The City should also conduct a comprehensive review on its water connection fees every three to five years to ensure appropriate funding of capital projects and equity among customers.

ORDINANCE NO. ____

ORDINANCE OF THE COUNCIL OF THE CITY OF ROSEVILLE AMENDING
SECTIONS 14.08.025, 14.08.026 AND 14.08.029 OF CHAPTER 14.08 OF TITLE 14 OF
THE ROSEVILLE MUNICIPAL CODE REGARDING CONNECTION FEES

THE CITY OF ROSEVILLE ORDAINS:

SECTION 1. Section 14.08.025 of Chapter 14.08 of Title 14 of the Roseville
Municipal Code is hereby amended:

14.08.025 Water connection fees.

A. In order that appropriate provision be made for sharing the costs of the
maintenance and expansion of the raw water supply, water treatment, storage, and distribution
facilities of the city by those who receive the benefits thereof, there are established connection
fees to such facilities, which fees shall be imposed in addition to the service connection costs
charged pursuant to Section 14.08.020. Such additional water connection fees include a
“standard connection fee” and an “irrigation connection fee.” The fees shall be set so that they
are equal to, but not greater than, the cost of service.

B. The water connection fees shall be based upon the applicable “dwelling unit
equivalent” (“DUE”). The fee for one DUE shall be ~~\$4,675.00~~ \$8,559.00 on July 1, 2015.

C. The connection fee amount set forth above shall be adjusted annually on July 1st
of each year by three percent or by a percentage equal to the inflation rate for the prior year for
construction costs as determined by the environmental utilities director in the preceding June,

whichever is greater. The director's determination of the percentage equal to the inflation rate for the prior year for construction costs shall be based upon the Engineering News Record, Construction Cost Index for the prior 12 months ending in May. The environmental utilities director shall report the amount of the adjustment in percentage terms and the dollar amount due per DUE to the city council annually at the first regular meeting of the council following the adjustment of the fee. ~~Notwithstanding the foregoing, the fee for one DUE shall increase by \$750.00 on July 1, 2008 and \$750.00 on July 1, 2009.~~

D. Except as otherwise provided, all water connection fees established by this chapter shall be payable upon issuance of a building permit. Connection fees will be determined using the amount in effect on the date of building permit issuance.

SECTION 2. Section 14.08.026 of Chapter 14.08 of Title 14 of the Roseville Municipal Code is hereby amended:

14.08.026 Standard connection fee.

A. The standard connection fee for various types of service and applicable DUEs are based upon water service sizes required by the Uniform Plumbing Code and DUEs as shown in Section 14.08.029 for non-residential connections and upon large lot use density categories for residential connections as defined herein. ~~Should a smaller water service be installed than that required by the Uniform Plumbing Code, then the fee shall be not less than one DUE.~~ The standard connection fee shall be calculated as follows:

1. ~~For all single family and two family dwellings, as defined in Roseville Municipal Code Section 19.08.080(E)(2) and (E)(3), respectively,~~ the connection fee shall be based upon the large lot land use density as defined within the Land Use Element of the City's General Plan,

the water service size as required by the Uniform Plumbing Code, and the equivalent DUE's as shown in Section 14.08.029. The minimum connection fee service size shall be based on a three-quarter-inch service size and the equivalent dwelling unit shall be one DUE if zoned low density residential; 60 percent of the cost of one DUE for each dwelling unit if zoned medium density residential; and, 40 percent of the costs of one DUE for each dwelling unit if zoned high density residential. Fees shall not be based on the size of the master meter to a multifamily dwelling. Multifamily dwellings shall also pay an irrigation connection fee as defined in Roseville Municipal Code section 19.08.027.

~~2. For multifamily dwellings, which include apartments, townhomes, rowhouses, triplexes, fourplexes and condominiums, as defined by Roseville Municipal Code Section 19.08.080(E)(1), the connection fee shall be 45 percent of the cost of one DUE for each dwelling unit. Fees shall not be based on the size of the master meter to the multifamily dwelling.~~

B. For ~~single family residential services~~ all dwellings, as defined in Roseville Municipal Code section 19.08.080(E), that require automatic fire protection systems pursuant to Roseville Municipal Code Section 16.16.120, the increased ~~connection~~ service size will not be assessed an additional fee associated with the fire protection system requirement. Connection fees shall be based on a three-quarter inch service size and the equivalent dwelling units the required by Roseville Municipal Code section 14.08.026(A) service size as determined by the Uniform Plumbing Code without consideration for any fire protection system required by Roseville Municipal Code Section 16.16.120.

~~C. If, after construction of a "spec" or "shell" building, a tenant improvement building permit is requested, the standard connection fee for the entire building will be~~

~~redetermined. If as a result of the tenant improvements a greater number of DUES are applicable for the building then originally charged and paid for, then the applicant for the tenant improvement building permit must pay for the number of DUES not previously paid. If the redetermination of fees results in less DUES required, no refund will be given. If a building complex is divided into separate units, the standard connection fee shall likewise be redetermined and repaid based upon DUES for all of the separate units.~~

D.C No additional water connection fee shall be charged for facilities located within a multifamily dwelling complex that are appurtenant to the general function of the multifamily dwelling complex. Such facilities include, but shall not be limited to, community centers, recreational centers, rental offices, maintenance offices and fire systems.

~~E. No additional irrigation connection fee shall be charged for multifamily dwellings, as defined in Roseville Municipal Code Section 19.08.080(E)(1), when the standard connection fee is based on the number of living units.~~

SECTION 3. Section 14.08.029 of Chapter 14.08 of Title 14 of the Roseville Municipal Code is hereby amended:

14.08.029 Dwelling unit equivalents.

DUES for water connection fees are:

Service Size	DUES
5/8 in.	0.7
3/4 in.	1.0
1.0 in.	1.7
1.5 in.	3.3
2.0 in.	5.3
3.0 in.	11.7
4.0 in.	20.0

6.0 in.	41.7
8.0 in.	60.0
10.0 in.	96.7
12.0 in.	143.3

SECTION 4. This ordinance shall be effective at the expiration of thirty (30) days from the date of adoption.

SECTION 5. The City Clerk is hereby directed to cause this ordinance to be published in full at least once within fourteen (14) days after it is adopted in a newspaper of general circulation in the City, or shall within fourteen (14) days after its adoption cause this ordinance to be posted in full in at least three (3) public places in the City and enter in the Ordinance Book a certificate stating the time and place of said publication by posting.

PASSED AND ADOPTED by the Council of the City of Roseville this ___ day of _____, 20__, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

MAYOR

ATTEST:

City Clerk

The Sacramento Bee
P.O. Box 15779 • 2100 Q Street • Sacramento, CA 95852

RECEIVED
2015 MAR 23 PM 1:30
CITY CLERK DEPARTMENT
ROSEVILLE, CA

**CITY OF ROSEVILLE
2005 HILLTOP CIRCLE
ROSEVILLE CA 95747**

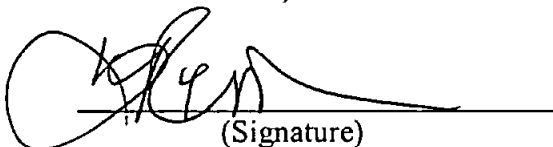
DECLARATION OF PUBLICATION
(C.C.P. 2015.5)

COUNTY OF SACRAMENTO
STATE OF CALIFORNIA

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interest ed in the above entitled matter. I am the printer and principal clerk of the publisher of The Sacramento Bee, printed and published in the City of Sacramento, County of Sacramento, State of California, daily, for which said newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Sacramento, State of California, under the date of September 26, 1994, Action No. 379071; that the notice of which the annexed is a printed copy, has been published in each issue thereof and not in any supplement thereof on the following dates, to wit:

MARCH 12, 2015

I certify (or declare) under penalty of perjury that the foregoing is true and correct and that this declaration was executed at Sacramento, California, on **MARCH 12, 2015**


(Signature)

NO 104 PUBLIC NOTICE

NOTICE OF PUBLIC HEARING

NOTICE IS HEARBY GIVEN that a public hearing will be held before the City Council of the City of Roseville for considering the following:

ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ROSEVILLE AMENDING SECTIONS 14.08.025 (WATER CONNECTION FEES) AND 14.08.026 (STANDARD CONNECTION FEE) OF CHAPTER 14.08 (WATER) OF TITLE 14 (PUBLIC UTILITIES) OF THE ROSEVILLE MUNICIPAL CODE

The public hearing will be held on the 1st day of April, 2015, at 7 p.m., or as soon thereafter as may be heard, at the City Council Chambers at 311 Vernon Street, Roseville, CA. All interested persons are invited to appear and be heard. Persons with disabilities who need arrangements to ensure meeting accessibility should notify the City Clerk's Department at least 48 hours in advance of the meeting by calling 916-774-5263 or through the TDD line at 916-774-5220 (for hearing impaired).

If you challenge the decision in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City Clerk at, or prior to the public hearing.

ROSEVILLE CITY COUNCIL
Sonia Orzco, City Clerk

PUBLIC HEARING NOTICE

16578224

PUBLIC HEARING NOTICE

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ROSEVILLE CITY COUNCIL

Sonia Orozco, City Clerk

Dated: March 16, 2015

PUBLISHED IN THE ROSEVILLE PRESS TRIBUNE: MARCH 20, 2015

The above space is reserved for Court/County Filed Date Stamp

**PROOF OF PUBLICATION
(2015.5 C.C.P.)**

**STATE OF CALIFORNIA
County of Placer**

I am a citizen of the United States and employed by a publication in the County aforesaid. I am over the age of eighteen years, and not a party to the mentioned matter. I am the principal clerk of the Roseville Press Tribune, a newspaper of general circulation, in the City of Roseville, which is printed and published in the County of Placer. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the County of Placer, on the date of November 13, 1951 (Case Number 16996). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

MARCH 20

I certify, under penalty of perjury, that the foregoing is true and correct.



Terry Clark

Dated in Roseville, California

MARCH 20, 2015

**PROOF OF PUBLICATION
ROSEVILLE PRESS TRIBUNE
188 Cirby Way
Roseville, CA 95678**