November 8, 2024

Delta Diablo Capacity Charge Study

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Executive Summary

Delta Diablo (District) engaged IB Consulting to update its capacity charges. This Capacity Charge Study Report (Report) describes the approach, methodology, and technical analysis used to derive updated capacity charges per California State Government Code, Section 66013 (GC 66013). GC 66013 allows an agency to charge the estimated reasonable infrastructure cost to serve a new connection for which the charge is imposed.

The existing wastewater capacity charge varies by three service areas (or Zones) and is $3,940 for Bay Point (Zone 1), $4,358 for Pittsburg (Zone 2), and $5,033 for Antioch (Zone 3). These fees are for one Equivalent Residential Unit (1 ERU)[1], reflecting the wastewater facility design requirements of 200 daily gallons of sewer discharge. The strength loading factors for a Residential ERU are 220 mg/L (milligrams per liter) for both Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS), and 400 mg/L for Chemical Oxygen Demand (COD). Based on our analysis, the updated wastewater capacity charge is **$5,471** per ERU for Bay Point (Zone 1) and **$4,886** per ERU for both Pittsburg (Zone 2) and Antioch (Zone 3). The updated fees recover each new connection's proportionate share of treatment facility costs, plus a proportional share of collection facilities costs for Bay Point connections.

Annual Capacity Charge Adjustment

IB Consulting recommends adjusting the capacity charge annually to keep pace with inflation by applying the San Francisco Engineering News-Record Construction Cost Index (SF ENR - CCI). The District should also review its capacity charges every five years, in conjunction with its master plan updates, to capture any significant changes and ensure capacity charges remain equitable.

[1] 1 ERU = 200 gallons of flow per day, BOD = 220 mg/L, TSS = 220 mg/L, and COD = 400 mg/L

Overview

District Background

Located in Contra Costa County, the District provides wastewater treatment services for about 218,000 customers in the cities of Antioch and Pittsburg, and the unincorporated community of Bay Point. The District treats approximately 14.2 million gallons per day (MGD) of wastewater and produces 7.7 MGD of recycled water daily. Pittsburg (Zone 2) and Antioch (Zone 3) only pay for the District's Conveyance and Wastewater Treatment Plant (WWTP), as the collection systems for those service areas are owned and operated by each respective City. However, the collection system for Bay Point (Zone 1) is owned and operated by the District and new connections in Bay Point pay a proportional share of the collection system.

As part of the District's financial plan and rate update, the capacity charges are being reviewed and updated to ensure new system users or existing users requiring increased system capacity pay their fair share of the costs associated with the wastewater facilities required to serve them.

Capacity Charge

A "Capacity Charge" is defined as a charge for public facilities in existence when a charge is imposed or for new facilities to be constructed in the future that benefit the person or property being charged. Capacity charges ensure new development or existing users requiring increased system capacity pay their fair share of the costs associated with the facilities.

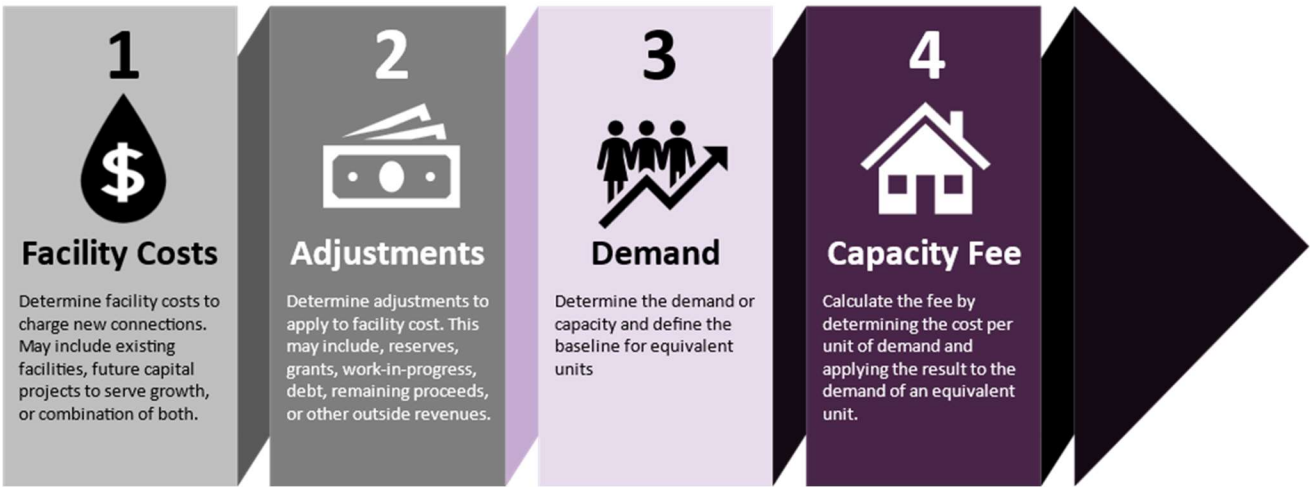
Based on the requirements of GC 66013, capacity charges must be based on the *"reasonable cost"* to accommodate additional demand from new development or the expansion of existing connections. In addition, Proposition 26 amended the State Constitution in 2010, which redefined a "tax" as any levy, charge, or exaction of any kind imposed by a local government. However, there were seven exemptions within Proposition 26, including cost-based charges imposed for providing a service (i.e., capacity charges) so long as such fees do not exceed the cost of providing the service. Therefore, the study summarized in this Report connects the costs of facilities, the capacity of the wastewater system, the increased capacity gained from any expansions, and the updated proposed fees in compliance with the Proposition 26 exemption.

Government Code section 66016.6 requires that prior to levying a new fee or capacity charge, the District evaluate the amount of the fee or capacity charge. The evaluation shall include evidence to support that the fee or capacity charge does not exceed the estimated reasonable cost of providing service, in accordance with Section 66013. This Report meets the requirements of Government Code section 66016.6.

Capacity Charge Methodology

There are four primary steps in calculating capacity charges: (1) determine the cost of facilities and assets recoverable through capacity charges, (2) incorporate any credits or adjustments to apply towards the total infrastructure costs such as grants, existing debt obligations, unspent debt proceeds, and available funding through previously collected capacity charges, (3) identify demand or capacity related to the facilities and define the baseline requirements for a connection or equivalent dwelling unit based on planning documents, 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 Charge Analysis



In addition to the four steps above, there are two primary approaches for calculating capacity charges: the "Buy-In Method" and "Incremental-Cost Method." Selecting the best method depends on the unique circumstances of the utility, existing facilities funded in advance of development, current and future capacity planned to be built in the system, available funding, whether future facilities will be debt-financed, expected future growth, 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.

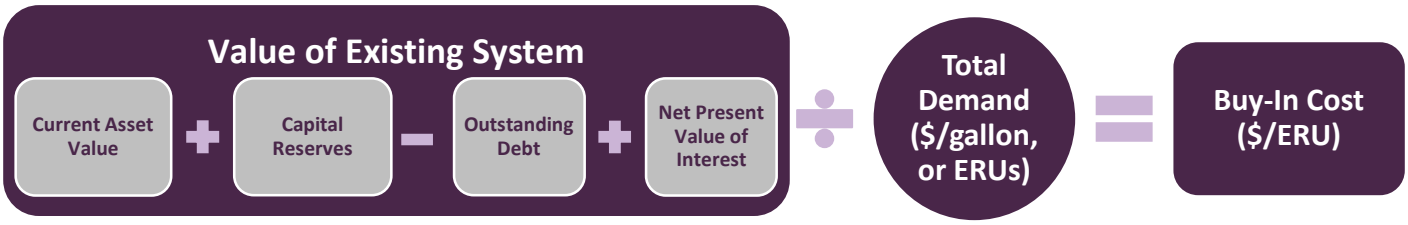
Buy-In Method

The basis of the Buy-In Method is to pay for existing facilities funded in advance of growth. This approach ensures new development and expanded connections buy into the utility system's existing facilities. The Buy-In method eliminates any potential funding of existing system deficiencies as the District's current asset inventory only reflects improvements to the system today.

Once the system value is determined, dividing the total value by the total available capacity derives the buy-in cost per ERU. 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. Demand is measured in gallons per day (gpd) for the wastewater treatment plant capacity and a cost per gallon of capacity is derived. The cost per gallon is multiplied by the daily flow represented by one ERU (the District utilizes 200 gallons per day for facility design) to determine the amount per ERU. Assignment of ERUs to a developing parcel will vary based on land use type, projected wastewater flows, and strength loadings. Therefore, non-residential connections may

be assigned additional ERUs based on the type and strength of the expected discharge from the new connection. Figure 2 shows the framework for calculating the amount related to the buy-in component.

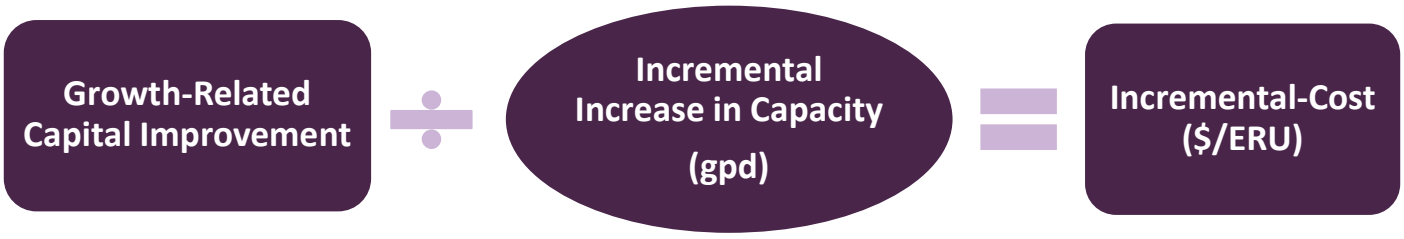
Figure 2 – Buy-In Component



Incremental-Cost Method

The Incremental-Cost Method 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 and required for growth. Projects associated with routine repair & replacement and Master Plan improvements required to address existing deficiencies (*not deficiencies to accommodate growth*) are excluded. Also, specific projects within the Master Plan may benefit existing and new development. In these instances, new development only pays its proportionate share based on the demand or capacity taken from these projects. Under the Incremental-Cost Method, growth-related capital improvements are allocated to new development based on their capacity requirements. Demand is measured in gpd and a cost per gallon of capacity is derived. The cost per gallon is multiplied by the daily flow represented by one ERU to determine the incremental cost per ERU. Figure 3 shows the framework for calculating capacity charges using the incremental cost component.

Figure 3 – Formula for Incremental-Cost Approach



Hybrid Method

When there is both a buy-in component and incremental-cost component used to update capacity charges, the approach is commonly referred to as the Hybrid Method. 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 solely needed to serve new development. ***For this study, the updated wastewater capacity charges are based on the Hybrid Method***.

Capacity Charge Analysis

Step 1 – Asset Valuation (RCLD Asset Value)

This study utilizes the Replacement Cost Less Depreciation (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 District provided 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 SF ENR - CCI, published by the Engineering News-Record. For 2024 (year to date through October), the SF ENR – CCI value is 15,425. Accumulated depreciation was also indexed to maintain consistency with 2024 dollars. Subtracting the accumulated depreciation from the replacement cost yields the updated RCLD and reflects service standards in 2024 dollars. Table 1 summarizes the wastewater assets by category and shows the original cost (OC), accumulated depreciation, replacement cost in 2024 dollars, accumulated depreciation in 2024 dollars, and assets adjusted for the 2024 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. A detailed listing of wastewater assets can be found in Appendix A.

Table 1 – Asset Summary

Asset Summary					
Asset Categories	OC	Accumulated Depreciation	Replacement Cost (2024 $)	RC Accumulated Depreciation (2024 $)	RCLD (2024 $)
	[A]	[B]	[C]	[D]	[E] = C-D
Bay Point Collection	$6,760,048	$1,128,295	$9,096,508	$1,819,988	$7,276,521
Land	$3,771,104	$0	$4,320,035	$0	$4,320,035
Plant Conveyance	$27,460,089	$16,222,638	$61,378,180	$39,776,119	$21,602,061
Storage & Pumping	$50,925,691	$23,810,656	$100,713,108	$56,224,067	$44,489,041
Treatment	$126,193,291	$76,418,097	$258,516,399	$190,842,630	$67,673,768
Equipment	$13,467,966	$9,917,856	$21,694,266	$17,264,154	$4,430,112
General Admin	$17,494,831	$11,345,809	$35,976,199	$24,863,127	$11,113,071
Total Assets	**$246,073,021**	**$138,843,351**	**$491,694,695**	**$330,790,085**	**$160,904,610**

Step 2 - Asset Adjustments

It is also important to identify any adjustments to the RCLD total asset value. Special consideration may be required when assets are acquired through debt financing, contributed by developers, and grant funding. For this study, the adjustments impacting the asset valuation are separated into three components:

***Capital Reserves*:** Includes reserves that provide funding for system improvements, which increases the asset values of the corresponding category. It is reasonable and appropriate to include the balance of the capital-related reserves because they have been built up over time by existing rate customers and will be used to repair or replace aging infrastructure, thereby contributing to the value of the system. Capital reserves will **increase** the system's value as the cash equivalents are available for capital spending. However, previously collected capacity charges (WW Expansion) that have not yet been spent are applied as a credit towards the system asset value. Table 2 identifies the FY 2025 beginning reserve balances for the District.

Table 2 – Capital-Related Reserves

Capital-Related Reserves	
Description	Included Capital-Related Reserves
(+) Capital Asset Fund	$3,542,999
(+) Advanced Treatment Fund	$21,073,154
(+) Capital Asset Replacement Fund	$40,492,969
(+) Bay Point - Collections	$2,555,289
(-) WW Expansion	($15,773,313)
Total Capital-Related Reserves	$51,891,098

Outstanding Principal: Remaining outstanding principal payments of existing bonds and loans. Debt obligations that are funded by sewer rates (Sewer Service Charges or SSCs) reduce the RCLD asset value because the principal must be paid off for the District to realize the RCLD value. Table 3 identifies the amount of outstanding principal remaining for the existing debt for the wastewater system, with FY 2025 as the starting point. For the 2016 “SRF Loan – PB Force Main Improvement,” the debt was apportioned between sewer service charges (i.e., rates) and capacity charges because the improvement provided additional capacity for growth; 75% of the cost is secured by SSCs, and 25% of the cost is secured by capacity charges. The 75% of the outstanding principal associated with SSCs are included in Table 3 since new connections will be paying this portion of the debt through rates. Detailed wastewater debt schedules are in Appendix B.

Table 3 – Outstanding Principal

Outstanding Principal			
Description	Value ($)	Include ?	Included Outstanding Principal
2011 SRF Loan - Aeration Basin Imp Project	$2,589,124	Yes	($2,589,124)
2015 CEC Loan - FOG Receiving Facility	$262,306	Yes	($262,306)
2016 SRF Loan - PB Force Main Imp (SSCs)	$7,123,311	Yes	($7,123,311)
2016 SRF Loan - PB Force Main Imp (CFCC)	$2,291,158	No	$0
2011 Municipal Finance Corp Loan - Solar Project	$989,993	Yes	($989,993)
2015 SRF Loan - BP Pipeline Repair	$887,947	Yes	($887,947)
2016 SRF Loan - BP Pipeline Repair	$1,619,839	Yes	($1,619,839)
2014 SRF Loan - BP 2017 Pipeline Repair	$2,956,392	Yes	($2,956,392)
2014 SRF Loan Pump Station Facilities Repair	$11,519,975	Yes	($11,519,975)
Total Outstanding Principal	**$30,240,045**		**($27,948,888)**

Outstanding Interest: The PB Force Main Improvement included debt financing as a funding source with 25% of the debt secured by capacity charges. The 25% of debt secured by capacity charges must recover the future interest payments through maturity at part of the one-time capacity charges for each new connection.

Outstanding Interest associated with financing requires an additional step to derive the Net Present Value (NPV) of all future interest payments to reflect today's dollars. Paying the total amount of future interest payments in advance, before the interest is incurred, would overcharge new connections. The NPV calculation discounts the future interest payments by 2.282%[2], compounded annually.

Table 4 shows the amount of outstanding interest and the NPV of the outstanding interest using the 2.282% discount factor for the 25% of the PB Force Main Improvement financing.

Table 4 – NPV of Outstanding Interest

NPV of Outstanding Interest				
Description	Total Interest	NPV of Interest	Include ?	Included NPV of Outstanding Interest
2016 SRF Loan - PB Force Main Imp (SSCs)	$1,668,179	$1,420,992	No	$0
2016 SRF Loan - PB Force Main Imp (CFCC)	$511,737	$439,138	Yes	$439,138

The asset adjustments from Table 2 through Table 4 are summarized in Table 5 to show the total asset adjustments.

[2] The discount factor of 2.282% equals the average yield since 2000 of the Treasury Securities at a 3-Year Constant Maturity (Treasury Securities). Treasury Securities are a safe and conservative return on investment for public agency investments.

Table 5 – Asset Value Adjustments

Valuation Adjustments	
Adjustments	Value ($)
(+) Capital Related Reserves	
Capital Asset Fund	$3,542,999
Advanced Treatment Fund	$21,073,154
Capital Asset Replacement Fund	$40,492,969
Bay Point - Collections	$2,555,289
WW Expansion	($15,773,313)
Total Capital Related Reserves	$51,891,098
(-) Outstanding Principal	
2011 SRF Loan - Aeration Basin Imp Project	($2,589,124)
2015 CEC Loan - FOG Receiving Facility	($262,306)
2016 SRF Loan - PB Force Main Imp (CAR)	($7,123,311)
2011 Municipal Finance Corp Loan - Solar Project	($989,993)
2015 SRF Loan - BP Pipeline Repair	($887,947)
2016 SRF Loan - BP Pipeline Repair	($1,619,839)
2014 SRF Loan - BP 2017 Pipeline Repair	($2,956,392)
2014 SRF Loan Pump Station Facilities Repair	($11,519,975)
Total Outstanding Principal	($27,948,888)
(+) NPV of Outstanding Interest	
2016 SRF Loan - PB Force Main Imp (CFCC)	$439,138
Total Adjustments	**$24,381,347**

Step 3 – System Demand/Capacity

The existing demand is reflected by total ERUs and system capacity in gpd. The total design capacity of the wastewater treatment plants does not necessarily reflect the safe operating capacity. Once the plant capacity is close to 85%[3] of total capacity, additional upgrades or capacity expansions are required. Therefore, when deriving capacity-related unit rates, the operating capacity is used. Table 6 summarizes the units of service[4] for the wastewater system.

Table 6 – Wastewater System

Wastewater System Information		
Allocation Basis		Units of Service
Bay Point ERUs	(ERU)	7,452
Operational Capacity	(gpd)	16,900,000
SPI Additional Capacity	(gpd)	3,100,000
Plant Capacity	(gpd)	20,000,000
Pump Station Capacity	(gpd)	1,260,000

Step 4 – Buy-In Component Calculations

The previous steps identified wastewater assets (infrastructure), capital-related reserves, outstanding debt principal, net present value of outstanding interest, and system capacity. The buy-in component can be determined by deriving the cost per ERU of the wastewater assets and adjustments. The net RCLD asset value (Total System Value) of the wastewater treatment plant is divided by the operational plant capacity to derive the unit rate per gallon of operational capacity. For the Bay Point collection system, the current asset value is apportioned over existing Bay Point ERUs, reflecting the value of the collection system on a per ERU basis. The cost per ERU is then derived in Table 7. Regional charges reflect the cost Pittsburg and Antioch will pay, and Bay Point includes the same Regional components plus the Bay Point collection system component.

[3] Operational Capacity is equal to 84.5% of Plant Capacity (20,000,000 gpd x 84.5% = 16,900,000 gpd)
[4] SPI stands for Secondary Process Improvements

Table 7 – Asset Unit Rate ($ per ERU)

Buy-In Asset Unit Rate							
Asset Category	RCLD (2024 $) [A]	Allocation Basis [B]	Units of Service [C]	Unit Rate [D] = A÷C	Conversion Factor [E]	Regional ($/ERU) [F] = DxE	Bay Point ($/ERU) [G] = DxE
Bay Point Collection	$7,276,521	Bay Point ERUs	7,452	$976.45	1	$0	$977
Land	$4,320,035	Operational Capacity	16,900,000	$0.26	200	$52	$52
Plant Conveyance	$21,602,061	Operational Capacity	16,900,000	$1.28	200	$256	$256
Storage & Pumping	$44,489,041	Operational Capacity	16,900,000	$2.63	200	$527	$527
Treatment	$67,673,768	Operational Capacity	16,900,000	$4.00	200	$801	$801
Equipment	$4,430,112	Operational Capacity	16,900,000	$0.26	200	$53	$53
General Admin	$11,113,071	Operational Capacity	16,900,000	$0.66	200	$132	$132
Total	**$160,904,610**					**$1,821**	**$2,798**

Table 8 summarizes the adjustments for capital-related reserves, outstanding principal, and the net present value of outstanding interest with the associated cost per ERU. The cost per ERU is derived for both Regional and Bay Point. Certain debt obligations relate to the Bay Point collection system and are assigned solely to Bay Point.

Table 8 – Adjustments ($ per ERU)

Valuation Adjustments							
Adjustments	Value ($) [A]	Allocation Basis [B]	Units of Service [C]	Unit Rate [D] = A÷C	Conversion Factor [E]	Regional ($/ERU) [F] = DxE	Bay Point ($/ERU) [G] = DxE
(+) Capital Related Reserves							
Capital Asset Fund	$3,542,999	Operational Capacity	16,900,000	$0.21	200	$42	$42
Advanced Treatment Fund	$21,073,154	Operational Capacity	16,900,000	$1.25	200	$250	$250
Capital Asset Replacement Fund	$40,492,969	Operational Capacity	16,900,000	$2.40	200	$480	$480
Bay Point - Collections	$2,555,289	Bay Point ERUs	7,452	$342.90	1	$0	$343
WW Expansion	($15,773,313)	Operational Capacity	16,900,000	($0.93)	200	($187)	($187)
Total Capital Related Reserves	$51,891,098					$585	$928
(-) Outstanding Principal							
2011 SRF Loan - Aeration Basin Imp Project	($2,589,124)	Operational Capacity	16,900,000	($0.15)	200	($31)	($31)
2015 CEC Loan - FOG Receiving Facility	($262,306)	Operational Capacity	16,900,000	($0.02)	200	($4)	($4)
2016 SRF Loan - PB Force Main Imp (SSCs)	($7,123,311)	Operational Capacity	16,900,000	($0.42)	200	($85)	($85)
2011 Municipal Finance Corp Loan - Solar Project	($989,993)	Operational Capacity	16,900,000	($0.06)	200	($12)	($12)
2015 SRF Loan - BP Pipeline Repair	($887,947)	Bay Point ERUs	7,452	($119.16)	1	$0	($120)
2016 SRF Loan - BP Pipeline Repair	($1,619,839)	Bay Point ERUs	7,452	($217.37)	1	$0	($218)
2014 SRF Loan - BP 2017 Pipeline Repair	($2,956,392)	Bay Point ERUs	7,452	($396.72)	1	$0	($397)
2014 SRF Loan Pump Station Facilities Repair	($11,519,975)	Operational Capacity	16,900,000	($0.68)	200	($137)	($137)
Total Outstanding Principal	($27,948,888)					($269)	($1,004)
(+) NPV of Outstanding Interest							
2016 SRF Loan - PB Force Main Imp (CFCC)	$439,138	Operational Capacity	16,900,000	$0.03	200	$6	$6
Total NPV of Outstanding Interest	$439,138					$6	$6
Total Adjustments	**$24,381,347**					**$322**	**($70)**

Table 9 summarizes the total buy-in amount per ERU for Regional and Bay Point rounded to the nearest dollar.

Table 9 – Buy-In Calculation ($ per ERU)

System Buy-In Components		
Description	Regional ($/ERU)	Bay Point ($/ERU)
Wastewater Infrastructure	$1,821	$2,798
(+) Capital Related Reserves	$585	$928
(-) Outstanding Principal	($269)	($1,004)
(+) NPV of Outstanding Interest	$6	$6
System Buy-In per ERU	**$2,143**	**$2,728**

Step 5: Incremental Costs

The capacity charge includes planned capital projects for secondary process and pump station improvements, as shown in Table 10. The secondary process improvements will add an additional 3.1 MGD of capacity and the pump station improvements will add an additional 1.26 MGD of capacity.

Table 10 – Incremental Costs

Incremental-Cost Components	
Capital Projects	Projected Costs
Secondary Process Improvements	$32,550,000
Pump Station Improvements	$4,050,000
Total Incremental Component	**$36,600,000**

Step 6: Incremental-Cost Component Calculations

The incremental costs are associated with constructing additional capacity. Therefore, the project cost is spread over the additional capacity added to the wastewater system in gpd. Table 11 summarizes the cost per gallon of incremental capital projects and the associated cost per ERU for the two service areas.

Table 11 – Incremental-Cost Component ($ per ERU)

Incremental-Cost Components							
Capital Projects	Projected Cost [A]	Allocation Basis [B]	Units of Service [C]	Unit Rate [D] = A÷C	Conversion Factor [E]	Regional ($/ERU) [F] = DxE	Bay Point ($/ERU) [G] = DxE
Secondary Process Improvements	$32,550,000	SPI Additional Capacity	3,100,000	$10.50	200	$2,100	$2,100
Pump Station Improvements	$4,050,000	Pump Station Capacity	1,260,000	$3.21	200	$643	$643
Total Incremental Component						**$2,743**	**$2,743**

Updated Capacity Charges

Table 12 summarizes the updated Regional and Bay Point wastewater capacity charges per ERU by combining the buy-in and the incremental-cost component. Developing parcels will be assigned ERUs on a case-by-case basis to account for total residential dwelling units, total flow, and strength loading in relation to an ERU.

Table 12 – Capacity Charge Summary

Proposed Wastewater Capacity Charge ($/ERU)		
Capacity Fee Components	Regional ($/ERU)	Bay Point ($/ERU)
System Buy-In Component		
Wastewater Infrastructure	$1,821	$2,798
(+) Capital Work-in-Progress	$0	$0
(+) Capital Related Reserves	$585	$928
(-) Outstanding Principal	($269)	($1,004)
(+) NPV of Outstanding Interest	$6	$6
System Buy-In per ERU	$2,143	$2,728
Incremental Component		
Secondary Process Improvements	$2,100	$2,100
Pump Station Improvements	$643	$643
Total Incremental Component	$2,743	$2,743
Total Proposed Wastewater Capacity Fee	**$4,886**	**$5,471**

Annual Capacity Charge Adjustment

In conjunction with adopting the updated wastewater capacity charges, IB Consulting recommends adjusting the capacity charge annually to keep pace with inflation by applying the Engineering News Record Construction Cost Index (ENR). The District should also review its capacity charges every five years, in conjunction with its master plan updates, to capture any significant changes and ensure capacity charges remain equitable.

Appendix A – Asset Listing

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Appendix B – Debt Schedules

Table 13 – Debt Schedules FY 2025 to FY 2034

Financial Information											
Wastewater Debt	*Funding Source*	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034
2011 SRF Loan - Aeration Basin Imp Project	*100% WW CAR*										
Principal		$259,040	$265,776	$272,686	$279,776	$287,050	$294,513	$302,170	$310,027	$318,087	$0
Interest		$67,317	$60,582	$53,672	$46,582	$39,308	$31,845	$24,187	$16,331	$8,270	$0
Subtotal 2011 SRF Loan - Aeration Basin Imp Project		$326,358	$326,358	$326,358	$326,358	$326,358	$326,358	$326,358	$326,358	$326,358	$0
2015 CEC Loan - FOG Receiving Facility	*100% WW CAR*										
Principal		$51,420	$51,936	$52,457	$52,980	$53,513	$0	$0	$0	$0	$0
Interest		$2,495	$1,980	$1,459	$935	$402	$0	$0	$0	$0	$0
Subtotal 2015 CEC Loan - FOG Receiving Facility		$53,916	$53,916	$53,916	$53,916	$53,915	$0	$0	$0	$0	$0
2016 SRF Loan - PB Force Main Imp (CAR)	*75% WW CAR*										
Principal		$249,838	$254,585	$259,422	$264,351	$269,374	$274,492	$279,707	$285,022	$290,437	$295,955
Interest		$132,969	$128,177	$123,294	$118,319	$113,248	$108,081	$102,817	$97,452	$91,985	$86,414
Subtotal 2016 SRF Loan - PB Force Main Imp (CAR)		$382,807	$382,762	$382,716	$382,670	$382,622	$382,573	$382,524	$382,473	$382,422	$382,369
2016 SRF Loan - PB Force Main Imp (CFCC)	*25% WW CFCC*										
Principal		$84,862	$86,474	$88,117	$89,791	$91,497	$93,236	$95,007	$96,812	$98,652	$100,526
Interest		$42,726	$41,098	$39,440	$37,749	$36,027	$34,272	$32,484	$30,662	$28,805	$26,912
Subtotal 2016 SRF Loan - PB Force Main Imp (CFCC)		$127,587	$127,572	$127,557	$127,541	$127,524	$127,508	$127,491	$127,474	$127,456	$127,439
2011 Municipal Finance Corp Loan - Solar Project	*100% WW CA*										
Principal		$110,410	$119,768	$129,682	$140,186	$151,310	$163,086	$175,550	$0	$0	$0
Interest		$47,173	$41,650	$35,662	$29,180	$22,176	$14,620	$6,477	$0	$0	$0
Subtotal 2011 Municipal Finance Corp Loan - Solar Project		$157,584	$161,418	$165,344	$169,366	$173,486	$177,706	$182,028	$0	$0	$0
2015 SRF Loan - BP Pipeline Repair	*100% BP CAR*										
Principal		$34,802	$35,464	$36,137	$36,824	$37,524	$38,237	$38,963	$39,703	$40,458	$41,227
Interest		$16,540	$15,873	$15,193	$14,500	$13,793	$13,073	$12,340	$11,593	$10,831	$10,055
Subtotal 2015 SRF Loan - BP Pipeline Repair		$51,343	$51,336	$51,330	$51,324	$51,317	$51,310	$51,303	$51,296	$51,289	$51,282
2016 SRF Loan - BP Pipeline Repair	*100% BP CAR*										
Principal		$59,997	$61,137	$62,298	$63,482	$64,688	$65,917	$67,170	$68,446	$69,746	$71,072
Interest		$30,207	$29,056	$27,884	$26,689	$25,471	$24,230	$22,966	$21,678	$20,365	$19,027
Subtotal 2016 SRF Loan - BP Pipeline Repair		$90,204	$90,193	$90,182	$90,171	$90,159	$90,148	$90,136	$90,124	$90,111	$90,099
2014 SRF Loan - BP 2017 Pipeline Repair	*100% BP CAR*										
Principal		$84,816	$86,427	$88,069	$89,743	$91,448	$93,185	$94,956	$96,760	$98,599	$100,472
Interest		$55,366	$53,739	$52,081	$50,392	$48,671	$46,917	$45,129	$43,308	$41,452	$39,561
Subtotal 2014 SRF Loan - BP 2017 Pipeline Repair		$140,182	$140,166	$140,151	$140,135	$140,119	$140,102	$140,085	$140,068	$140,051	$140,033
2014 SRF Loan Pump Station Facilities Repair	*100% WW CAR*										
Principal		$301,470	$307,197	$313,034	$318,982	$325,043	$331,218	$337,511	$343,924	$350,459	$357,117
Interest		$216,016	$210,233	$204,341	$198,337	$192,219	$185,984	$179,631	$173,158	$166,561	$159,839
Subtotal 2014 SRF Loan Pump Station Facilities Repair		$517,485	$517,431	$517,375	$517,319	$517,261	$517,202	$517,143	$517,082	$517,020	$516,956

Table 14 – Debt Schedules FY 2035 to FY 2044

Financial Information											
Wastewater Debt	*Funding Source*	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044
2011 SRF Loan - Aeration Basin Imp Project	*100% WW CAR*										
Principal		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal 2011 SRF Loan - Aeration Basin Imp Project		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2015 CEC Loan - FOG Receiving Facility	*100% WW CAR*										
Principal		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal 2015 CEC Loan - FOG Receiving Facility		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2016 SRF Loan - PB Force Main Imp (CAR)	*75% WW CAR*										
Principal		$301,579	$307,309	$313,147	$319,097	$325,160	$331,338	$337,633	$344,049	$350,585	$357,247
Interest		$80,737	$74,953	$69,059	$63,052	$56,932	$50,695	$44,340	$37,864	$31,265	$24,541
Subtotal 2016 SRF Loan - PB Force Main Imp (CAR)		$382,316	$382,262	$382,206	$382,150	$382,092	$382,033	$381,973	$381,912	$381,850	$381,787
2016 SRF Loan - PB Force Main Imp (CFCC)	*25% WW CFCC*										
Principal		$102,436	$104,382	$106,366	$108,387	$110,446	$112,544	$114,683	$116,862	$119,082	$121,345
Interest		$24,984	$23,020	$21,017	$18,977	$16,898	$14,780	$12,621	$10,422	$8,180	$5,896
Subtotal 2016 SRF Loan - PB Force Main Imp (CFCC)		$127,421	$127,402	$127,383	$127,364	$127,344	$127,324	$127,304	$127,283	$127,262	$127,241
2011 Municipal Finance Corp Loan - Solar Project	*100% WW CA*										
Principal		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal 2011 Municipal Finance Corp Loan - Solar Project		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2015 SRF Loan - BP Pipeline Repair	*100% BP CAR*										
Principal		$42,010	$42,808	$43,621	$44,450	$45,295	$46,155	$47,032	$47,926	$48,836	$49,764
Interest		$9,264	$8,459	$7,638	$6,801	$5,948	$5,080	$4,194	$3,292	$2,373	$1,436
Subtotal 2015 SRF Loan - BP Pipeline Repair		$51,274	$51,267	$51,259	$51,251	$51,243	$51,235	$51,227	$51,218	$51,209	$51,201
2016 SRF Loan - BP Pipeline Repair	*100% BP CAR*										
Principal		$72,422	$73,798	$75,200	$76,629	$78,085	$79,569	$81,080	$82,621	$84,191	$85,790
Interest		$17,664	$16,275	$14,859	$13,417	$11,947	$10,449	$8,923	$7,368	$5,783	$4,169
Subtotal 2016 SRF Loan - BP Pipeline Repair		$90,086	$90,073	$90,059	$90,046	$90,032	$90,018	$90,004	$89,989	$89,974	$89,959
2014 SRF Loan - BP 2017 Pipeline Repair	*100% BP CAR*										
Principal		$102,381	$104,326	$106,308	$108,328	$110,386	$112,484	$114,621	$116,799	$119,018	$121,279
Interest		$37,634	$35,670	$33,669	$31,630	$29,552	$27,435	$25,277	$23,079	$20,839	$18,556
Subtotal 2014 SRF Loan - BP 2017 Pipeline Repair		$140,015	$139,996	$139,977	$139,958	$139,939	$139,919	$139,898	$139,878	$139,857	$139,835
2014 SRF Loan Pump Station Facilities Repair	*100% WW CAR*										
Principal		$363,903	$370,817	$377,862	$385,042	$392,358	$399,812	$407,409	$415,150	$423,037	$431,075
Interest		$152,989	$146,009	$138,897	$131,649	$124,264	$116,739	$109,070	$101,256	$93,293	$85,179
Subtotal 2014 SRF Loan Pump Station Facilities Repair		$516,892	$516,826	$516,759	$516,691	$516,622	$516,551	$516,479	$516,405	$516,330	$516,254

Table 15 – Debt Schedules FY 2045 to FY 2053

Financial Information										
Wastewater Debt	*Funding Source*	FY 2045	FY 2046	FY 2047	FY 2048	FY 2049	FY 2050	FY 2051	FY 2052	FY 2053
2011 SRF Loan - Aeration Basin Imp Project	*100% WW CAR*									
Principal		$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest		$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal 2011 SRF Loan - Aeration Basin Imp Project		$0	$0	$0	$0	$0	$0	$0	$0	$0
2015 CEC Loan - FOG Receiving Facility	*100% WW CAR*									
Principal		$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest		$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal 2015 CEC Loan - FOG Receiving Facility		$0	$0	$0	$0	$0	$0	$0	$0	$0
2016 SRF Loan - PB Force Main Imp (CAR)	*75% WW CAR*									
Principal		$364,034	$370,951	$377,999	$0	$0	$0	$0	$0	$0
Interest		$17,688	$10,706	$3,591	$0	$0	$0	$0	$0	$0
Subtotal 2016 SRF Loan - PB Force Main Imp (CAR)		$381,723	$381,657	$381,590	$0	$0	$0	$0	$0	$0
2016 SRF Loan - PB Force Main Imp (CFCC)	*25% WW CFCC*									
Principal		$123,650	$126,000	$0	$0	$0	$0	$0	$0	$0
Interest		$3,569	$1,197	$0	$0	$0	$0	$0	$0	$0
Subtotal 2016 SRF Loan - PB Force Main Imp (CFCC)		$127,219	$127,197	$0	$0	$0	$0	$0	$0	$0
2011 Municipal Finance Corp Loan - Solar Project	*100% WW CA*									
Principal		$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest		$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal 2011 Municipal Finance Corp Loan - Solar Project		$0	$0	$0	$0	$0	$0	$0	$0	$0
2015 SRF Loan - BP Pipeline Repair	*100% BP CAR*									
Principal		$50,710	$0	$0	$0	$0	$0	$0	$0	$0
Interest		$482	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal 2015 SRF Loan - BP Pipeline Repair		$51,192	$0	$0	$0	$0	$0	$0	$0	$0
2016 SRF Loan - BP Pipeline Repair	*100% BP CAR*									
Principal		$87,420	$89,081	$0	$0	$0	$0	$0	$0	$0
Interest		$2,523	$846	$0	$0	$0	$0	$0	$0	$0
Subtotal 2016 SRF Loan - BP Pipeline Repair		$89,943	$89,927	$0	$0	$0	$0	$0	$0	$0
2014 SRF Loan - BP 2017 Pipeline Repair	*100% BP CAR*									
Principal		$123,584	$125,932	$128,324	$130,763	$133,247	$135,779	$138,358	$0	$0
Interest		$16,230	$13,859	$11,444	$8,983	$6,474	$3,919	$1,314	$0	$0
Subtotal 2014 SRF Loan - BP 2017 Pipeline Repair		$139,813	$139,791	$139,768	$139,745	$139,721	$139,697	$139,673	$0	$0
2014 SRF Loan Pump Station Facilities Repair	*100% WW CAR*									
Principal		$439,266	$447,612	$456,116	$464,782	$473,613	$482,612	$491,782	$501,125	$510,647
Interest		$76,911	$68,485	$59,900	$51,151	$42,236	$33,152	$23,896	$14,463	$4,851
Subtotal 2014 SRF Loan Pump Station Facilities Repair		$516,176	$516,097	$516,016	$515,934	$515,850	$515,764	$515,677	$515,588	$515,498