FLORIN RESOURCE CONSERVATION DISTRICT / ELK GROVE WATER DISTRICT

Capacity Fee Study

FINAL REPORT / MAY 2, 2023

Florin Resource Conservation District

Elk Grove Water District

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May 2, 2023

Mr. Bruce Kamilos, PE
General Manager
Florin Resource Conservation District / Elk Grove Water District
9829 Waterman Rd.
Elk Grove, CA 95624

Subject: Capacity Fee Study – Final Draft

Dear Mr. Kamilos:

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Capacity Fee Study report for the Florin Resource Conservation District / Elk Grove Water District (District). This report explains the methodologies and rationale used to develop the capacity fee for the District's Service Area 1.

It has been a pleasure working with you, and we thank you and District staff for the support provided during the course of this study.

Sincerely,

Theresa Jurotich, PE (KS, WA), PMP
Manager

Charles Diamond
Senior Consultant

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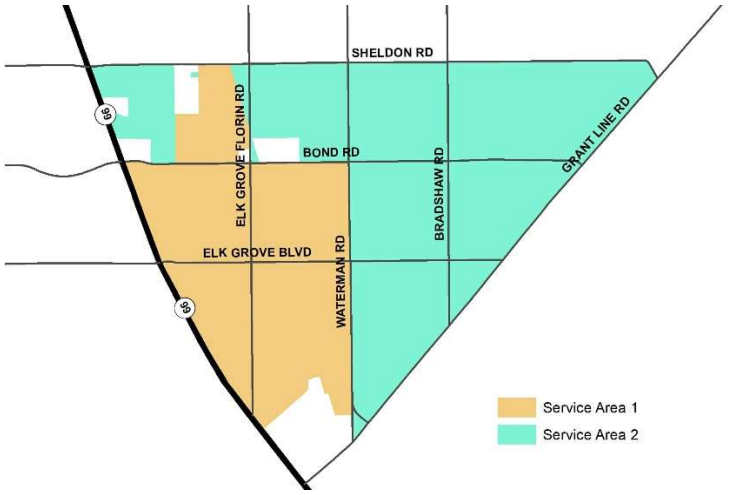
1. Executive Summary

In 2022, the Florin Resource Conservation District / Elk Grove Water District (District) engaged Raftelis to conduct a capacity fee study to update water capacity fees. The study is informed by the legal requirements in California.

The District has two services areas as shown in Figure 1-1. The District owns and operates a water supply, transmission, and distribution system within Service Area 1. In Service Area 2, the District owns the distribution system while the Sacramento County Water Agency owns and operates the transmission and water supply system. Therefore, the District calculates a water capacity fee for Service Area 1. Capacity fees for Service Area 2 are developed by, and paid to, the Sacramento County Water Agency.

Figure 1-1: Elk Grove Water District Service Areas Map



Given the District has available water system capacity, Raftelis used the equity buy-in method to calculate updated capacity fees for Service Area 1. The asset value as replacement cost less deprecation was determined and divided by the existing equivalent meters to determine the updated fees. Table 1-1 presents the projected capacity fees.

Table 1-1: Proposed and Existing Water Capacity Fees[1]

Meter Size	EM Capacity Ratio	Proposed $/EM	Current $/EDU ($/EM)
1"	1.0	**$4,292**	$4,479
1 1/2"	2.0	**$8,584**	$8,958
2"	3.2	**$13,734**	$14,333
3"	7.0	**$30,044**	$26,874
4"	12.0	**$51,504**	$44,790
6"	27.0	**$115,884**	$89,580

[1] Capacity ratios are based on safe operating capacities for the most common meter types used by the District as listed in the American Water Works Association, *Principles of Water Rates, Fees, and Charges,* M1, Seventh Edition

2. Legal Requirements and Fee Setting Methodology

The philosophy that utility services should be paid for by those that receive the service is often referred to as "growth-pays-for-growth." The principal is summarized in the American Water Works Association (AWWA) Manual M26: Water Rates and Related Charges:

> "*The purpose of designing customer-contributed-capital system charges is to prevent or reduce the inequity to existing customers that results when these customers must pay the increase in water rates that are needed to pay for added plant costs for new customers. Contributed capital reduces the need for new outside sources of capital, which ordinarily has been serviced from the revenue stream. Under a system of contributed capital, many water utilities are able to finance required facilities by use of a 'growth-pays-for-growth' policy."*

This principle, in general, applies to water, wastewater, and storm drainage systems. In the excerpt above, customer-contributed-capital system charges are equivalent to capacity fees.

2.1. Capacity Fees Legal Framework and California Requirements

In establishing capacity fees, it is important to understand and comply with local laws and regulations governing the establishment, calculation, and implementation of capacity fees. The following sections summarize the regulations applicable to the development of capacity fees for the District.

Capacity fees must be established based on a reasonable relationship to the needs and benefits brought about by the development or expansion. Courts have long used a standard of reasonableness to evaluate the legality of development charges. The basic statutory standards governing capacity fees are embodied by California Government Code Sections 66013, 66016, 66022 and 66023. Government Code Section 66013 contains requirements specific to determining utility development charges:

> *"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 charge; they must establish a nexus or relationship between a development project and the public improvement being financed with the charge.
- The capacity charge revenue must be segregated from the General Fund in order to avoid commingling of capacity fees and the General Fund.

2.2. Capacity Fees Methodology

Capacity fees are also commonly known as developer fees, development impact fees, connection fees, tap fees, and system development charges, among others. All are one-time capital charges, assessed against a new development (or intensified redevelopment), to recover the proportional share of capacity investment, previously constructed by a utility (or will be constructed), to accommodate growth. Capacity fees are codified in the California Government Code Sections 66000-60025. Capacity fees must reflect the link between the fee imposed on, and the benefit received by, a new connection to the system. The fee charged may not exceed the reasonable share of costs associated with providing the service.

Three different methodologies to calculate capacity fees exist: **buy-in, incremental, and hybrid**; with variations of each dictated by local community and system characteristics, as well as policy objectives. Utilities have broad latitude in the method and approach used to calculate fees provided the fees reflect the benefit of, and do not exceed the costs for, providing service to the connection. These fees are designed to be proportional to the burden placed on the system by new connections. The project team, which includes Raftelis and District staff, decided to use the buy-in approach given the system still has capacity to meet demand.

The "buy-in method" is based on the premise that new customers are entitled to service at the same price as existing customers. Under this approach, new customers pay only an amount equal to the current system value, either using the original cost, replacement cost, original cost less depreciation, or replacement cost less depreciation as the valuation basis. This net investment, or value of the system, is then divided by the current capacity of the system to determine the buy-in cost per unit. For example, if the existing system has 100 units of average use and the new connector uses an equivalent unit, then the new customer would pay 1/100 of the total value of the existing system. By contributing this capacity fee, the new connector has bought into the existing system. The user has effectively acquired a financial position on par with existing customers and will face future capital re-investment on equal financial footing with those customers. This approach is suitable when: (1) agencies have built most of their facilities and only a small portion of future facilities are needed for build-out, (2) agencies do not have a detailed adopted long-term capital improvement plan, or (3) the "build-out" date is so far out in the future that it is difficult to accurately project growth and required facilities with precision.

To estimate the asset value of existing facilities, Raftelis recommends the replacement cost less depreciation (RCLD) method. The current value of water facilities is materially affected by the effects of age. All assets have estimated useful lives, which vary by type. For example, pumps may have a 20-year life, buildings 50 years, and pipelines 80 years. Each year an asset is devalued by the fraction of its useful life to original cost. This is referred to as straight line or linear depreciation. At the end of an asset's useful life, it is worth zero dollars on paper, though it may still be in service. Depreciation accounts for estimated devaluation in system assets caused by wear and tear, decay, inadequacy, and obsolescence. To provide appropriate recognition of the effects of depreciation on existing water systems, the original cost valuation can be inflated to today's dollars rather than the value of the dollar when the asset was placed in service. Original cost and depreciation are inflated using historical indices to reflect today's dollars. Replacement cost depreciation is then subtracted from the replacement cost of the asset to yield replacement cost less depreciation. RCLD allows for an accounting of system assets in present value while also accounting for proportional devaluation via depreciation.

3. Capacity Fees

This section discusses the review and development of an updated water capacity fee for the District.

3.1. Methodology

In California, the basic statutory standards governing water connection, or capacity, fees are embodied in Government Code Sections 66013 et seq. (The Mitigation Fee Act). An important requirement in designing capacity fees is enumerated in Government Code 66013, which requires that capacity fees must be based on an estimate of the reasonable cost of providing capacity. Thus, the primary objectives of establishing full cost recovery capacity fees are to achieve equity in distributing costs and to provide a mechanism by which new users can pay for the cost of the facilities required to serve them, without burdening existing users. In short, the goal of full cost recovery capacity fees is to ensure that growth pays its own way.

Several methods exist to calculate capacity fees. Three main computational approaches are discussed below.

3.1.1. Equity Buy-in Method

The buy-in concept is based on the premise that new users buy into the system and achieve a financial position that is on par with other existing users of the system. In publicly owned systems, most of the assets used to provide service are paid for by users through a system of rates, charges, and taxes. In service areas that experience growth in customers and in quantity of service provided, it is generally true that facilities used by previous customers now serve existing customers. Thus, it is the existing customers who have made the "up-front" investment in the existing system capacity including the unused or "surplus" capacity that is available to serve newly connecting customers.

To foster equity between existing and new users, the new users pay for the cost or value associated with equity of the existing user. If the existing system has 100 units of use and the new user requires one unit of use, then the new user would pay for 1/100 of the value of the existing system. This approach is termed the "equity buy-in" method because by paying for the required capacity, the new user buys into the existing system and thereby achieves financial parity with other existing users. Together, the new and existing users will face future capital challenges on equal footing since equivalent investments have been made. This method is applicable in situations where the existing system has adequate surplus capacity and does not require major upgrades or improvements.

3.1.2. Incremental Cost Method

The incremental method is based on the premise that new development (new users) should pay for the additional capacity and expansions necessary to serve the new development. This method is typically used where there is little or no capacity available to accommodate growth and expansion is needed to service the new development. Under the incremental method, growth-related capital improvements are allocated to new development based on their estimated usage or capacity requirements, irrespective of the value of past investments made by existing customers.

For instance, if it costs X dollars ($X) to provide 100 additional equivalent units of capacity for average usage and a new connector uses one of those equivalent units, then the new user would pay $X/100 to connect to the system. In other words, new customers pay the incremental cost of capacity. As with the equity buy-in

approach, new connectors will effectively acquire a financial position that is on par with existing customers. Use of this method is generally considered to be most appropriate when a significant portion of the capacity required to serve new customers must be provided by the construction of new facilities.

3.1.3. Hybrid

The hybrid approach is typically used where some capacity is available to serve new growth but additional expansion is still necessary to accommodate new development. Under the hybrid approach the capacity fee is based on the summation of the existing capacity and any necessary expansions. In utilizing this methodology, it is important that system capacity costs are not double counted when combining costs of the existing system with future costs from the capital improvement program. Capital costs associated with repair and replacement of the existing system should not be included in the calculation, unless specific existing facilities that will be replaced through the capital improvement program can be isolated and removed from the existing asset inventory and cost basis. In this case, the rehabilitative costs of the capital projects essentially replace the cost of the relevant existing assets in the existing cost basis. Capital improvements that expand system capacity to serve future customers may be included proportionally to the percentage of the cost specifically required for expansion of the system.

3.1.4. Proposed Approach

The approach used in determining capacity fees needs to reflect the system characteristics in addition to meeting regulatory requirements and policy considerations. In determining the District's capacity fees, we recommend the equity buy-in method as the District has no growth projects planned and still has sufficient existing capacity to meet additional demands from new customers.

For the equity buy-in approach, we used the replacement cost less depreciation (RCLD) method to determine the value of the system. This method considers the cost to build new facilities but recognizes that capacity available in existing facilities is not new and is adjusted for depreciation.

3.2. Water Capacity Fee

The District only assesses a capacity fee on new development in Service Area 1 as it owns and operates a water supply, transmission, and distribution system within this area. Within Service Area 2, the Sacramento County Water Agency owns and operates the transmission and supply system, the backbone assets of that system. The District owns the distribution system. Therefore, the District does not access a capacity fee for new customers in Service Area 2; that is done by the Sacramento County Water Agency.

To determine the water system capacity cost (fee), Raftelis calculated the replacement cost of the Service Area 1 backbone system as of December 2022 by inflating historical costs using the annual average Engineering News Record (ENR) Construction Cost Index (CCI) for San Francisco. The backbone system represents those assets such as water supply, treatment, and transmission that are for the benefit of all customers. Assets that serve a portion of the customers are considered non-backbone and are not included in the calculation. To recognize that Service Area 1 is not new, Raftelis subtracted the accumulated depreciation of its backbone assets from the replacement cost to determine the value of the RCLD of Service Area 1 assets. The RCLD of Service Area 1 for the mid-point of FYE 2022 is shown in Line 1 of Table 3-1. Outstanding debt principal is subtracted from this value because the bond or loan holders "own" that portion of the asset value. Additionally, when new users join Service Area 1, they will be responsible for debt payments through the regular fees and charges. New users also benefit from the District's cash reserves, which represent equity

existing users have added to the system. Therefore we subtract outstanding debt (Line 2) and add in cash reserves (Line 3). The resulting value in Line 4 is the adjusted system value.

Table 3-1: Water Capacity Fee Calculation

Line No.	Basis of Proposed Water Capital Fee	Equity Buy-in
	Existing Equity Buy-In Component	RCLD-Total
1	SA1 Backbone System Value	$ 48,877,117
2	Less SA 1 Outstanding Debt Principal (1)	$ 21,488,535
3	SA1 Cash on Hand (1)	$ 10,067,262
4	Adjusted System Value	$ 37,455,844
5	Number of Equivalent Meters (EM) in Service Area 1	8,725
6	Buy-in Unit Charge @ 1" Meter, $/EM	$ 4,292

(1) Allocated to SA1 based on RCLD asset valuation.

We divide the adjusted system value by the number of existing equivalent meters (Line 5) in Service Area 1 to determine the capacity fee for an equivalent meter. The resultant fee for an equivalent 1-inch meter is shown in Table 3-1**,** Line 6.

Equivalent meters shown in Line 5 of Table 3-1 are calculated using a hydraulic capacity (capacity) ratio. The capacity ratio is based on meter hydraulic capacity and is calculated to represent the potential demand on the water system compared to the base meter size. A ratio of hydraulic capacity is calculated by dividing the capacity of a meter at a given size by the base meter capacity using the maximum safe operating flow rates in gallons per minute (gpm). The base meter used in the study is the 1" meter, which is the most common meter size in the District's water system.

Table 3-2 shows the meter capacity and capacity ratio for each meter size. The capacity in gpm is based on the safe operating flow rates provided in the AWWA Manual M1 for the most common meter types used by the District. These ratios reflect an update to the ratios used in prior studies. The capacity ratios (Column C) are calculated by dividing the capacity in gpm (Column B) for each meter size (Column A) by the capacity in gpm for the 1" meter (Column B, Line 1). Column E shows the estimated equivalent meters for Service Area 1 based on the capacity ratio. Meter counts (Column D) at each size are multiplied by the capacity ratio (Column C) to arrive at the total number of equivalent meters. The total number of equivalent meters (Column E, Line 7) matches the number shown in Line 5 of Table 3-1.

Table 3-2: Equivalent Meters

Line No.	Meter (A)	Capacity (gpm) (B)	AWWA Ratio (C)	Service Area 1 Meters (D)	Equivalent Meter (E)
1	1"	50	1.0	7,686	7686
2	1 1/2"	100	2.0	43	86
3	2"	160	3.2	221	707
4	3"	350	7.0	18	126
5	4"	600	12.0	10	120
6	6"	1350	27.0	0	0
7	Total			7,978	8,725

Table 3-3 presents the proposed and existing capacity fees for new water customers in Service Area 1. The proposed fee for each meter size is calculated by multiplying the 1" fee by the corresponding capacity ratio.

Table 3-3: Proposed and Existing Water Capacity Fees

Meter Size	EM Capacity Ratio	Proposed $/EM	Current $/EDU ($/EM)
1"	1.0	**$4,292**	$4,479
1 1/2"	2.0	**$8,584**	$8,958
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