

April 17, 2023

Sewer Capacity Fee Study

South Placer
Municipal Utility
District



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South Placer Municipal Utility District – Sewer Capacity Fee Study

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Executive Summary

South Placer Municipal Utility District (the District) engaged IB Consulting, LLC (IBC) to complete a sewer capacity fee nexus study. This Capacity Fee Study Report (Report) describes the approach, methodology, and technical analysis used to derive updated capacity fees, which are governed by California State Government Code, Section 66013 (GC 66013). GC 66013 is separate from the Mitigation Fee Act (GC 66000) that governs developer impact fees. GC 66013 is specific to water and sewer capacity fees and requires that ***the proposed fees shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed.***

Currently, the District's sewer capacity fee is **\$4,827** for a single-family residential connection, defined as one Equivalent Dwelling Unit (1 EDU), representing a demand of 190 gallons per day of wastewater flow. The District's capacity fee was last updated in 2020 and was based on the District's 2020 System Evaluation and Capacity Assurance Plan (SECAP). The SECAP identifies the capital required to ensure sufficient capacity is available within the system to serve existing customers and new development through buildout. In instances where pipeline improvements are upsized to accommodate future growth, the costs of the pipeline improvements were allocated between existing customers and new development in relation to the increased cross-sectional area of the pipelines, which reflects the increased capacity realized from such improvements. In addition, new pipeline improvements that are required to accommodate new development were allocated 100% to new development.

Based on the analysis within the Report, the new proposed sewer capacity fee is **\$4,915** per EDU. This updated fee per EDU proportionately recovers new development's share of capital improvements to be constructed over a long-term planning horizon (2060). Current customers that increase their land use intensity by either adding additional residential dwelling units or changing their commercial use that causes an increase in flows or strength concentrations of its discharge will also pay for the increased demand placed on the sewer collection system.

Overview

Capacity Fee

A "Capacity Fee" is defined as a charge for public facilities in existence at the time a charge is imposed or charges for new facilities to be constructed in the future that is of benefit to the person or property being charged. Capacity fees ensure new development pays its fair share to connect to the system and does not cause additional burdens to current customers. Capital and infrastructure costs required to meet new demand/connections should be paid by those causing the cost to be incurred.

Based on the requirements of GC 66013, capacity fees must be based on the "*reasonable cost*" to accommodate additional demand from new development or the expansion of existing development. In addition to complying with GC 66013, compliance must be achieved with Proposition 26, which amended the State Constitution in 2010. Proposition 26 redefined a "tax" as any levy, charge, or exaction of any kind imposed by a local government. In other words, every charge is considered a tax that must be approved by the electorate, except for certain exemptions identified within Proposition 26. There are seven exemptions within Proposition 26, including a charge imposed for a specific benefit conferred directly to the payor that is not provided to those not charged and which does not exceed the reasonable costs to the local government of conferring the benefit imposed (i.e., capacity fees for service). Therefore, the nexus study summarized in this Report connects the proposed fee to the reasonable cost of improvements in compliance with GC 66013 and satisfies the Proposition 26 exemption.

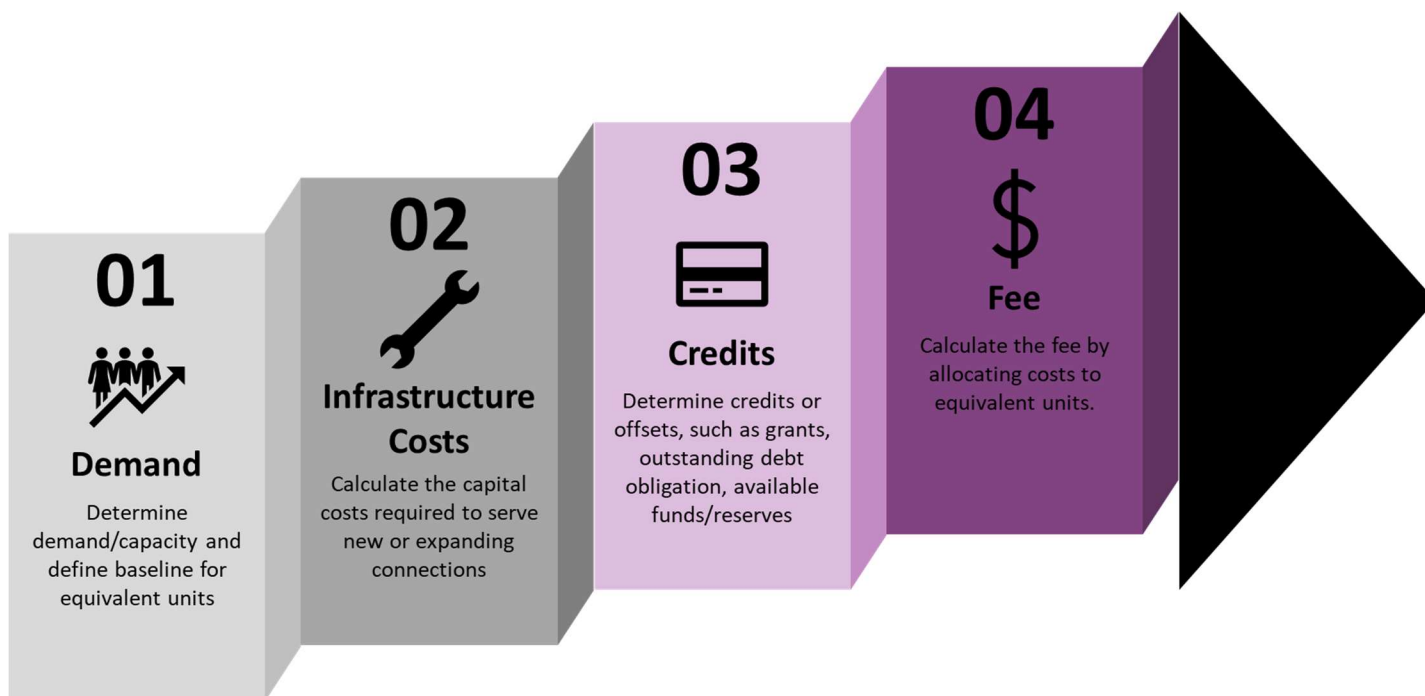
District Background

The District serves the communities of Rocklin, Loomis, Penryn, Newcastle, and portions of Granite Bay, and unincorporated Placer County, with a population of approximately 85,000. The District owns and operates the sewer collection system, which consists of 290 miles of pipelines ranging in size from 4" to 42", thirteen lift stations, and ten flow monitoring stations. The District's service area is primarily a residential area with some commercial and institutional uses.

Capacity Fee Methodology

There are four primary steps in calculating capacity fees: (1) identify demand and define the baseline requirements for a connection, or equivalent dwelling unit based on planning documents, (2) determine infrastructure costs, (3) incorporate any credits or offsets to apply towards the total infrastructure costs, such as grants, applicable debt obligations, and available funding through previously collected capacity fees, and (4) apportion the net infrastructure costs equitably based on the demand placed on the utility system.

Figure 1 – Capacity Fee Analysis



In addition to the four steps above, there are two primary approaches for calculating capacity fees: the "Buy-In Approach" and "Incremental-Cost Approach." Selecting the best approach depends on the unique circumstances of the utility, such as existing build-out of the service area, expected future growth, existing infrastructure capacity, and access to up-to-date planning documents/master plans. Careful consideration may be required to allocate costs between existing and new customers and ensure no duplication of costs.

Buy-In Approach

The basis of the Buy-In Approach (Buy-In Approach) is the value of the existing system. This approach accounts for the current service standard that existing customers receive from the District's existing assets. This approach ensures that new development buys into the utility system and funds the necessary improvements to maintain and receive the same level of service experienced by today's customers. Therefore, new development pays an amount equal to their fair share of the existing system assets. The Buy-In Approach also eliminates funding of any existing system deficiencies as the District's current asset inventory only reflects improvements in the ground today.

System assets may be valued in a few different ways. Options include: (1) using the original cost of the improvements (OC), (2) original cost less depreciation of system assets to account for the time improvements are in service (OCLD), (3) replacement cost of the improvements by bringing the original cost into today's dollars (RC), and (4) replacement cost less depreciation which brings both the original cost and the accumulated depreciation value into today's dollars (RCLD). The most common valuation technique is RCLD. Using RCLD generates a system value based on today's cost of the improvements while accounting for the time assets have been in service. RCLD uses the Construction Cost Index (CCI), published by Engineering News-Record, to derive asset costs in today's dollars.

Once the system value is determined, dividing the total value by the total existing demand (Existing EDUs) derives a value per EDU. Demand is commonly used for system design and planning. It is a primary driver for the system's current configuration and how it expands in the future.

This approach is suited for agencies that (1) have built most of their facilities in advance with only a minimal portion of facilities needed for build-out, (2) don't have an adopted long-term capital improvement plan, or (3) the "build-out" date is so far out in the future that it is difficult to project growth and required facilities accurately.

Incremental-Cost Approach

The Incremental-Cost Approach (Incremental Approach) is based on the principle that new development should pay for improvements required to connect them to the system, including the need for any additional capacity and/or expansions. This approach is typically used when specific capital improvements are identified within planning documents for growth to occur. The Incremental Approach uses an agency's most recent planning documents to determine growth-related improvements. In the case of SPMUD, their SECAP provides the detail required to develop capacity fees using the Incremental Approach, including capital facilities and additional EDUs through build out. In addition, improvements that are required to address existing deficiencies are excluded. Specific projects that may benefit existing and new development are apportioned based on the capacity of the improvements to ensure new development only pays its proportionate share.

Recommended Approach

For this study, the updated capacity fees are based on an Incremental Approach as the District has a detailed listing of capital improvements necessary to serve new development, as identified within its SECAP. The SECAP identifies the upsizing of existing sewer trunk lines and new sewer trunk lines to convey flow from future developments within the service area to the regional treatment plants. Contingency, design, and administration costs are also included for these projects. These system improvements will serve the additional demand generated by new development.

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Capital Improvements

The SECAP identified a list of existing assets requiring upsizing to serve new development as well as improvements solely needed to accommodate new development. The detailed listing of improvements is included below with the percentage allocated to new development. For new facilities, the increase in capacity is equal to 100%, as the improvement is needed for new development to occur. For exiting assets requiring upsizing, the percent allocated to new development is directly related to the increased capacity gained from the improvement by comparing the cross-sectional areas of the existing pipe size and the increased pipe size. This cross-sectional area of a pipeline is related to the capacity of the pipeline to convey sewer flows. Therefore, new development only pays for their proportionate share of the facilities. Existing customers are recovering their proportionate share through the ongoing repair and replacement funded by rates. Table 1 lists the capital improvements, the size of the existing facility (when applicable) and new facility, the cross-sectional areas of the trunk lines, and the Incremental Capacity gained as a percentage.

Table 1: Capital Facilities and Incremental Capacity

Capital Facilities	Include? Yes/No	Sewer Trunk Size (In)		Cross-Sectional Area (SF)			Incremental Increased Capacity (%)
		Existing	New Facility	Existing	New Facility	Increased Capacity	
		[A]	[B]	[C] = (A/2) ² x Pi	[D] = (B/2) ² x Pi	[E] = D - C	
Boyington Diversion	Yes	N/A	12	N/A	113 sf	113 sf	100.00%
Springview Drive	Yes	24	30	452 sf	707 sf	254 sf	36.00%
SPMUD Corp Yard	Yes	30	36	707 sf	1,018 sf	311 sf	30.56%
Woodside	Yes	27	36	573 sf	1,018 sf	445 sf	43.75%
Lower Secret Ravine A	Yes	27	36	573 sf	1,018 sf	445 sf	43.75%
Lower Secret Ravine B	Yes	24	36	452 sf	1,018 sf	565 sf	55.56%
Lower Secret Ravine C	Yes	24	30	452 sf	707 sf	254 sf	36.00%
Lower Secret Ravine D	Yes	18	27	254 sf	573 sf	318 sf	55.56%
Schriber / Black Willow	Yes	18	21	254 sf	346 sf	92 sf	26.53%
Sucker Ravine B	Yes	15	18	177 sf	254 sf	78 sf	30.56%
Bankhead A	Yes	12	15	113 sf	177 sf	64 sf	36.00%
Bankhead B	Yes	8	15	50 sf	177 sf	126 sf	71.56%
Upper Antelope Creek East A	Yes	8	12	50 sf	113 sf	63 sf	55.56%
Aguilar Creek B	Yes	10	12	79 sf	113 sf	35 sf	30.56%
Antelope Creek A	Yes	18	27	254 sf	573 sf	318 sf	55.56%
Antelope Creek B	Yes	18	24	254 sf	452 sf	198 sf	43.75%
Antelope Creek C	Yes	10	15	79 sf	177 sf	98 sf	55.56%
Clover Valley	Yes	8	15	50 sf	177 sf	126 sf	71.56%
Sierra College Trunk	Yes	N/A	24	N/A	452 sf	452 sf	100.00%
Cameo Trunk	Yes	N/A	15	N/A	177 sf	177 sf	100.00%
Upper Clover Valley A	Yes	N/A	10	N/A	79 sf	79 sf	100.00%
Upper Antelope Creek	Yes	N/A	15	N/A	177 sf	177 sf	100.00%
Upper Antelope Creek West	Yes	N/A	8	N/A	50 sf	50 sf	100.00%
Upper Antelope Creek Middle A	Yes	N/A	10	N/A	79 sf	79 sf	100.00%
Upper Antelope Creek Middle B	Yes	N/A	8	N/A	50 sf	50 sf	100.00%
Loomis East	Yes	N/A	8	N/A	50 sf	50 sf	100.00%
Brace Road Pump Station	Yes	N/A	N/A	N/A	N/A	N/A	100.00%
Brace Road East	Yes	N/A	12	N/A	113 sf	113 sf	100.00%
Horseshoe Bar Road East	Yes	N/A	10	N/A	79 sf	79 sf	100.00%

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The capital improvements listed within the SECAP reflected May 2020 dollars. For this sewer capacity fee update, the costs were brought forward to 2023 dollars by indexing the original cost by the Engineer's News Record – Construction Cost Index through March 2023 (ENR - May 2020 = 12,118.67; ENR – March 2023 = 14,269.29). The result increased the original cost by 17.75% ($14,269.29 / 12,118.67 = 1.1775$). Table 2 summarizes the updated facility costs and the portion attributable to the updated sewer capacity fee by taking the percent allocations derived in Table 1.

Table 2: Capital Facility Costs and Percent Allocations for Capacity Fee

Capital Facilities	Include?	Original Cost	2023 Costs	Incremental Capacity	Incremental Capacity
	Yes/No	CY 2020	117.75%	Increased Capacity (%)	Incremental Capacity (\$)
		[A]	[B] = A x 1.1775	[C] Table 1 - Col F	[D] = B x C
Boyington Diversion	Yes	\$1,390,293	\$1,637,070	100.00%	\$1,637,070
Springview Drive	Yes	\$890,088	\$1,048,079	36.00%	\$377,308
SPMUD Corp Yard	Yes	\$763,556	\$899,087	30.56%	\$274,721
Woodside	Yes	\$204,807	\$241,160	43.75%	\$105,508
Lower Secret Ravine A	Yes	\$3,106,539	\$3,657,950	43.75%	\$1,600,353
Lower Secret Ravine B	Yes	\$1,277,973	\$1,504,813	55.56%	\$836,007
Lower Secret Ravine C	Yes	\$4,259,913	\$5,016,048	36.00%	\$1,805,777
Lower Secret Ravine D	Yes	\$1,356,075	\$1,596,778	55.56%	\$887,099
Schriber / Black Willow	Yes	\$1,908,162	\$2,246,861	26.53%	\$596,106
Sucker Ravine B	Yes	\$2,656,300	\$3,127,793	30.56%	\$955,715
Bankhead A	Yes	\$3,879,880	\$4,568,559	36.00%	\$1,644,681
Bankhead B	Yes	\$633,388	\$745,814	71.56%	\$533,672
Upper Antelope Creek East A	Yes	\$2,915,183	\$3,432,628	55.56%	\$1,907,016
Aguilar Creek B	Yes	\$3,799,453	\$4,473,856	30.56%	\$1,367,012
Antelope Creek A	Yes	\$5,478,000	\$6,450,345	55.56%	\$3,583,525
Antelope Creek B	Yes	\$3,143,813	\$3,701,840	43.75%	\$1,619,555
Antelope Creek C	Yes	\$1,729,271	\$2,036,217	55.56%	\$1,131,231
Clover Valley	Yes	\$4,258,371	\$5,014,232	71.56%	\$3,587,961
Sierra College Trunk	Yes	\$4,795,200	\$5,646,348	100.00%	\$5,646,348
Cameo Trunk	Yes	\$1,170,000	\$1,377,675	100.00%	\$1,377,675
Upper Clover Valley A	Yes	\$1,800,000	\$2,119,500	100.00%	\$2,119,500
Upper Antelope Creek	Yes	\$6,165,000	\$7,259,287	100.00%	\$7,259,287
Upper Antelope Creek West	Yes	\$1,848,000	\$2,176,020	100.00%	\$2,176,020
Upper Antelope Creek Middle A	Yes	\$1,611,000	\$1,896,952	100.00%	\$1,896,952
Upper Antelope Creek Middle B	Yes	\$1,824,000	\$2,147,760	100.00%	\$2,147,760
Loomis East	Yes	\$2,784,000	\$3,278,160	100.00%	\$3,278,160
Brace Road Pump Station	Yes	\$3,000,000	\$3,532,500	100.00%	\$3,532,500
Brace Road East	Yes	\$2,822,400	\$3,323,376	100.00%	\$3,323,376
Horseshoe Bar Road East	Yes	\$2,763,000	\$3,253,432	100.00%	\$3,253,432
Total Incremental Component		\$74,233,665	\$87,410,140		\$60,461,328

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Capacity Fee Analysis

The SECAP also identified the estimated number of additional EDUs through build out based on planning documents from the City of Rocklin, Town of Loomis, Placer County, Horseshoe Bar / Penryn Community Plan, and Granite Bay Community Plan. Through this evaluation, the SECAP identified 12,320 additional EDUs. For this updated sewer capacity fee study, the District identified the number of EDUs that have come online since the SECAP study and updated the remaining EDUs, equal to 10,839. The 1,481 EDUs that have since come online, paid capacity fees and all available capacity fees are credited towards the facility cost.

The projected costs are divided by the total additional EDUs to derive the updated Capacity Fee per EDU. Table 3 provides a summary for determining the incremental component associated with upsizing and expanding sewer trunks as well as contingency (25%), and design / administration (8%) costs.

Table 3: Sewer Incremental Cost Component per EDU

Capital Facilities	Include?	Original Cost	2023 Costs	Incremental Capacity		Units of	Unit Rate
	Yes/No	CY 2020	117.75%	Increased Capacity (%)	Incremental Capacity (\$)	Additional EDUs	\$/EDU
		[A]	[B] = A x 1.1775	[C] Table 1 - Col F	[D] = B x C	[E]	[F] = D ÷ E
Boyington Diversion	Yes	\$1,390,293	\$1,637,070	100.00%	\$1,637,070	10,839	\$151.04
Springview Drive	Yes	\$890,088	\$1,048,079	36.00%	\$377,308	10,839	\$34.81
SPMUD Corp Yard	Yes	\$763,556	\$899,087	30.56%	\$274,721	10,839	\$25.35
Woodside	Yes	\$204,807	\$241,160	43.75%	\$105,508	10,839	\$9.73
Lower Secret Ravine A	Yes	\$3,106,539	\$3,657,950	43.75%	\$1,600,353	10,839	\$147.65
Lower Secret Ravine B	Yes	\$1,277,973	\$1,504,813	55.56%	\$836,007	10,839	\$77.13
Lower Secret Ravine C	Yes	\$4,259,913	\$5,016,048	36.00%	\$1,805,777	10,839	\$166.60
Lower Secret Ravine D	Yes	\$1,356,075	\$1,596,778	55.56%	\$887,099	10,839	\$81.84
Schriber / Black Willow	Yes	\$1,908,162	\$2,246,861	26.53%	\$596,106	10,839	\$55.00
Sucker Ravine B	Yes	\$2,656,300	\$3,127,793	30.56%	\$955,715	10,839	\$88.17
Bankhead A	Yes	\$3,879,880	\$4,568,559	36.00%	\$1,644,681	10,839	\$151.74
Bankhead B	Yes	\$633,388	\$745,814	71.56%	\$533,672	10,839	\$49.24
Upper Antelope Creek East A	Yes	\$2,915,183	\$3,432,628	55.56%	\$1,907,016	10,839	\$175.94
Aguilar Creek B	Yes	\$3,799,453	\$4,473,856	30.56%	\$1,367,012	10,839	\$126.12
Antelope Creek A	Yes	\$5,478,000	\$6,450,345	55.56%	\$3,583,525	10,839	\$330.61
Antelope Creek B	Yes	\$3,143,813	\$3,701,840	43.75%	\$1,619,555	10,839	\$149.42
Antelope Creek C	Yes	\$1,729,271	\$2,036,217	55.56%	\$1,131,231	10,839	\$104.37
Clover Valley	Yes	\$4,258,371	\$5,014,232	71.56%	\$3,587,961	10,839	\$331.02
Sierra College Trunk	Yes	\$4,795,200	\$5,646,348	100.00%	\$5,646,348	10,839	\$520.93
Cameo Trunk	Yes	\$1,170,000	\$1,377,675	100.00%	\$1,377,675	10,839	\$127.10
Upper Clover Valley A	Yes	\$1,800,000	\$2,119,500	100.00%	\$2,119,500	10,839	\$195.54
Upper Antelope Creek	Yes	\$6,165,000	\$7,259,287	100.00%	\$7,259,287	10,839	\$669.74
Upper Antelope Creek West	Yes	\$1,848,000	\$2,176,020	100.00%	\$2,176,020	10,839	\$200.76
Upper Antelope Creek Middle A	Yes	\$1,611,000	\$1,896,952	100.00%	\$1,896,952	10,839	\$175.01
Upper Antelope Creek Middle B	Yes	\$1,824,000	\$2,147,760	100.00%	\$2,147,760	10,839	\$198.15
Loomis East	Yes	\$2,784,000	\$3,278,160	100.00%	\$3,278,160	10,839	\$302.44
Brace Road Pump Station	Yes	\$3,000,000	\$3,532,500	100.00%	\$3,532,500	10,839	\$325.91
Brace Road East	Yes	\$2,822,400	\$3,323,376	100.00%	\$3,323,376	10,839	\$306.61
Horseshoe Bar Road East	Yes	\$2,763,000	\$3,253,432	100.00%	\$3,253,432	10,839	\$300.16
Contingency (25%)	Yes				\$15,115,332	10,839	\$1,394.53
Design/Admin (8%)	Yes				\$4,836,906	10,839	\$446.25
Total Incremental Component		\$74,233,665	\$87,410,140		\$80,413,566		\$7,418.91

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The capacity fee must also account for available capacity fees collected over the years that will go towards the funding of the capital facilities. The funds in the Capital Expansion Fee Reserve will be applied to the incremental costs as a credit towards the total capital facility cost per EDU, equal to \$7,418.91. Table 4 takes the Capital Expansion Fee Reserve divided by the total additional EDUs to derive a credit per EDU. Table 5 summarizes the final updated sewer capacity fee by taking the facility cost per EDU plus adjustments per EDU.

Table 4: Sewer Available Capacity Fees Credit

Adjustment Summary	Value (\$)	Allocation Basis	Units of Service	\$ per EDU
	[A]	[B]	[C]	[D] = A ÷ c
Adjustments				
(+) Capital Related Reserves	(\$27,140,321)	Additional EDUs	10,839	(\$2,503.95)

Table 5: Sewer Incremental Cost with Adjustments

Incremental Components	\$ / EDU
Incremental Costs	\$7,419
(+) Capital Related Reserves	(\$2,504)
Total Incremental Components	\$4,915

Updated Capacity Fees

Table 6 summarizes the proposed sewer capacity fees for an equivalent single-family residential dwelling unit or 1 EDU and shows the comparison with the current capacity fee. Non-residential connections will be assigned EDUs on a case-by-case basis to account for total flow in relation to a single-family residential unit.

Table 6: Sewer Proposed Capacity Fee

	Existing Wastewater Capacity Fee	Proposed Wastewater Capacity Fee	Difference (\$)
1 EDU	\$4,827	\$4,915	\$88

Each subsequent year, the District should adjust the capacity fees by applying the annual percentage change in the Engineering News-Record CCI to keep pace with inflation, coupled with a comprehensive update every five years.