2023 Capacity Fee Study

Phelan Piñon Hills Community Services District

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Executive Summary

Phelan Piñon Hills Community Services District (the CSD) engaged IB Consulting, LLC (IBC) to complete a capacity fee nexus study for its water enterprise. This Capacity Fee Study Report (Report) describes the approach, methodology, and technical analysis used to derive updated capacity fees per 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 CSD's water capacity fee consists of a charge that varies by the new connection's meter size. Meter sizes reflect the additional capacity/demand placed on the water system from each new connection based on the safe maximum operating capacity in Gallons Per Minute (GPM), published by the American Water Works Association (AWWA). The updated capacity charge includes two primary components: 1) a Buy-In component for existing facilities and 2) a Water Rights component for acquiring additional water rights in the Mojave Basin to serve new development.

The new proposed capacity fee is **$10,951** per 1" meter, with larger meters paying more for the additional capacity/demand they placed on the system. These updated fees proportionately recover new development's share of existing assets to continue improving and expanding the system at the same level of service existing customers receive today. Current customers expanding their capacity will also pay for the incremental increased demand placed on the water 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.

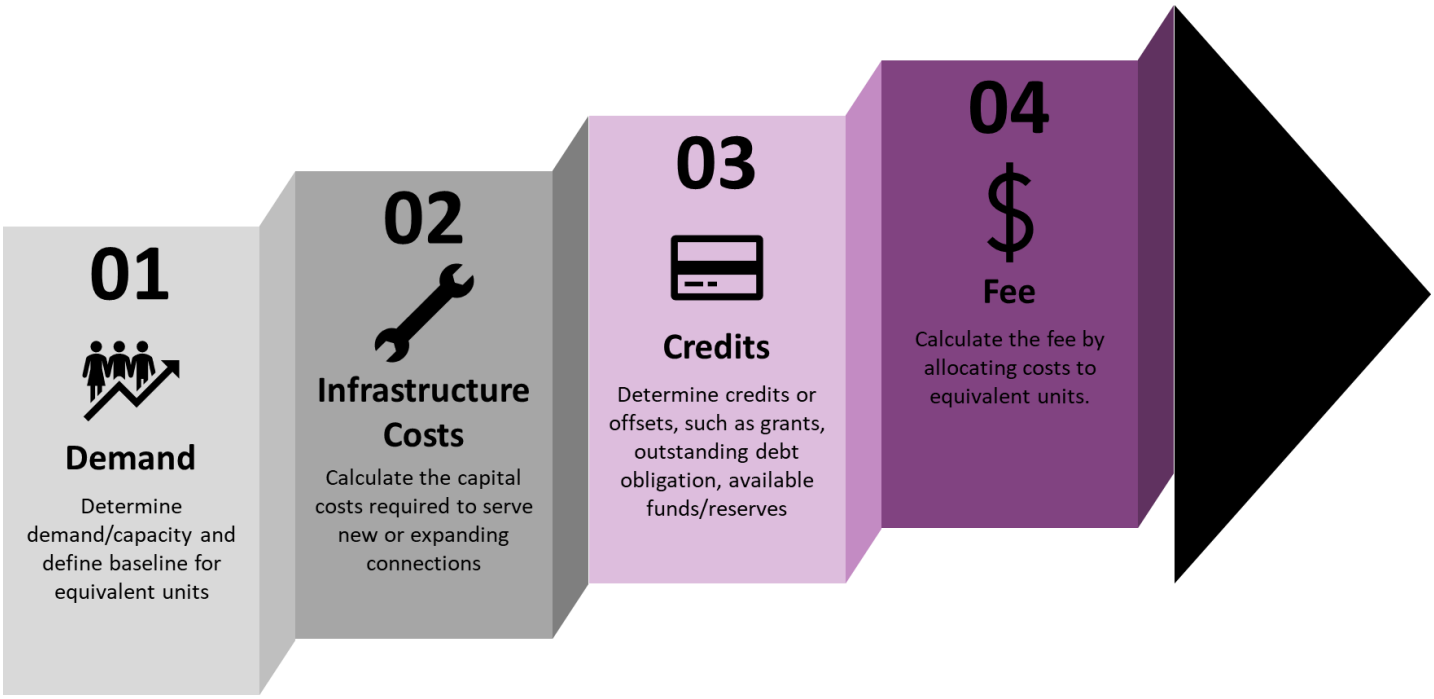
CSD Background

The CSD was formed in 2008 and the water service area spans approximately 128 square miles in San Bernardino County and includes approximately 7,060 service connections. The CSD'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, meter equivalent, 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, existing debt obligations, and capital related reserves that will convert to assets, and (4) apportion the net infrastructure costs equitably to various types of connections 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 is the value of the existing system. This approach accounts for the current service standard that existing customers receive from the CSD'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 system. The Buy-In Approach also eliminates any potential funding of existing system deficiencies as the CSD'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. We calculate RCLD using the Construction Cost Index (CCI), published by Engineering News-Record.

Once the system value is determined, dividing the total value by total existing demand derives a value per unit of demand. 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. Using meter size and the corresponding meter capacity (water flow demand in gallons per minute) provides a means to derive a value per Meter Equivalent (ME).

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 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-Cost Approach uses the CSD's most recent Master Plan to determine growth-related improvements. Projects associated with routine repair & replacement are not included. In addition, Master Plan improvements that are required to address existing deficiencies are excluded. Also, specific projects within the Master Plan may benefit both existing and new development. In these instances, new development only pays its proportionate share based on the demand or capacity taken from these projects.

Hybrid Approach

Another approach that may be used is the Hybrid Approach, which accounts for both a buy-in component and an incremental component. The Hybrid Approach is utilized when the existing system has available capacity and/or is substantially built while specific capital improvements within planning documents are clearly identified and needed to serve new development.

Recommended Approach

For this study, the updated capacity fees utilize the Buy-In approach plus the current known cost for acquiring additional water rights from the Mojave Water Agency.

Asset Valuation

RCLD Asset Value

The first step in determining the capacity fee using the Buy-In Approach is to determine the value of the existing system. As mentioned above, there are several methods of determining the current value of assets. This study utilizes the RCLD method of valuing the system. RCLD valuation is the most equitable and reasonable approach since it considers the time value of money and factors in the remaining useful life of each asset. To accomplish this, the CSD provided its FY 2022 fixed asset records containing the original cost of each asset. Replacement costs were estimated by bringing forward the original costs to today's dollars to reflect the estimated cost if a similar asset were constructed today.

The original cost of each asset was indexed by the annual percentage change of the 20-cities CCI, published by the Engineering News Record. For 2022, the CCI value is 12,133. Accumulated depreciation was also indexed to maintain consistency with 2022 dollars. Subtracting the accumulated depreciation from the replacement cost yields the updated RCLD and reflects service standards in 2022 dollars. Table **1** shows the water assets and summarizes the original cost, replacement cost in 2022 dollars, accumulated depreciation in 2022 dollars, and replacement costs adjusted by the 2022 depreciation (RCLD). Land values were not depreciated, and the replacement value is estimated by increasing the original acquisition costs by a 2% inflation limit in-line with Proposition 13 constraints on assessed values. The detailed asset listings are on file with the CSD and part of the Capacity Fee Model that is also on file with the CSD.

Table 1 – Water Asset Replacement Cost Less Depreciation

Asset Category	Original Cost	Original Cost Less Depreciation	Replacement Cost	Replacement Cost Less Depreciation	Replacement Cost Less Depreciation
	OC	*OCLD*	*RC*	*RCLD*	*RCLD*
Buildings	$835,415	$389,677	$1,069,530	$490,106	$490,106
Equipment	$9,240,119	$4,749,368	$10,708,026	$5,343,874	$5,343,874
Hydrants	$245,579	$0	$693,739	$0	$0
Land	$3,212,658	$3,144,276	$4,183,004	$4,107,505	$4,107,505
Meters	$2,335,232	$1,117,826	$2,771,993	$1,117,826	$1,117,826
Planning	$755,423	$378,458	$873,901	$382,227	$382,227
Pumping	$835,718	$132,345	$1,541,918	$247,507	$247,507
Reservoirs	$4,284,907	$910,804	$8,525,658	$1,774,057	$1,774,057
Tanks	$2,184,312	$1,308,081	$3,277,885	$1,842,956	$1,842,956
Transmission & Distribution	$21,560,964	$5,291,571	$56,713,028	$11,217,507	$11,217,507
Water Rights	$18,695,632	$17,514,342	$24,023,428	$22,688,549	$22,688,549
Water Shares	$8,400	$8,400	$10,393	$10,393	$10,393
Wells	$5,807,806	$3,431,293	$9,437,707	$5,145,945	$5,145,945
Wells - Dairy	$185,948	$136,945	$218,186	$160,673	$160,673
Total Existing Assets	$70,188,112	$38,513,386	$124,048,396	$54,529,126	$54,529,126

Buy-In Component

The potential demand on the water system is proportional to the potential flow through each meter. AWWA publishes each meter type's safe maximum operating capacity in GPM. Using the AWWA capacity information, an equivalency for each meter size is set based on a 1" meter's GPM. There are 1,914 existing 3/4" meters; however, new connections receive an 1" meter or bigger. Each meter's safe maximum operating flow capacity was divided by the base meter's safe operating flow capacity of 50 GPM to determine the equivalent capacity ratio. Total MEs are determined by multiplying the number of meters by the capacity ratios. The utility's net RCLD is then divided by total MEs to derive a system value per ME. Table 2 provides a summary of the total meters connected to the system and corresponding meter equivalents.

Table 2 – Existing Water Meter Equivalents

Meter Size	AWWA Capacity (gpm) [A]	Capacity Ratio [B] = A ÷ 50	Existing Meters [C]	Meter Equivalent [D] = B x C
≤ 3/4"	30	0.60	1,914	1,148
1"	50	1.00	5,065	5,065
1 1/2"	100	2.00	30	60
2"	160	3.20	48	154
3"	350	7.00	2	14
4"	630	12.60	1	13
6"	1,300	26.00	-	-
8"	2,800	56.00	-	-
10"	4,200	84.00	-	-
Total MEs				6,454

Capacity Fee Analysis

The RCLD asset value of the Water Utility is divided by total MEs to derive the updated Capacity Fee per 1" meter. Table 3 provides a summary for determining the buy-in component for the system assets. Under the system assets, Water Rights and Water Shares were excluded from the total asset values as the new connection capacity fees will include a component for water rights based on the current known cost per Acre Foot (AF). Otherwise, new connections would be paying twice for the water needed to serve their demand.

Table 3 – Water Buy-In by Asset Category

Asset Category	Include Assets in Valuation?	RCLD [A]	Allocation Basis	Mete Equivalents [B]	$ per ME [C] = A ÷ B
Buildings	Yes	$490,106	Meter Equivalent	6,454	**$75.94**
Equipment	Yes	$5,343,874	Meter Equivalent	6,454	**$828.05**
Hydrants	Yes	$0	Meter Equivalent	6,454	**$0.00**
Land	Yes	$4,107,505	Meter Equivalent	6,454	**$636.47**
Meters	Yes	$1,117,826	Meter Equivalent	6,454	**$173.21**
Planning	Yes	$382,227	Meter Equivalent	6,454	**$59.23**
Pumping	Yes	$247,507	Meter Equivalent	6,454	**$38.35**
Reservoirs	Yes	$1,774,057	Meter Equivalent	6,454	**$274.89**
Tanks	Yes	$1,842,956	Meter Equivalent	6,454	**$285.57**
Transmission & Distribution	Yes	$11,217,507	Meter Equivalent	6,454	**$1,738.18**
Water Rights	No	$0	Meter Equivalent	6,454	**$0.00**
Water Shares	No	$0	Meter Equivalent	6,454	**$0.00**
Wells	Yes	$5,145,945	Meter Equivalent	6,454	**$797.38**
Wells - Dairy	Yes	$160,673	Meter Equivalent	6,454	**$24.90**
		$31,830,184			**$4,932**

Asset Value Adjustments

It is also important to identify any adjustments to the RCLD total asset value. For this study, adjustments are separated into four components: (1) Work-in-Progress, (2) Capital Related Reserves, and (3) Debt Obligations. Below is a description of each component and how it affects the updated RCLD figure.

Work-in-Progress: Includes recently completed capital improvements that are not yet reflected within the CSD's most recent asset listing due to timing. These capital improvements are added to the asset value.

Capital Related Reserves: Includes reserves that provide funding for system improvements, which increases the asset values of the corresponding category. Capital related reserves will increase the system's value as the cash equivalents on hand are available for capital spending and will convert to hard assets.

Debt Obligations: Includes any outstanding debt obligations. The remaining principal is subtracted from the RCLD to reduce the value of the system as these liabilities funded improvements within the asset listings. The remaining debt obligations will be paid through rates.

The Buy-In component must deduct outstanding principal of debt; otherwise, new connections will pay twice as part of the capacity fees and debt payments through rates.

Figure 2 identifies the adjustments applied to the CSD's updated RCLD asset values. Table 4 summarizes the adjustments with the cost per ME.

Figure 2 – Adjustments to RCLD of Assets

Assets/Liabilities	Net Impact (N/A, Increase / Decrease)	Water System	Description
Work-in-Progress			
Chromium 6 Mitigation	N/A	$0	Funded by a dedicated fixed charge to cover expenses
Civic Center	N/A	$0	Will be funded by debt and rates
Pipeline-Pinon Hills Road	Increase	$157,300	Adds value to the system, but not yet captured within asset listing
Meter Replacement	N/A	$0	Related to replacement of existing meters; new connections will pay for their meter
Work-in-Progress Total		**$157,300**	
Capital Related Reserves			
Capital Replacement Fund	Increase	$4,568,057	Funding for system improvements, which will increase asset values
Disaster Fund	Increase	$3,807,294	Funding for emergency system replacement, which will increase asset values
Capital Related Reserves Total		**$8,375,351**	
Debt Obligations			
2021 Loan Refinancing	Decrease	($5,149,902)	Remaining outstanding principal of debt
CIEDB No. B14-101	N/A	$0	Funding for existing water rights, which were excluded from asset value
2015 HWY 138 Project	Decrease	($65,332)	Remaining outstanding principal of debt
Debt Obligations Total	**Decrease**	**($5,215,234)**	

Table 4 – Water Buy-In Adjustments

Adjustment Summary	Value ($) [A]	Allocation Basis	Mete Equivalents [B]	$ per ME [C] = B ÷ A
Adjustments				
(+) Capital Work-in-Progress	$157,300	Meter Equivalent	6,454	**$24.37**
(+) Capital Related Reserves	$8,375,351	Meter Equivalent	6,454	**$1,297.78**
(-) Outstanding Debt Principal	(5,215,234.08)	Meter Equivalent	6,454	**-$808.11**
Net Adjustment Unit Rate				**$514.04**

The updated capacity fee using the Buy-In Approach, including adjustments associated with work-in-progress, reserves, and outstanding debt. is shown in Table 5.

Table 5 – Water System Buy-In Component

System Buy-In	$ per ME
Water Infrastructure	$4,932.16
(+) Capital Work-in-Progress	$24.37
(+) Capital Related Reserves	$1,297.78
(-) Outstanding Debt Principal	(808.11)
Total System Buy-In	$5,446.20

Water Rights Component

As part of the updated Capacity Fee, the purchase of additional water rights from the Mojave Basin Watermaster is also incorporated to ensure the CSD can maintain groundwater as its primary source of water. The most recent purchase of water rights from Mojave Water Agency was $5,000 per AF in September 2020. This cost was indexed based on the ENR – CCI to 2022 dollars in line with the CSD's system assets (1 AF of water in 2022 dollars = $5,291). In addition, the Mojave Water Agency has ramped down its water allocations to water agencies. The CSD is subject to a 60% ramp down of its water rights at the time of this report. Therefore, the ramp down coefficient of 60% is incorporated into the calculation of amount of water rights to acquire to serve a new connection. Based on the average water usage of CSD customers and the Max Day Demand of the CSD's system of 1.87 (Master Plan – Section 4.1), a new connection is expected to use an average of 298 gallons per day (gpd) with a peak demand of 557 gpd (298 x 1.87 = 557). This results in a total annual water requirement of 1.04 AF (557 x 365 ÷ 325,850.58 = 0.62 AF ÷ .60 = 1.04 AF) This equates to a cost of $4,801.63 per ME for the Water Rights component, as shown in Table 6.

Table 6 – Water Rights Cost Component

Water Rights	Projected Cost ($ per AF) [A]	Residential Demand [B]	$ per ME [C] = A x B
Mojave Basin Area Watermaster	$5,291	1.04	$5,504.37
Total Water Rights Component			$5,504.37

Table X summarizes the updated capacity fee (rounded to the dollar) which includes the valuation of Existing Asset, Adjustments, and Water Rights.

Table 7 – Capacity Fee Summary

System Buy-In Component	
Water Infrastructure	$4,932.16
(+) Capital Work-in-Progress	$24.37
(+) Capital Related Reserves	$1,297.78
(-) Outstanding Debt Principal	($808.11)
Total System Buy-In	**$5,446.20**
Water Rights Component	
Mojave Basin Area Watermaster	$5,504.37
Water Rights	**$5,504.37**
Total Proposed Water Capacity Fee	**$10,951.00**

Updated Capacity Fees

Table 8 summarizes the proposed water capacity fees by meter size, with the 1" meter set as 1 ME. Capacity fees for new connections increase as the size of the meter increases based on the capacity ratios.

Table 8 – Water Proposed Capacity Fee

Meter Size	Capacity Ratio	Proposed Capacity Fee
1"	1.00	$10,951
1 1/2"	2.00	$21,902
2"	3.20	$35,043
3"	7.00	$76,657
4"	12.60	$137,983
6"	26.00	$284,726
8"	56.00	$613,256
10"	84.00	$919,884

Each subsequent year, the CSD 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.