CITY OF ROSEVILLE, CA

FY 2027 Water and Local Wastewater Capacity/Connection Fee Update and Nexus Fee Study

June 16, 2026

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RAFTELIS

28185 Madison Avenue
Suite A, #9
Murrieta, CA 92562

Phone 951.698.0145

www.raftelis.com

June 16, 2026

Mr. George Hanson
Water Utility Manager
City of Roseville
2005 Hilltop Circle
Roseville, CA 95747

Subject: FY 2027 Water and Local Wastewater Capacity /Connection Fee Update and Nexus Fee Study

Dear Mr. Hanson,

Raftelis is pleased to provide this report on the 2027 Water and Local Wastewater Capacity/Connection Fee Update and Nexus Fee Study. The overarching objective of the study was to develop updated water and local wastewater capacity fees including:

- Reviewing the current methodology and assumptions used by the City to determine its water and local wastewater capacity fees.
- Evaluating the City's current water and local wastewater capacity fees in relation to compliance with applicable California law.
- Development of updated water and local wastewater capacity fees for implementation in FY 2027.
- Recommending potential modifications to the current water and local wastewater capacity fees to ensure compliance with California law and water industry best practices.

It has been a pleasure working with you, Mr. Joseph Barrow, and Ms. Archana Wagley. Thank you for the support you provided to Raftelis during this study.

Sincerely,
RAFTELIS.

John Wright
Principal Consultant

Summer Simpson
Consultant

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1. Executive Summary

1.1. Study Description

In November 2024, the City of Roseville (City) engaged Raftelis to conduct a Water and Wastewater Capacity/Connection Fee Update and Nexus Fee Study. The overarching objective of the study was to develop updated water and local wastewater capacity fees including:

- Reviewing the current methodology and assumptions used by the City to determine its water and local wastewater capacity fees.
- Evaluating the City's current water and local wastewater capacity fees in relation to compliance with applicable California law.
- Development of updated water and local wastewater capacity fees for implementation in FY 2027.
- Recommending potential modifications to the current water and local wastewater capacity fees to ensure compliance with California law and water industry best practices.

1.2. Capacity Fee Introduction

Capacity fees recover a portion of the cost of past investments in existing infrastructure that will be used to provide services to future customers. They can also be used to recover the cost of planned investments in infrastructure that will provide services to future customers or the proportional share of planned investments that will serve both future and existing customers. Cash receipts from capacity fees lower the amount of revenue that must be collected through utility rates (i.e., they offset the annual revenue requirement from rates). Depending on the utility in question, the fees used to recover the cost of growth-related infrastructure are referred to as capacity fees, connection fees, system development charges, utility impact fees or various other names. The term "capacity fee" is used throughout this report.

It is important to note that California utilities are *not* required to assess capacity fees. Many utilities choose to fund all growth-related capital expenditure through utility rates. Further, governing bodies are not required to charge the maximum legally defensible capacity fees calculated as part of a nexus study. Many governing bodies, for various policy or economic development considerations, choose to implement capacity fees lower than those calculated in a nexus study.

The principles and procedures underlying the calculation of water and wastewater capacity fees are similar. Industry standard procedures for the calculation of water capacity fees can be found in the American Water Works Association (AWWA) publication *Manual of Water Supply Practices M1, Principles of Water Rates, Fees, and Charges, 8th Edition* (AWWA Manual M1). Industry standard procedures for the calculation of wastewater capacity fees can be found in the Water Environment Federation publication (WEF) *Manual of Practice No. 27, Financing and Charges for Wastewater Systems, 4th Edition* (WEF Manual 27).

1.3. California Legal Requirements

As discussed more in Section 2 of this report, in the state of California, the basic statutory standards governing water and wastewater capacity fees are embodied in Government Code Sections 66000 et seq. Code §66013 (b)(3) describes a "Capacity Charge" in the following manner:

> *"Capacity charge" means a charge for public facilities in existence at the time a charge is imposed or charges for new public facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged, including supply or capacity contracts for rights and entitlements, real property interests, and entitlements and other rights of the local agency involving capital expense relating to its use of existing or new public facilities."*

The requirement that capacity fees be cost-based is provided in Government Code § 66013(a) which states:

> *"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."*

1.4. Capacity Fee Calculation Methods

There are three industry-standard methods for calculating water and wastewater capacity fees. Each method is allowable under California Government Code § 66013(b)(3).

1. Buy-In Method
2. Incremental Cost-Method
3. Combined Method

As discussed in Section 3 of this report, Raftelis used the incremental cost method to update the City's water and local wastewater capacity fees.

1.5. Proposed Water Capacity Fees

Table 1-1 shows the proposed updated water capacity fees for FY 2027 which were calculated using the incremental cost approach based on a 2026 – 2035 planning horizon. Although no changes are recommended to the fundamental structure of the City's water capacity fees, the calculated demand relationships between medium- and high-density residential customers have changed (see Column A, lines 2 - 4 and Column C, lines 2 - 4). These changes are discussed in greater detail in the next section of this report.

Table 1-1: Proposed Updated FY 2027 Water Capacity Fees

Land Use Type	A Current EDUs	B Current FY 2026 Fee	C Proposed EDUs	D Proposed FY 2027 Fee	E $ Difference	F % Difference
Residential						
Low Density (LDR) 0 – 6.99 Units per Acre	1.00	$12,688	1.000	$12,388	($300)	(2.36%)
Medium Density (MDR) 7.00 – 12.99 Units per Acre	0.60	$7,614	0.563	$6,970	($644)	(8.45%)
High Density (HDR) > 13.00 Units per Acre	0.40	$5,074	0.550	$6,808	$1,734	34.17%
Multi Family per Dwelling Unit	0.40	$5,074	0.550	$6,808	$1,734	34.17%
Commercial and Irrigation						
Meter Size	**Meter Flow Equivalencies (1)**	**Current FY 2026 Fee**	**Meter Flow Equivalencies**	**Proposed FY 2027 Fee**	**$ Difference**	**% Difference**
3/4"	1.0	$12,688	1.0	$12,388	($300)	(2.36%)
1.0"	1.7	$21,570	1.7	$21,060	($509)	(2.36%)
1.5"	3.3	$41,870	3.3	$40,882	($988)	(2.36%)
2.0"	5.3	$67,246	5.3	$65,659	($1,587)	(2.36%)
3.0"	11.7	$148,450	11.7	$144,945	($3,504)	(2.36%)
4.0"	20.0	$253,760	20.0	$247,769	($5,991)	(2.36%)
6.0"	41.7	$529,090	41.7	$516,599	($12,490)	(2.36%)
8.0"	60.0	$761,280	60.0	$743,308	($17,972)	(2.36%)
10.0"	96.7	$1,226,930	96.7	$1,197,965	($28,964)	(2.36%)
12.0"	143.3	$1,818,190	143.3	$1,775,268	($42,922)	(2.36%)

(1) Meter flow equivalencies specified by the City

1.6. Proposed Local Wastewater Capacity Fees

The wastewater capacity fees updated in this study were for the City's local collection and conveyance system that transports sanitary sewage flows to the City's two wastewater treatment plants. While this report refers to these fees as "Local Wastewater Capacity Fees," this term has the same meaning as "Local Sewer Connection Fee" as defined in the Roseville Municipal Code. Expenses eligible for recovery through local capacity fees include costs associated with upsized local sewer collection infrastructure, wastewater lift stations, new wastewater collection system vehicles, and new wastewater collection system support facilities such as maintenance shops and equipment storage buildings. The wastewater treatment plants provide wastewater treatment services for the City and its two regional partners, the South Placer Municipal Utility District and Placer County. The capacity costs of the wastewater treatment plants are recovered through a regional capacity/connection fee. Therefore, they were not addressed in this study. No changes are recommended to the fundamental structure of the City's local wastewater capacity fees. Table 1-2 shows the proposed updated local wastewater-capacity fees which were also calculated under the incremental cost approach.

Table 1-2: Proposed Updated FY 2027 Local Wastewater Capacity Fee

All Land Use Types	A Current FY 2026 Fee	B Proposed FY 2027 Fee	C $ Difference	D % Difference
Local Sewer Connection Fee per Sewer Unit	$460	$817	$357	77.6%

2. Economic Framework and Regulatory Requirements

2.1. Economic Framework

Capacity fees can be used to recover a portion of the cost of past investments in existing capacity-related infrastructure that will be used to provide services to future customers. They can also be used to recover the cost of planned investments in infrastructure that will provide services to future customers or the proportional share of planned investments that will serve both future and existing customers. Cash receipts from capacity fees lower the amount of revenue that must be collected from customers through water rates (i.e., they offset the annual revenue requirement from rates).

The infrastructure costs recovered through capacity fees are primarily associated planned future investments in "backbone" infrastructure. For water utilities, backbone infrastructure includes assets associated with functions such as supply, treatment, storage, pumping, and transmission. For wastewater utilities, backbone infrastructure includes assets associated with functions such as wastewater conveyance, pumping, treatment, and biosolids handling. Utility assets that were paid for by developers such as water distribution lines or wastewater collection system lines are not included in the capacity fee cost basis.

The basic economic philosophy behind capacity charges is that the cost of the facilities required to provide service should be paid for by those who receive the benefit. To fairly distribute the value of existing or expanded utility infrastructure, the charge should reflect a reasonable estimate of the cost of providing capacity to new users and not unduly burden existing customers through increased utility rates. Accordingly, many utilities make the philosophy that growth will pay for growth one of their primary guiding principles when developing their capacity charge structure.

The goal of maintaining equity between new and existing customers is reflected in the American Water Works Association (AWWA) *Manual of Water Supply Practices M1, Principles of Water Rates, Fees, and Charges, 7th Edition* (AWWA Manual M1). Page 323 (Chapter V11.2, System Development Charges):

> *The use of SDC receipts is generally limited. First, SDC receipts can be used to directly pay for a growth-related capital improvement project. In using SDC receipts in this manner, the utility will likely have avoided, at least minimized, the use of long-term debt or pay-as-you-go rate funding for the project that shelters the existing ratepayers from the cost of expansion of the system and, hence, may reduce the need for monthly user rate increases. The other typical use of SDC receipts is to apply them against growth-related debt service. When a utility issues long-term debt to pay for a growth-related capital project, the associated debt service is generally paid using SDC receipts."*

Similarly, the Water Environment Federation publication (WEF) *Manual of Practice No. 27, Financing and Charges for Wastewater Systems, 4th Edition* (WEF Manual 27). Page 200 (Chapter 10, System Development Charges) also discusses rate equity:

"System development charge proceeds are typically used to pay for capital projects related to growth and/or reimburse existing customers for past system capacity investments. Application of these fees assists the utility in implementing a "growth pays for growth" policy and helps with future capital improvement planning."
"Capital projects that are required to meet the demands of growth are often a burden on existing wastewater ratepayers. Through the use of SDCs [system development charges], costs associated with growth may largely be shifted to new customers and away from the existing wastewater customers over time, helping achieve intergenerational equity between customers."

In general, to withstand legal challenges, there must be a rational nexus between the capacity fees charged by a utility, the cost of capacity-related infrastructure required to accommodate demand growth created by future customers or otherwise provide some form of proportional benefit to future customers, and the benefits that new development receives from capacity-related infrastructure. Page 324 of AWWA Manual M1 summarizes three rational nexus tests:

1. There must be a connection established between new development and new or expanded facilities required to accommodate such development.

2. The cost of new or expanded facilities required to accommodate new development must be identified.

3. There must be an appropriate apportionment of costs to new development in proportion to the benefits it receives.

Similarly, the rational nexus framework summarized on Page 202 of WEF Manual 27 is:

1. There must be a reasonable connection between the new development that will pay capacity charges and the need for capacity-related infrastructure.

2. There must be a reasonable connection between the costs incurred to meet demand growth and the costs of serving other customers.

3. There must be a reasonable connection between identified costs and the level of capacity charges.

4. There must be a reasonable connection between costs and the amount of revenue generated by capacity charges.

5. There must be a reasonable connection between the cost of the utility for new development and the amount of the capacity charge.

For many utilities, especially those with rapid demand growth, capacity fees can be a significant source of funding for capital improvements. Nonetheless, some utilities choose to fund the infrastructure required to support demand growth solely through the operational cash flows provided by utility rates and charges. It is also important to note that a utility may charge capacity fees *even if it has adequate installed infrastructure capacity to meet long-term demand growth*. Pages 324 and 325 of AWWA Manual M1 state the following in this regard:

> *"The referenced nexus test can be satisfied based on an assessment of both current and future capacity available to meet growth-related demands. For example, a utility that has, in the extreme, constructed all of the water system capacity required through planned "build-out" of the service area can still make the nexus between the charge and the facilities needed to accommodate the anticipated growth. In this example, the basis for the charge would be the existing capacity available to service new demand."*

Although not specifically focused on water or wastewater capacity fees, an excellent discussion of fees imposed by California local governments to help pay for the cost of new development is provided in the California Department of Housing and Community Development (DHCD) publication, *Residential Impact Fees in California, Current Practices and Policy Considerations to Improve the Implementation of Fees Governed by the Mitigation Fee Act,* August 5, 2019. Page 50 of the publication provides a broader nexus discussion.

> *"Section 66001 of the California Government Code lays out the legal requirements for local agencies regarding the creation and imposition of fees on "Development Projects," defined as a project involving the issuance of a permit for construction or reconstruction. With regards to the reasonableness of the fees, local agencies are required to make two determinations: whether there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed, and how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed. Moreover, local agencies are also responsible for determining the reasonable relationship between the amount of the fee and the cost of the public facility."*

2.2. California Government Code Requirements

In establishing capacity charges, it is important to understand and comply with state and local laws and regulations governing the establishment, calculation, and implementation of these fees. The following sections summarize the regulations applicable to the development of capacity charges for the City as currently understood by Raftelis[1].

As originally noted in the Executive Summary section of this report, in the state of California, the basic statutory standards governing water and wastewater capacity fees are embodied in Government Code Sections 66000 et seq. Government Code §66013 (b) (3) describes a "Capacity Charge" in the following manner:

> "*Capacity charge" means a charge for public facilities in existence at the time a charge is imposed or charges for new public facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged, including supply or capacity contracts for rights and entitlements, real property interests, and entitlements and other rights of the local agency involving capital expense relating to its use of existing or new public facilities."*

The requirement that capacity fees be cost-based is provided in Government Code § 66013(a) which states:

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[1] Raftelis does not practice law, nor does it provide legal advice. The above discussion provides a general overview of Raftelis' understanding as rate and fee practitioners and is labeled "legal framework" for literary convenience only. The City should consult with its legal counsel for clarification and/or specific guidance.

> *"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."*

The procedures for handling capacity fee receipts are found in Government Code § 66013(c) which specifies:

> *"A local agency receiving payment of a charge in paragraph (3) of subdivision (b) it shall deposit it in a separate capital facilities fund with other charges received, and account for the charges in a manner to avoid commingling with other moneys of the local agency, except for investments, and shall expend those charges solely for the purposes for which the charges were collected."*

Other relevant Government Code sections related to capacity fees include:

Government Code §§ 66016

- Requirement for a public meeting before levying a capacity fee
- Requirement that the capacity fee calculation be available prior to the public meeting

Government Code §§ 66017

- Specification of the effective date of capacity fees after adoption

Government Code §§ 66020

- Procedures for protesting adopted capacity fees

Government Code §§ 66022

- Procedures for the judicial review of capacity fees

3. Capacity Fee Calculation Methodologies

3.1. Capacity Fee Calculation Methods

Regardless of which methodology is used, the basic formula for calculating capacity fees is to divide the value of infrastructure used to serve customer growth by existing or projected customer demand. Demand is generally expressed on the basis of equivalent dwelling units (EDUs) or equivalent 3/4" meters.

Figure 3-1: Generic Capacity Fee Calculation

Cost Basis ÷ EDUs = $ Capacity Fee

3.1.1. Buy-In Method

The 7th edition of AWWA Manual M1 (page 329) states that "the buy-in method is based on the value of the existing system's capacity. This method is typically used when the existing system has sufficient capacity to serve new development now and into the future." The premise is that new customers are entitled to water or wastewater service at the same cost as existing customers. Under the buy-in method, new customers pay an amount equal to the current infrastructure value. This infrastructure value is then divided by current system demand to determine the cost to "buy-in" per unit of capacity purchased. The buy-in method was not used to update the City's water and local wastewater capacity fees.

Figure 3-2: Buy-In Calculation

Replacement Cost of Existing Infrastructure ÷ Existing EDUs = $ Capacity Fee per EDU

3.1.2. Incremental Cost Method

The incremental cost method was used by Raftelis to update the City's water and local wastewater capacity fees. While the buy-in method relies on the valuation of existing infrastructure, the incremental cost approach relies on the present value cost of planned future infrastructure additions. According to the 7th edition of AWWA Manual M1 (page 330) this method is generally most appropriate for utilities where the existing system has "limited or no capacity to serve new development and new or incremental facilities are needed to serve development now and into the future."

The City's water and local wastewater utilities require future infrastructure investments through 2035 to serve projected demand growth and increase resiliency for water supply conveyance. This is especially true as it relates to the City's planned investments in infrastructure designed to enhance systemwide water supply resiliency. These water supply investments will benefit both existing customers and new customers connecting to the water utility system in the future.

When utilizing the incremental cost approach, it is important to have a capital improvement plan that identifies the costs associated with new capacity, the timing of the expenditure, and the proposed source(s) of funds for those capital improvements. The incremental cost approach is designed to equitably distribute these

capital costs to new customers in proportion to their projected usage of the infrastructure and the investment required to develop the infrastructure.

Figure 3-3: Incremental Cost Method

Present Value of Planned Infrastructure Benefiting New Customers ÷ Projected Incremental EDUs to be Served = $ Capacity Fee per EDU

3.1.3. Combined Method

The combined method is typically used where some remaining capacity is available to serve new development in parts of a system, but additional expansion is also necessary to accommodate new development for other parts of the system. Or where sufficient capacity remains in some system infrastructure functional components (e.g., treatment) but is deficient in others (e.g., water supply). In utilizing the combined method, it is important that system asset costs are not double counted when combining costs of the existing system with future costs from expanding the system. The costs of planned future infrastructure should not be included in the valuation of existing infrastructure assets. With the combined method, the capacity charge is based on the weighted average of the buy-in method and the incremental cost method. (i.e., the remaining existing capacity and the new, additional capacity).

Figure 3-4: Combined Method

Weighted Average of the Buy-In Capacity Fee + Incremental Cost Capacity Fee = $ Capacity Fee

3.2. Selected Capacity Fee Calculation Method

As discussed above, the City's water and local wastewater utilities require future infrastructure investments through 2035 to meet projected demand growth and increase resiliency for water supply conveyance. This is especially true as it relates to the City's planned investments in infrastructure designed to enhance systemwide water supply resiliency. The use of the forward-looking incremental method is fully aligned with the City's planned long-term investments in both water supply reliability and other required growth-related infrastructure.

4. Water Capacity Fee

4.1. Steps in the Calculation Process

The process used to calculate updated capacity fees involved the following steps. Each is discussed below in this section of the report.

- Review of Residential Assessment Methodology (Section 4.2)
- Update of Residential EDU Relationships (Section 4.3)
- Incremental EDU Additions Through 2035 (Section 4.4)
- Planned Infrastructure Additions Benefiting New Connections Through 2035 (Section 4.5)
- FY 2027 Water Capacity Fee Calculation (Section 4.6)
- FY 2027 Water Capacity Fee Assessment Schedule (Section 4.7)

4.2. Residential Assessment Methodology

The City assesses water capacity fees for new or enlarged commercial and irrigation connections based on water meter size. This is a common approach used by many utilities in California and across the United States. In contrast to its meter-sized based approach for commercial and irrigation properties, the City uses a development density-based methodology to assess capacity fees for new or enlarged residential connections.

The City's density-based residential assessment methodology addresses an inequity that may occur when residential water capacity fees are assessed based on meter size. Under the meter size-based assessment approach, if two residential properties are served by the same meter size (e.g., 3/4" or 1") they will pay the same capacity fee. This is true even if they have significantly different lot sizes. Over the long-term, due to its higher outdoor irrigation usage, the connection serving the larger lot may impose higher capacity demands on the water utility system. In contrast, the connection serving the smaller lot may impose lower long-term capacity demands on the water system due to its lower outdoor irrigation usage. This fact is not reflected when they initially connect to the system and pay the same capacity fee.

The City's density-based system assesses water capacity fees based on the number of residential dwelling units located within a given subdivision. This approach creates a closer alignment between the capacity fees paid by developers and the long-term capacity demands that new connections will ultimately impose on the water utility system through outdoor irrigation usage. For example, new connections located in low density residential developments (i.e., developments with less dwelling units per acre and the larger lot sizes) pay higher capacity fees that are more reflective of the higher capacity demands they will place on the water utility system due to their higher outdoor irrigation usage. Similarly, new connections located in high density residential developments (i.e., developments with more dwelling units per acre and smaller lot sizes) pay lower capacity fees that are more reflective of the lower capacity demands they will place on the water utility system due to their lower outdoor irrigation usage.

The City maintains three residential density classifications. Residential properties located in developments with a density of 0 – 6.99 dwelling units per acre are classified as low density residential. The average water consumption of low density residential connections is defined as equivalent to 1.0 dwelling unit (i.e., 1.0

EDU). Residential properties located in developments with a density of 7.00 – 12.99 units per acre are defined as medium density residential. Finally, residential properties located in developments with a density of greater than 13.00 units per acre are classified as high density residential. The EDU ratings assigned to medium and high density residential properties are expressed in comparison to 1.0 EDU low density residential properties.

Table 4-1 summarizes the residential density classifications and EDU relationships underlying the City's current residential capacity fees. The values shown in Table 4-1 have been used by the City since approximately 2015 without modification.

Table 4-1: Residential Density and EDU Relationships Used in Current Capacity Fees

Residential Land Use	Density per Acre	Average Gallons per Day per Unit	EDU Relationship Based on LDR Water Use
Low Density	0 – 6.99 Units per Acre	420	1.0
Medium Density	7.00 – 12.99 Units per Acre	250	.60
High Density	> 13.00 Units per Acre	170	.40

4.3. Update of Residential EDU Relationships

Residential EDU relationships were updated based on actual historical data provided by the City for the years 2022 – 2025. Table 4-2 presents this analysis. The values shown in Rows 2 – 4 reflect the average over this four-year period. These values were used in the calculation of the proposed updated water capacity fees

Table 4-2: Updated Residential EDU Relationships

Line	Period	Low Density	Medium Density	High Density
1	**Average 2022 – 2025**			
2	Data Points (Note 1)	39,362	6,238	10,608
3	Gallons per Unit per Day	339.13	190.82	186.36
4	Percent of LDR Water Use	100.0%	56.3%	55.0%
5	**2025**			
6	Data Points	40,549	7,228	10,848
7	Gallons per Unit per Day	363.57	214.04	198.35
8	Percent of LDR Water Use	100.0%	58.9%	54.6%
9	**2024**			
10	Data Points	39,797	6,605	10,653
11	Gallons per Unit per Day	328.32	183.26	186.08
12	Percent of LDR Water Use	100.0%	55.8%	56.7%
13	**2023**			
14	Data Points	39,115	5,920	10,019
15	Gallons per Unit per Day	321.00	177.18	169.00
16	Percent of LDR Water Use	100.0%	55.2%	52.6%
17	**2022**			
18	Data Points	37,987	5,197	10,912
19	Gallons per Unit per Day	343.65	188.79	192.00
20	Percent of LDR Water Use	100.0%	54.9%	55.9%

Note 1: A data point reflects the number of dwelling units associated with each individual water customer accounts.

4.4. Incremental EDU Additions Through 2035

4.4.1. Existing 2025 Systemwide EDUs

As discussed in Section 3.1.2, the incremental method of calculating capacity fees is dependent on two key factors. First is the number of total system incremental EDUs projected to be added during the planning horizon (i.e., the projected growth in demand). Second is the present value of planned infrastructure additions during the planning horizon that will provide services to future customers or the proportional share of planned investments that will serve both future and existing customers. The planning horizon used for the water capacity fee update as 2026 - 2035.

Table 4-3 presents the estimate of systemwide EDUs for the years 2022 - 2025. The EDU estimates shown for 2025 (Column D, Lines 14 – 19) were the starting point for the projection of incremental EDUs through the 2035 planning horizon.

Table 4-3: Estimate of Actual Systemwide EDUs in 2022 - 2025

Line	Description	A 2022	B 2023	C 2024	D 2025
1	Low Density Residential Data Points	37,987	39,115	39,797	40,549
2	Low Density Residential EDU Factor	100.0%	100.0%	100.0%	100.0%
3	Low Density EDUs	37,987	39,115	39,797	40,549
4	Medium Density Residential Data Points	5,197	5,920	6,605	7,228
5	Medium Density Residential EDU Factor	54.9%	52.6%	55.8%	58.9%
6	Medium Density EDUs	2,855	3,268	3,687	4,255
7	High Density Residential Data Points	10,912	10,019 (Note 1)	10,653	10,848
8	High Density Residential EDU Factor	55.9%	52.6%	56.7%	54.6%
9	High Density EDUs	6,097	5,275	6,038	5,918
10	Non-Residential Annual Gallons per Year	2,669,036,199	2,550,269,557	2,744,859,684	2,765,865,122
11	Residential Gallons per Day	344	321	328	364
12	Residential Gallons per Year	125,560	117,165	119,835	132,703
13	Non-Residential EDUs	21,257	21,766	22,905	20,843
14	EDU Summary				
15	Low Density	37,987	39,115	39,797	**40,549**
16	Medium Density	2,855	3,268	3,687	**4,255**
17	High Density	6,097	5,275	6,038	**5,918**
18	Commercial and Irrigation	21,257	21,766	22,905	**20,843**
19	Total EDUs	68,196	69,424	72,427	**71,565**

Note 1: Several data points were excluded from the 2023 dataset prior to the above calculations. The rationale for these exclusions was not documented, and therefore the reason for their removal is unknown.

The estimates of commercial and irrigation EDUs shown in Table 4-3 are based on the relationship in the billed water consumption of non-residential and low density residential customers in any given year. For example, in 2025 the billed water consumption of non-residential customers was 2.766 billion gallons (Column D, Line 10). The estimated annual water use of low density residential customers was 132,703 gallons (Column D, Line 12). This means that the 2025 non-residential customer consumption of 2.766 billion gallons was equivalent to 20,843 low density residential EDUs as shown in Column D, Line 13.

4.4.2. Projected Incremental EDUs Through 2035

The projected number of systemwide EDUs at 2035 is 83,425. This reflects an incremental increase of 11,860 EDUs from the existing level in 2025. This projection is based on a 1.55% annual growth in EDUs for every land use type (low, medium, and high density residential, and commercial and irrigation). The annual EDU growth rate of 1.55% as based on data from the City's Development Services Department.

Table 4-4 shows the projection of incremental EDUs through 2035.

Table 4-4: Projection of Incremental EDUs Through 2035

	A	B	C	D	E	F	G	H	I	J	K	L
Land Use	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**Incremental Change**
Low Density Residential	40,549	41,176	41,812	42,458	43,114	43,780	44,457	45,144	45,841	46,550	47,269	6,720
Medium Density Residential	4,255	4,321	4,388	4,456	4,524	4,594	4,665	4,737	4,811	4,885	4,960	705
High Density Residential	5,918	6,010	6,103	6,197	6,293	6,390	6,489	6,589	6,691	6,794	6,899	981
Commercial	20,843	21,165	21,492	21,824	22,161	22,503	22,851	23,204	23,563	23,927	24,297	3,454
Total EDUs	71,565	72,671	73,794	74,934	76,092	77,268	78,462	79,674	80,905	82,155	83,425	11,860

4.5. Planned Infrastructure Additions Through 2035

City staff developed detailed projections of planned infrastructure through the 2035 planning horizon. Two types of infrastructure were included. The first type of planned infrastructure additions are fully or partially required to increase the capacity of various system functions to serve demand growth. For example, they add capacity to the water storage, transmission, or pumping functions. The second type of planned infrastructure additions enhance long-term water supply portfolio resiliency (i.e., they enhance long-term water supply resiliency). They accrue to the benefit of both new customers connecting to the system and existing customers. Table 4-5 shows a detail of planned infrastructure additions through 2035. Key things to note about the information provided Table 4-5 include:

- The total cost of planned expenditures is $786,523,084 as shown in Column A, Line 25. $146,924,615 will be recovered from new customers through capacity fees (Column F, Line 25). $639,598,469 will be recovered from existing customers through rates (Column G, Line 25).

- The water supply resiliency costs allocated to new customers are $103,366,365 as shown in Column C, Line 25. 14.2% of water supply resiliency costs (Column B) were allocated to new customers because total projected EDUs will be 83,425. Of this amount, 11,860 EDUs will be added during the period 2026 – 2035 (both values are shown in Table 4-4). The ratio of new customer EDUs to total projected EDUs in 2035 is 14.2% (11,860 ÷ 83,425).

- The cost of planned infrastructure projects required to fully or partially add to the capacity to serve new customers is $43,558,250 (Column E, Line 25).

Table 4-5: Planned Infrastructure Additions Benefiting New Connections Through 2035

Line	Project	A	B	C	D	E	F	G
			Charged to New EDUs (Capacity Fees)					
			Water Supply Resiliency		Growth Infrastructure			
		Total Present Value Cost of All Projects Through 2035	% Assigned to New Customer Supply Resiliency	$ New Customer Supply Resiliency Portion	% Assigned to New Customer Growth Infrastructure	$ New Customer Growth Infrastructure	$ Total New Customer Capacity Fee Funded	$ Net Rate Payer Funded
1	(assign new Project No. break out from 500147) Treated Water Pipeline (from PCWA service area to Rsvl)	$98,406,664	14.2%	$13,989,612		$0	$13,989,612	$84,417,052
2	500505 -Cooperative Raw Water Supply Reliability Project	$154,000,000	14.2%	$21,892,829		$0	$21,892,829	$132,107,171
3	500148 - Potable Water Systems Evaluation	$950,000	14.2%	$135,053		$0	$135,053	$814,947
4	F25006-Capacity Fee Analysis	$600,000		$0	1	$600,000	$600,000	$0
5	Water Future Initiative - 5 ASR Wells (Marlin, Misty woods, Kaiser, Pleasant Grove, Campus Oaks)	$39,900,000	14.2%	$5,672,233		$0	$5,672,233	$34,227,767
6	F25067-NE tank 6 mg	$8,800,000		$0	0.5	$4,400,000	$4,400,000	$4,400,000
7	RMOU - 5 mg Tank and Pump station (Sierra Vista)	$15,100,000		$0	1	$15,100,000	$15,100,000	$0
8	F25008-Water Intertie with Citrus Heights Water	$244,200	14.2%	$34,716		$0	$34,716	$209,484
9	F25043-Interties and Pressure Reducing Stations (Amoruso Specific Plan/West Roseville Specific Plan)	$625,000	14.2%	$88,851		$0	$88,851	$536,149
10	500016 - Sites Reservoir Project	$225,000		$0	0.5	$112,500	$112,500	$112,500
11	500059-Groundwater Well Property	$491,500		$0	0.5	$245,750	$245,750	$245,750
12	Amoruso Ranch SP (Pump Station) - Obligation in DA (to be built offsite)	$8,600,000	14.2%	$1,222,587		$0	$1,222,587	$7,377,413
13	Creekview SP (Pump Station) - Obligation in DA (to be built offsite)	$9,023,120	14.2%	$1,282,738		$0	$1,282,738	$7,740,382
14	SVSP (Pump Station) - Obligation in DA, JM-60 or FD-63 (to be built Offsite)	$18,046,240	14.2%	$2,565,476		$0	$2,565,476	$15,480,764
15	WRSP Westpark (Pump Station) - Obligation in DA Westpark W-76 (to be built Offsite)	$9,023,120	14.2%	$1,282,738		$0	$1,282,738	$7,740,382
16	WRSP Fiddy (Pump Station) - Obligation in DA Fiddyment (to be built Offsite in lieu of F-66)	$18,046,240	14.2%	$2,565,476		$0	$2,565,476	$15,480,764
17	400063-Regional Wtr Supply Reliab Std	$442,000	14.2%	$62,835		$0	$62,835	$379,165
18	500512 - RiverArc	$266,000,000	14.2%	$37,814,887		$0	$37,814,887	$228,185,113
19	F25011-Corridors Specific Plan	$4,200,000		$0	0.5	$2,100,000	$2,100,000	$2,100,000
20	500510 - Emergency Backup Generators - Well Sites	$500,000	14.2%	$71,081		$0	$71,081	$428,919
21	EU Operations Center	$30,000,000		$0	0.7	$21,000,000	$21,000,000	$9,000,000
22	F25040-Folsom Reliability Project	$58,800,000	14.2%	$8,359,080		$0	$8,359,080	$50,440,920
23	F25101-Zone 4 to Zone 1 Pump Station - Blue Oaks	$7,000,000	14.2%	$995,129		$0	$995,129	$6,004,871
24	Antelope Pipeline Intertie (proposed downstream improvements)	$37,500,000	14.2%	$5,331,046		$0	$5,331,046	$32,168,954
25	**Total**	**$786,523,084**		**$103,366,365**		**$43,558,250**	**$146,924,615**	**$639,598,469**

4.6. FY 2027 Water Capacity Fee Calculation

Having calculated the inputs described above in Sections 4.2 – 4.5, the process of calculating updated FY 2027 water capacity fees is straightforward. Table 4-5 shows this calculation which is $12,388 for low density residential customers and 3/4" commercial and irrigation meters.

Table 4-6: Calculation of Proposed FY 2027 Capacity Fee

Line	Calculation of Capacity Fee	Amounts	Source
1	Supply Reliability Projects Benefiting New Customers	$103,366,365	Table 4-5, Column C, Line 25
2	Growth Infrastructure Benefiting New Customers	$43,558,250	Table 4-5, Column E, Line 25
3	Total Cost Basis (Present Value of Planned Infrastructure)	$146,924,615	
4			
5	Incremental EDU Additions Through 2035	11,860	Table 4-4, Column L
6	**Water Capacity Fee**	**$12,388**	

4.7. FY 2027 Assessment Schedule

Table 4-7 shows the derivation of the proposed FY 2027 capacity fee assessment schedule.

Table 4-7: Derivation of the Proposed FY 2027 Capacity Fee Assessment Schedule

Line	Residential Assessment Schedules (Density Based)			
	Density Classification	**Proposed EDUs**	**Proposed Capacity Fee**	**Source for EDU Relationships**
1	Low Density Residential (0 - 6.99 Units per Acre)	1.000	$12,388	Table 4-2, Line 4
2	Medium Density Residential (7.0 - 12.99 Units per Acre)	0.563	$6,970	Table 4-2, Line 4
3	High Density Residential (> 13.00 Units per Acre)	0.550	$6,808	Table 4-2, Line 4
4	**Commercial and Irrigation (Meter Size Based)**			
5	**Meter Size**	**Flow Equivalency**	**Proposed Capacity Fee**	**Source for Meter Flow Equivalencies**
6	3/4"	1.00	$12,388	Table 1-2, Column A (provided by City)
7	1.0"	1.70	$21,060	"
8	1.5"	3.30	$40,882	"
9	2.0"	5.30	$65,659	"
10	3.0"	11.70	$144,945	"
11	4.0"	20.00	$247,769	"
12	6.0"	41.70	$516,599	"
13	8.0"	60.00	$743,308	"
14	10.0"	96.70	$1,197,965	"
15	12.0"	143.30	$1,775,268	"

Table 4-8 shows a comparison of existing and proposed FY 2027 water capacity fees as originally presented in Table 1-1.

Table 4-8: Proposed Updated FY 2027 Water Capacity Fees

Land Use Type	A Current EDUs	B Current FY 2026 Fee	C Proposed EDUs	D Proposed FY 2027 Fee	E $ Difference	% Difference
Residential						
Low Density (LDR) 0 – 6.99 Units per Acre	1.00	$12,688	1.000	$12,388	($300)	(2.36%)
Medium Density (MDR) 7.00 – 12.99 Units per Acre	0.60	$7,614	0.563	$6,970	($644)	(8.45%)
High Density (HDR) > 13.00 Units per Acre	0.40	$5,074	0.550	$6,808	$1,734	34.17%
Multi Family per Dwelling Unit	0.40	$5,074	0.550	$6,808	$1,734	34.17%
Commercial and Irrigation						
Meter Size	**Meter Flow Equivalencies (1)**	**Current FY 2026 Fee**	**Meter Flow Equivalencies**	**Proposed FY 2027 Fee**	**$ Difference**	**% Difference**
3/4"	1.0	$12,688	1.0	$12,388	($300)	(2.36%)
1.0"	1.7	$21,570	1.7	$21,060	($509)	(2.36%)
1.5"	3.3	$41,870	3.3	$40,882	($988)	(2.36%)
2.0"	5.3	$67,246	5.3	$65,659	($1,587)	(2.36%)
3.0"	11.7	$148,450	11.7	$144,945	($3,504)	(2.36%)
4.0"	20.0	$253,760	20.0	$247,769	($5,991)	(2.36%)
6.0"	41.7	$529,090	41.7	$516,599	($12,490)	(2.36%)
8.0"	60.0	$761,280	60.0	$743,308	($17,972)	(2.36%)
10.0"	96.7	$1,226,930	96.7	$1,197,965	($28,964)	(2.36%)
12.0"	143.3	$1,818,190	143.3	$1,775,268	($42,922)	(2.36%)

(1) Meter flow equivalencies specified by the City

4.8. Annual Water Capacity Fee Adjustments

On an annual basis, the City adjusts its water capacity fees by applying data from the Engineering News Record Construction Cost Index (ENR CCI) or 3.0%, whichever is higher. Raftelis recommends that the City continue this policy.

5. Local Wastewater Capacity Fees

5.1. Sewer Units

The City's wastewater capacity fees are assessed based on "sewer units." The City's Code of Ordinances provides a comprehensive discussion on the determination of Residential Sewer Units (Section 14.16.100) and Commercial and Industrial Sewer Units (Sections 14.16.100.1 and 14.16.100.2). Based on an analysis completed by Staff, the City provided service to 82,273 sewer units as of June 30, 2023. Projected sewer units in 2035 are 93,753 which represents an incremental growth of 11,480 sewer units over existing levels. The annual growth rate in sewer units through 2035 is 1.0% annually. This value as provided by City staff.

5.2. Methodology Used for Local Wastewater Capacity Fees

The current local wastewater capacity fee is only $460 per sewer unit. Historically the City has required a new development to install the necessary sewer infrastructure through agreements with the developers. Due to concerns regarding the impact on the development community, Raftelis and City staff agreed that using the lower cost incremental cost approach was the preferred option.

Raftelis calculated a proposed local wastewater capacity fee of $817 using an incremental cost approach that featured planned growth-related capital expenditures specified by the City. The total growth-related capital expenditure used in the calculation was $9,375,000. A detail of these expenditures is shown in Table 5-1.

Table 5-1: Planned Growth-Related Capital Expenditures Through 2035

Year	Expenditure	Amount
2028	Vactor Truck	$685,000
2029	CCTV Truck	$450,000
2029	1/2 Ton Truck	$70,000
2031	1/2 Ton Truck	$70,000
2031	Wastewater Collections Building PGWWTP	$4,050,000
2032	Wastewater Collections Building PGWWTP	$4,050,000
	Total	**$9,375,000**

Using the incremental cost approach featuring planned capital improvement expenditures allowed for the development of a much less expensive, although still quantitatively based wastewater capacity fee. This fact notwithstanding, the proposed local wastewater capacity fee of $817 is a 77.6% increase over the current fee of $460. Similar increases can be expected as an outcome of future nexus studies.

Table 5-2: Calculation of Proposed Updated FY 2027 Local Wastewater Capacity Fee

Line	Description	Amount
1	Projected Sewer Units in 2035 at a 1.0% Annual Growth Rate	93,753
2	Sewer Units as of June 30, 2023	82,273
3	Incremental Growth in Sewer Units	11,480
4		
5	Planned Growth-Related Capital Expenditures	$9,375,000
6	Sewer Units	11,480
7	Proposed Local Wastewater Capacity Fee	$816.91
8		
9	Current Local Wastewater Capacity Fee	$460.00
10	$ Increase	$356.91
11	% Increase	77.6%

5.3. Annual Local Wastewater Capacity Fee Adjustments

On an annual basis, the City adjusts its local wastewater capacity fees by applying data from the Engineering New Record Construction Cost Index (ENR CCI). Raftelis recommends that the City continue this policy.