



# WEST BAY SANITARY DISTRICT SEWER CONNECTION FEE STUDY

**Final Report – April 1, 2022**



**HF&H Consultants, LLC**



# **WEST BAY SANITARY DISTRICT**

500 Laurel Street  
Menlo Park, CA 94025



## **CONNECTION FEE STUDY**

*April 1, 2022*

### **HF&H CONSULTANTS, LLC**

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April 1, 2022

Mr. Sergio Ramirez  
District Manager  
West Bay Sanitary District  
500 Laurel Street  
Menlo Park, California, 94025  
**Subject: Connection Fee Update**

Dear Mr. Ramirez,

Connection fees were last updated in 2017. This report documents the results of our analysis of the District's connection fees to update the connection fees based on the current value of capacity that benefits new connections to the District.

Thank you for asking HF&H to assist with this matter.

Sincerely,

HF&H CONSULTANTS, LLC

Rick Simonson, CMC  
Senior Vice President



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## ACRONYMS

BOD	Biological Oxygen Demand
CIP	Capital Improvement Plan
EDU	Equivalent Dwelling Unit; an average single-family residential customer
ENR CCI	Engineering News Record Construction Cost Index
FU	Fixture units
FY	Fiscal Year
GPD	Gallons Per Day
HCF or CCF	Hundred Cubic Feet of metered water; 748 gallons; a cube of water 4.6 feet on edge
I&I	Inflow and infiltration
JPA	Joint Powers Authority
MGD	Million Gallons per Day
MPPS	Menlo Park Pump Station
RCN	Replacement Cost New
SS	Suspended Solids
SVCW	Silicon Valley Clean Water

## ACKNOWLEDGEMENTS

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**WEST BAY SANITARY DISTRICT**

**CONNECTION FEE STUDY**





## SECTION 1: EXECUTIVE SUMMARY

Customers connecting to the District pay connection fees once at the time of connection to reimburse the District for costs incurred to provide capacity for future growth. This report describes the methodology, summarizes the analysis, and includes a comparison with the connection fees charged by the three other JPA member agencies of Silicon Valley Clean Water (SVCW).

### FINDINGS AND RECOMMENDATIONS

- 1. Current connection fees.** The District conducted its last connection fee update in 2017 based on its collection system *Master Plan* prepared by West Yost Associates in 2013, which identified future specific capital improvement projects. Since that time, the District has updated its capital improvement program. Therefore, it is appropriate that the District update its connection fees to reflect changes in its currently planned improvements and the value of its current assets which provide capacity for development.
- 2. Methodology.** In 2011 and 2017, HF&H derived the connection fee using the Replacement Cost New (RCN) method, which is intended to fully recover growth's share of the cost of capacity. We recommend that the District continue using this method. The updated replacement value of the District's facilities is determined to be \$309,894,468, assuming Scenario #2 is used to value the District's sewer mains. Two valuation scenarios are discussed in Section 3.
- 3. System Capacity.** The District's facilities provide 7,200,000 million gallons per day (MGD) of capacity. The District has attributed 200 gallons per day (GPD) as the capacity per single family equivalent dwelling unit (EDU). As a result, the District can accommodate 36,000 EDUs at 200 GPD.
- 4. Connection fees per EDU.** The results of the present analysis increase the current connection fee of \$6,919 per EDU to \$8,608. This amount reflects the changes since 2017, the District's planned capital improvements and the District's share of the retired debt service costs to date for the SVCW capital improvements associated with the treatment plant renovation that began in 2009. The District has discretion to charge less than \$8,608 as this analysis is intended to determine the maximum value of the connection fee. The recommended connection fee is based on computing the value of the District's sewer mains using the approach of Scenario #2 discussed in Section 3. The computed connection fee using the approach of Scenario #1 is included in Section 3, for reference.
- 5. Connection fee per accessory dwelling unit.** Existing laws dictate that connection fees for sewer service should be based either on the size of the accessory dwelling unit or the number of fixture units. In 2017, HF&H recommended the District use fixture units as the basis for charging connection fees for accessory dwelling units. We recommend

that the District continue using this method. To derive the fee per fixture unit, we recommend the District continue using 20 fixture units per EDU based on plumbing code values for the number of fixture units per sink, dishwasher, clothes washer, shower, toilet, etc. for the average single-family home.

6. **Incremental connection fee for remodeling.** The charge per fixture unit used to determine the connection fee for accessory dwelling units can also be used for charging incremental connection fees for remodeling that requires additional capacity in the District's facilities.

## CONCLUSION

The \$1,691 increase in the connection fee, from \$6,919 to \$8,608 per EDU, is primarily attributable to:

1. The infrastructure added by the District since the last update.
2. An increase in asset value of existing infrastructure due to construction cost inflation.
3. The additional retired debt service for capital improvements at the SVCW treatment facility.
4. The inclusion of five years of planned capital improvements for future facilities in the near term.

The value of capacity derived in this report represents the value of a connection in the District's facilities. By paying connection fees, development reimburses the District for costs incurred to provide capacity for future growth. The value of capacity for other purposes, such as leasing or selling capacity, may be different.

## IMPLEMENTATION

Once the District has adopted an updated connection fee based on the findings of this study, we recommend that the District annually update the connection fees by the percentage change in the *Engineering News Record* Construction Cost Index for San Francisco over the next five-year period. The District should plan to conduct detailed connection fee studies approximately every five years in keeping with industry practice, which will reflect other changed conditions, such as capital improvement program assumptions.

## SECTION 2: INTRODUCTION

### DISTRICT BACKGROUND

The District provides wastewater collection and transport services for approximately 55,000 customers in the City of Menlo Park, portions of the Cities of Redwood City, Atherton, Portola Valley, Woodside, East Palo Alto, and unincorporated areas of San Mateo County and Santa Clara County. Wastewater collected in the District's system is transported to the Menlo Park Pump Station (MPPS) where it is pumped to the SVCW plant for treatment.

### CURRENT CONNECTION FEE

The District's current connection fee of \$6,919 per equivalent dwelling unit (EDU) was last studied in detail in 2017.<sup>1</sup> Because the District assigned 200 gallons per day (GPD) per EDU, the \$6,919 connection fee equals \$34.595 per gallon. Commercial customers are charged \$34.595 per GPD based on the estimated wastewater discharge plus \$1,037.70 for 30 GPD of inflow and infiltration (I&I) into the lateral. A Supplementary Connection Fee is also charged for a second connection at the same building equal to \$1,037.70.

### LEGAL REQUIREMENTS

Connection fees are a type of development impact fee that public agencies may impose as a condition of development under the authority of California Government Code Section 66000 et seq., the Mitigation Fee Act. The purpose of these fees is to ensure that development pays its fair share of the costs associated with providing system capacity. Connection fees are a one-time charge paid at the time the connection is made. The Act requires that "those fees or charges shall not exceed the estimated reasonable cost of providing the service". Because the Act does not prescribe a formula or procedure for determining "the estimated reasonable cost," it is the responsibility of the analyst to employ a method that yields a reasonable result.

The courts generally regard fees as being reasonable if they are not capricious, arbitrary, or discriminatory. Fees are capricious if there is no factual basis for the underlying data used to make the calculations. Fees are arbitrary if there is no logical rationale for choosing among alternatives. Fees are discriminatory if they disproportionately allocate costs to one class of service at the expense of another class. The purpose of this report is to document that the conditions have been met to establish that the District's sewer service connection fees are reasonable.

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<sup>1</sup> *Sewer Connection Fee Study*. HF&H Consultants November 2017.

## ANALYTICAL APPROACH

Three steps are required to determine the reasonable costs that can be recovered with connection fees: (1) facilities that benefit growth must be identified, (2) the cost of those facilities must be derived, and (3) the capacity provided by those facilities must be determined. The approach used in this report to address each of these steps is described below.

The District's current fee is based on the replacement cost of its infrastructure assets and land. As such, the current replacement value is dependent on construction cost inflation, which gradually increases over time. The calculation is based on the entire collection system as an integral network without attempting to separate capacity for existing customers from capacity for growth. The current methodology determined the connection fee in terms of the unit cost of capacity in today's dollars.

### Facilities That Benefit Growth

The combination of the existing and future facilities comprises the facilities that will be needed to serve existing and future customers within the foreseeable planning horizon. Existing facilities are included in the connection fee calculation because they provide capacity for existing and future customers. The existing facilities constitute a network with capacity for both existing rate payers as well as capacity for growth.

The inventory of the existing collection systems was compiled by the District as of June 30, 2021. The inventory categorizes facilities by function (i.e., pump stations and flow equalization) or, for *administrative* assets, by description (i.e., land and buildings). A copy of the inventory of existing facilities is shown in **Appendix A**.

The future capital improvements were developed by the District and constitute pay-as-you-go capital projects that are budgeted for the next five years. Future facilities will provide capacity for growth as well as benefit existing ratepayers by improving reliability and upgrading facilities. There are currently no plans for constructing facilities which shall be used exclusively by growth or expanding current facilities to accommodate growth. A copy of the proposed capital improvements is also provided in **Appendix B**.

The combination of the existing and future facilities represents all infrastructure that will be required to meet demands within the near term. Additional facilities introduced will be included in future updates. There will also be other facilities that are currently projected for future construction that are modified or replaced by other facilities. Again, changes like this can be reflected in future updates to the facility inventory.

### Value of Facilities

The determination of reasonable costs begins by determining the value of the existing facilities. The maximum value, RCN, is the amount that it would cost the District to construct its facilities today. This value represents the original cost escalated from the construction date based on

construction cost inflation. By escalating the value, the District is compensated for having constructed capacity for growth, if and when a new customer chooses to connect. In effect, the RCN value represents the cost to construct capacity today.

RCN value also indirectly compensates the District for incurring the subsequent costs of maintaining facilities. By maintaining facilities, the capacity for both existing users and growth maintains its ability to provide service. The District has no choice but to maintain not only the capacity for existing customer but also the unused capacity for growth. The District is entitled to receive reimbursement from growth for having maintained growth's share of capacity. Maintenance and repair costs at least partially offset depreciation. These costs can be reimbursed by not deducting depreciation. In addition, The District incurs the cost of carrying capital costs until they receive reimbursement from growth. It is assumed that the District is indirectly reimbursed for this opportunity cost by not deducting depreciation.

Capital facilities are typically funded either directly from rate revenue on a PAYGo basis or from borrowed funds such as bonds or loans. When borrowed funds are used, it is reasonable for the District to be reimbursed for the debt service they have retired but not for the outstanding debt. Hence, in the case of debt-funded infrastructure, it is appropriate to include the cumulative principal and interest cost that the District has incurred instead of the full acquisition cost. In this way, growth is not reimbursing the District for borrowed funds.

Contributed capital can be excluded for facilities that do not provide system-wide capacity such as in-tract facilities, which includes customer meters, services, and laterals. In-tract facilities are facilities constructed by developers specifically for the benefit of subdivisions without any additional capacity for other connections. Data is often not available to estimate exactly how much capital was contributed by developers. However, reasonable estimates can be made to minimize how much contributed capital is included in the connection fee calculation so that double counting is avoided.

For purposes of this study, the RCN value should be considered the maximum justifiable value.

### Capacity in Facilities

The proposed connection fee relies on the available capacity in the collection system. Capacity was based on the estimated total number of equivalent dwelling units at build-out. In effect, the approach follows the *buy-in*, or *average cost*, methodology. By using the buy-in methodology, it was not necessary to determine the portion of facilities that is attributable to growth, as is done in some connection fee studies.

The connection fee represents the unit cost of capacity. The unit cost is determined by dividing the value of the facilities by the capacity available in the system. Total capacity available in the system relies on a standard capacity per connection. In this way, the connection fee is the average cost paid by today's connections. In order to join the system, new connections need to pay the average cost so that they are at the same level of capital participation as existing

connections so that all connections have borne an equivalent cost. The connection fee should not be viewed as the cost of a share in the facilities. Paying a connection fee does not convey an ownership share in the facilities. Paying a connection fee only provides reimbursement to those who bore the cost of providing capacity for future connections.



## SECTION 3: CALCULATION METHODOLOGY

### FACILITIES INCLUDED IN CALCULATION

Most of the existing facilities constitute the transmission system, which is well documented and represents a District-wide network of pipelines that provide capacity for existing ratepayers as well as for the growth expected during the next five years. The inventory of sewer mains and pump stations used in the 2017 *Connection Fee Study* was adjusted for additions, retirements, and replacement of assets. The inventory of other existing assets (Land, Pump Stations, Fleet, Buildings, Plant & Administrative, and Flow Equalization Facilities) was provided by the District and represents assets in operation as of June 30, 2021.

The future facilities planned during the next five years were derived from the District's updated capital improvement plan. Future facilities will provide capacity for growth as well as benefit existing ratepayers by improving reliability and upgrading facilities. These future facilities are included because it is expected that they will also provide capacity for growth during the study period.

Connection fees are used to recover growth's fair share of the costs of existing facilities that provide capacity for growth. Growth can occur anywhere within the service area. Hence, the facilities required to serve the District's current customers are the same facilities that provide service for growth.

The combination of the existing and future facilities represents all infrastructure that will be required to meet demands within the near term. Undoubtedly, there will be additional facilities that should be included in future updates. There will also be other facilities that are currently projected for future construction that are modified or replaced by other facilities. Again, changes like this can be reflected in future updates.

**Figure 3-1** summarizes the current and planned facilities that are included in the connection fee calculation.

**Figure 3-1. Facility Costs Recovered by Connection Fees**

Type of Facility
Sewer Mains
Land
Pump Stations
Fleet
Plant & Administration
Buildings
Flow Equalization Facilities

While **Figure 3-1** identifies the facilities included in the calculation, it is important to point out facilities excluded from the calculation, as well. Assets associated with Sharon Heights Recycled Water Facility were not included. This facility does not benefit all customers within the District, nor does it provide capacity for growth. Instead, this facility provides recycled water for the specific benefit of Sharon Heights Golf & Country Club. Therefore, the value of these facilities was not included.

## VALUE OF FACILITIES

The 2017 *Connection Fee Study* updated the number of linear feet of sewer pipe laid in the District, the diameter of the pipes, the original construction cost based on the year of construction, and the replacement cost in current dollars. We determined any additions, along with retirements, by comparing the total linear feet of pipe (by diameter) in the 2017 *Connection Fee Study*, to the total linear feet of pipe (by diameter) provided by the District staff.

Existing facilities were then valued by escalating the original construction costs to current year costs using the *Engineering News Record Construction Cost Index (ENR CCI)* for San Francisco as of June 2021. An updated inventory of the existing facilities is shown in **Appendix A**. The value of future facilities in the capital improvement program for the next five years is presented in current dollars.

Two approaches used to derive the value of the District's existing sewer mains yielded a contrast in the total value of the system. As the largest component of the system value, the range in value of the sewer mains directly influences the computed connection fees. The first approach (Scenario #1 in **Figure 3-2**) assumes replacement of all existing sewer mains at the current replacement cost per linear foot. Current supply shortages, permitting costs, and construction materials have inflated current replacement costs. For reference, in Scenario #1 the replacement cost per linear foot of 6" main is \$310. In the previous study, the replacement cost for a sewer main with an identical diameter was \$73. An increase of more than 300% from the previous study emphasizes the current replacement cost may be influenced by more than sustained increases to construction costs.

The second approach (Scenario #2 in **Figure 3-2**) escalates the 2015 replacement cost from the previous connection fee study to 2021 using the ENR CCI for San Francisco as of June 2021. Scenario #2 determined a replacement cost per linear foot of 6" main equal to \$111, only a 52% increase from the previous study replacement cost. Scenario #2 leads to a more conservative valuation of the District's sewer mains.

Our recommendation is to use Scenario #2, the more conservative approach to value the District's sewer mains. The current climate of inflation and material shortages is the product of economic uncertainty brought on by the COVID-19 pandemic. With time, material supply chains will re-stabilize, and inflation will return to more historic levels. Scenario #1 considers replacement values under a set of circumstances that are a departure from typical norms. As a result, higher replacement costs reflect this outlier scenario. In contrast, the approach used in

Scenario #2 to escalate 2015 replacement costs to 2021 levels reflects only the change in construction costs relative to the past. The result is a more pragmatic valuation, absent of current pandemic-related abnormalities.

The District's five-year capital improvement program (CIP) has been included as a component of the valuation of the system. This connection fee analysis looks forward five years until the next update. As such, the value of the system includes existing facilities and planned, future facilities that will be added to the system to support capacity. If these planned, future facilities were not included, the analysis would be out of date before the next connection fee update occurred. The District's five-year CIP is included to reflect the true cost of capacity to be provided by these improvements once built. A copy of the District's CIP program is shown in **Appendix B**.

The retired debt service on the SVCW CIP, paid by the District, is also included in the District's connection fees. SVCW's CIP began in 2009 and is funded by bonds and loans with repayment periods of at least 25 years. The SVCW debt service is allocated among the four member agencies based on their shares of capacity; the District's share is currently about 27%. The District's debt service payments have grown as additional bonds and loans have been issued since 2009. Beyond the next five years, the District is scheduled to begin making payments for their share of new WIFIA loans. Once initiated, these payments should be added to the District's register of retired debt service in future connection fee updates. An inventory of the District's retired debt service is shown in **Appendix C**.

The SVCW CIP has been underway since 2009. The District's cumulative share of SVCW debt service to date has grown from \$10.2 million in 2017 to \$35.6 million, but still represents a small portion of the overall connection fee. However, the District's nearly one-quarter share of almost \$1 billion in estimated project costs will continue to grow, particularly when financing costs are included. All of the principal and interest should be included in deriving the District's connection fees because it represents a cost borne by the District for facilities that benefit growth.

Since the previous study, the District has used reserves to reduce its total of SVCW debt service. The \$13 million reduction of debt service the District paid in 2019 and 2020 has been included in the valuation of the system to reflect the District's cost to provide capacity.

The value of the District's existing and future assets is summarized in **Figure 3-2** on the next page.

**Figure 3-2. Infrastructure Assets**

	Replacement Cost New Scenario #1	Replacement Cost New Scenario #2
Sewer Mains	\$535,563,632	\$188,816,838
5-Year CIP Projects	\$45,239,500	\$45,239,500
Pump Stations	\$12,121,354	\$12,121,354
Other Assets (Land, Fleet, Buildings, FEF)	\$15,051,957	\$15,051,957
SVCW Debt Buydown	\$13,000,000	\$13,000,000
Retired Debt Service through FY 2020-21	\$35,664,819	\$35,664,819
Total Asset Value	\$656,641,261	\$309,894,468

**CAPACITY IN FACILITIES**

The District’s *Master Plan* from 2013 identified a total projected system capacity of 7.2 MGD. This figure was used for the *2017 Connection Fee Study* and has been used reconfirmed for this study. This 7.2 MGD capacity was then divided by standard flow per EDU to determine the number of EDUs that can be accommodated by the current capacity in the system.

District staff continues to recommend assuming the standard flow of 200 GPD per EDU, in line with the *2017 Connection Fee Study*, the estimated average use has not changed since 2017. This flow provides capacity for average flows per EDU that the District is currently experiencing plus an allowance for I&I. Dividing 7.5 MGD by the standard flow per EDU, 200 GPD, yields a capacity of 36,000 EDUs, as shown in **Figure 3-3**.

**Figure 3-3. Capacity in Collection Facilities – EDUs**

System Capacity	
Total Dry Weather Flow (gpd)	7,200,000
Average Flow per EDU (gpd)	200
Capacity (EDUs)	<b>36,000</b>

**CONNECTION FEES**

The value of the facilities in **Figure 3-2** serves as the basis for the connection fee. The connection fee is determined by dividing the values in **Figure 3-2** by the Total EDUs shown in **Figure 3-3**. The resulting connection fee per EDU is shown in **Figure 3-4** below.

In addition to the connection fee per EDU, **Figure 3-4** provides the capacity charge per gallon for commercial connections and the capacity charge per fixture unit (FU) for residential accessory dwelling units or remodels. Commercial connections would multiply the connection charge per gallon by the projected volume of wastewater discharged per day. The connection fee per FU would be multiplied times the number of FUs in the accessory dwelling unit to charge a connection for the accessory dwelling unit. The District will continue to use 20 FUs per

EDU as the basis for charging accessory dwellings. The charge per fixture unit could also be applied for remodeling projects that require additional wastewater capacity. For example, adding a bathroom with a shower, sink, and toilet would require six additional FUs. Similarly, commercial remodeling that requires additional FUs could be charged an incremental connection fee.

The connection fees shown below represent the maximum unit cost the District could charge, based on the calculated unit cost of capacity. However, the District has discretion to set the connection fee as something less, if desired. We recommend the District adopt the proposed connection fees using the Scenario #2 values for reasons previously discussed. The connection fee per EDU would increase from \$6,919 to \$8,608.

**Figure 3-4. District's Connection Fee Calculation**

	<u>Scenario #1</u>	<u>Scenario #2</u>
<b>Total System Value</b>	\$656,641,261	\$309,894,468
<b>System Capacity</b>		
Total Dry Weather Flow (gpd)	7,200,000	7,200,000
Average Flow per EDU (gpd)	<u>200</u>	<u>200</u>
Capacity (EDUs)	<b>36,000</b>	<b>36,000</b>
<b>Capacity Charge per EDU</b>		
Total Assets	\$656,641,261	\$309,894,468
Total EDUs	<u>36,000</u>	<u>36,000</u>
<b>Charge per EDU</b>	<b>\$18,240</b>	<b>\$8,608</b>
<b>Capacity Charge per Gallon</b>		
Capacity Charge per EDU	\$18,240	\$8,608
Average Flow per EDU (gpd)	<u>200</u>	<u>200</u>
<b>Charge per Gallon</b>	<b>\$91.20</b>	<b>\$43.04</b>
<b>Capacity Charge per Fixture Unit</b>		
Capacity Charge per EDU	\$18,240	\$8,608
Fixture Units per EDU	<u>20</u>	<u>20</u>
<b>Charge per Fixture Unit</b>	<b>\$912.00</b>	<b>\$430.40</b>

The capacity charge per gallon calculated in **Figure 3-4** assumes a maximum strength concentration of 300 mg/l of Biological Oxygen Demand (BOD) and Suspended Solids (SS). Connections discharging wastewater with strength concentrations exceeding this threshold must also be addressed. To do so, a strength component is added to the calculation of connection fees for Non-Residential Use exceeding 300 mg/l. The strength component portion of the District's valuation is assumed as all retired debt service payments made to SVCW for treatment-related infrastructure, plus the previous SVCW debt buydown performed by the District. **Figure 3-5** demonstrates how the strength component is derived.

**Figure 3-5. District's Strength Component of Connection Fee Calculation**

	<b>RCN Value</b>
SVCW Debt Buydown	\$13,000,000
Retired Debt Service through FY 2020-21	\$35,664,819
<b>Total System Value</b>	<b>\$48,664,819</b>
Capacity Charge per EDU	<u>36,000</u>
Charge per EDU	\$1,351.80
Average Flow per EDU (gpd)	<u>200</u>
<b>Treatment Charge per Gallon</b>	<b>\$6.76</b>

The treatment charge per gallon is multiplied by the average daily flow and the strength ratio. The strength ratio is the ratio of the connection's highest BOD concentration or SS concentration to 300 mg/l. The portion of the capacity charge per gallon associated with collection functions of the system is the total charge less the treatment charge (\$43.04 - \$6.76 = \$36.28). The full equation to calculate the connection fee for a single Non-Residential connection, with a discharge strength concentration exceeding 300mg/l, accounts for both the treatment and collection components of the District's system value:

$$= \$36.28/\text{GPD} \times \text{average daily flow (GPD)} + \$6.76/\text{GPD} \times \text{strength ratio}^* \times \text{average daily flow (GPD)}$$

*\*strength ratio defined as ratio of highest BOD concentration or SS concentration to 300 mg/L*

A supplementary connection will be charged for additional connections at the same building. The revised fee is based on the current fee assumption of 30 GPD attributed to each sewer lateral connection. Therefore, the revised supplementary connection fee proposed is \$1,291.20, the product of the flow rate per sewer lateral multiplied by the capacity charge per gallon, \$43.04.

## SECTION 4: CONNECTION FEE COMPARISON

**Figure 4-1** compares residential connection fees among the SVCW members. The District's proposed fee of \$8,608 per dwelling unit is neither the highest nor the lowest among this peer group. This figure also indicates the flow per EDU used by each SVCW member agency to determine their respective fee per dwelling unit.

**Figure 4-1. Comparison of Residential Connection Fees**

SVCW Member	Connection Fee (\$/DU)	Assumed Flow/EDU
<b>WBSD</b>		
Current	\$6,919	200 GPD
Proposed	\$8,608	200 GPD
<b>San Carlos</b>		
Single Family	\$10,811	190 GPD
Multi Family	\$5,000	120 GPD
<b>Redwood City</b>	\$960	270 GPD
<b>Belmont</b>	\$9,889	270 GPD

**Figure 4-2** compares commercial connection fees among the SVCW members.

**Figure 4-2. Comparison of Commercial Connection Fees**

SVCW Member	Connection Fee (\$/unit)	Connection Fee (at 300 GPD)
<b>WBSD</b>		
Current	\$34.59/GPD	\$10,377
Proposed	\$43.04/GPD	\$12,912
<b>San Carlos</b>	\$56.90/GPD	\$17,070
<b>Redwood City</b>	\$960/2,000 sq. ft.	\$4,800 at 10,000 sq. ft.
<b>Belmont</b>	\$36.63/GPD	\$10,989

The District's proposed fee of \$43.04 per GPD is also neither the highest nor the lowest among this peer group. This figure also indicates what the connection fee would be for each SVCW member agency based on 300 GPD<sup>2</sup>. Note, the District's proposed and current fees calculated are assumed to have a strength concentration less than or equal to 300 mg/l.

As of the writing of this report, limited information was available for how the other SVCW member agencies determine their connection fees for accessory dwelling units (ADUs). Applicants for ADUs in San Carlos pay a connection fee proportionately in relation to the square footage of a typical single-family dwelling if the ADU footprint is greater than 750 square feet. However, no connection fee information was available for ADUs that are less than 750 square feet. Also, no information was available to describe how Redwood City and Belmont determine their connection fees for any size of ADUs.

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<sup>2</sup> The District charges a minimum commercial connection fee based on 300 GPD. Projected discharge less than 300 GPD is subject to the minimum charge.



## **APPENDIX A: FIXED ASSET LIST**

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West Bay Sanitary District  
 Connection Fee Model  
 Tab 3. Fixed Asset Listing

Asset Type	Asset #	Asset Description	Acquired	Date In Service	Acquisition		Cost/Basis	ENR CCI Index	ENR CCI Ratio	RCN Value
					Year					
		Land	7/1/15		2015		44,467	11,155.41	1.19	52,741.80
	<b>Total Land</b>						<b>44,467</b>			<b>52,741.80</b>
Pump Stations	404	Henderson Pump Station	7/91	7/1/1991	1991		525,766	6,222.06	2.13	1,118,039.95
Pump Stations	545	Grinder Pump Main Proj 1749.9	9/01	9/1/2001	2001		67,251	7,399.07	1.79	120,260.33
Pump Stations	579	Menlo Ind Pump Sta	06/03	7/1/2003	2003		501,159	7,788.80	1.70	851,340.70
Pump Stations	16	Willow Road Ps			1980		27,285	4,371.96	3.03	82,574.59
Pump Stations	325	Univ & Illinois Ps Improv			1985		87,960	5,055.04	2.62	230,228.04
Pump Stations	326	Willow Road Pump Station			1980		330,507	4,371.96	3.03	1,000,238.25
Pump Stations	333	Stowe Ln Ps Impr			1959		51,594	979.66	13.51	696,830.42
Pump Stations	416	2 Ram Sewage Pumps-Stowe Ln.			1959		24,170	979.66	13.51	326,442.31
Pump Stations	422	2 Multiquip Gens/Switches			1992		98,789	6,294.84	2.10	207,646.05
Pump Stations		GASB 34 Implementation Adjustment - Infrastructure	6/30/04	7/1/2004	2004		1,732,644	8,228.39	1.61	2,786,077.62
Pump Stations	581	University Pump Station	07/04	7/1/2004	2004		91,369	8,228.39	1.61	146,920.74
Pump Stations	594	Install New Mq25 Diesel Generator (University Ps)	4/05	4/1/2005	2005		24,818	8,462.45	1.56	38,803.29
Pump Stations	687	Illinois Pump Station - Xfer From Cip	12/09	1/1/2010	2009		912,493	9,722.17	1.36	1,241,837.63
Pump Stations	702	Flyght Pump For Hamilton Ps	4/30/2011	5/1/2011	2011		29,662	10,204.79	1.30	38,459.34
Pump Stations	703	Gorman 6" Portable Pump	6/24/2011	7/1/2011	2011		31,027	10,204.79	1.30	40,228.59
Pump Stations	754	Willow Road Ps Control Panel-Construction	6/30/13	7/1/2013	2013		109,871	10,898.84	1.21	133,383.01
Pump Stations	793	Sausal Vista Ps	11/30/16	12/16/2016	2016		1,354,419	11,609.44	1.14	1,543,619.60
Pump Stations		Pump & Panel Replacements		7/1/2017	2017		25,893	12,014.72	1.10	28,514.55
Pump Stations	794	Sausal Vista Ps II	2/28/17	3/1/2017	2017		1,215,564	12,014.72	1.10	1,338,637.04
Pump Stations		O'Brien & University Pump Station - Tank Replacement	11/8/19	12/1/2019	2019		21,731	12,764.52	1.04	22,525.51
Pump Stations		Pump & Panel Replacements	2/5/20	2/5/20	2020		20,960	13,168.76	1.00	21,058.96
Pump Stations		Bayside Equipment: Willow Pump Station - Diesel Pump	6/26/20	7/1/2020	2020		20,886	13,168.76	1.00	20,985.14
Pump Stations		Air & Lube Systems: Diesel Tanks Replacements	6/30/20	7/1/2020	2020		52,759	13,168.76	1.00	53,009.30
Pump Stations		34 Hp Flygt Pump	6/2/21	6/9/21	2021		33,693	13,231.18	1.00	33,692.70
	<b>Total Pump Stations</b>						<b>7,392,271</b>			<b>12,121,353.65</b>
Fleet	551	21002 Gmc Camera Van - 216	9/02	10/1/2002	2002		191,793	7,644.46	1.73	331,959.75
Fleet	575	2004 Sewer Rodder #204	6/04	7/1/2004	2004		81,790	8,228.39	1.61	131,516.97
Fleet	449	Case 580Sk Loader Backhoe	7/94	8/1/1994	1994		51,684	6,530.35	2.03	104,717.18
Fleet	538	Bobcat Skid Loader	10/01	11/1/2001	2001		41,225	7,399.07	1.79	73,718.87
Fleet	557	2003 Intl Sewer Van-Model 7400 - 215		11/1/2006	2006		115,890	9,108.66	1.45	168,341.08
Fleet	682	Unit 203 - Rehab Truck	01/09	3/1/2009	2009		120,213	9,722.17	1.36	163,601.83
Fleet	704	Unit 214 - Source Control Vehicle	10/1/10	11/1/2010	2010		33,035	10,120.29	1.31	43,189.67
Fleet	706	Unit 217 - Pump Station Truck	6/1/11	7/1/2011	2011		49,514	10,204.79	1.30	64,198.65
Fleet	707	Ditch Witch Equip. Co. Inc.	5/11/11	6/1/2011	2011		67,617	10,204.79	1.30	87,669.79
Fleet	723	Unit 220 - F550 2012	3/31/12	4/1/2012	2012		46,127	10,355.09	1.28	58,938.25
Fleet	724	Unit 206 - Maint Sup Expedition 2012	3/31/12	4/12/2012	2012		34,432	10,355.09	1.28	43,995.16
Fleet	725	Unit 210 - Pump Station Truck 2012 F550	3/31/12	4/12/2012	2012		112,444	10,355.09	1.28	143,674.46
Fleet	726	Harben 1/2" Jetter For Unit 220	6/30/12	7/12/2012	2012		45,309	10,355.09	1.28	57,893.10
Fleet	741	Jet/Vac Combo Unit	3/30/2013	4/13/2013	2013		329,414	10,898.84	1.21	399,908.41
Fleet	742	Ford Cmax Unit 201 - Replacement (2002)	6/30/2013	7/13/2013	2013		29,841	10,898.84	1.21	36,226.76
Fleet	768	Cctv Step Van System	4/30/2014	5/1/2014	2014		271,505	10,915.84	1.21	329,093.50
Fleet	766	Unit 208 - Replacement (2006)	2/1/2014	3/1/2014	2014		54,645	10,915.84	1.21	66,235.67
Fleet	771	Source Control Pickup	2/18/2015	2/18/2015	2015		34,782	11,155.41	1.19	41,254.01
Fleet	772	Hydrojet	6/30/2015	6/30/2015	2015		248,913	11,155.41	1.19	295,229.90
Fleet	785	Case Backhoe	2/5/2016	3/1/2016	2016		126,984	11,609.44	1.14	144,722.45
Fleet	797	2016 F-150 Pickup Unit 202	Mar-17	4/1/2017	2017		32,279	12,014.72	1.10	35,547.17
Fleet	798	Ford Explorer Unit 207	Mar-17	4/1/2017	2017		41,334	12,014.72	1.10	45,518.97
Fleet	813	Construction Inspector Vehicle - Unit 211	Jan-18	2/1/2018	2018		34,635	12,115.37	1.09	37,824.84

West Bay Sanitary District  
 Connection Fee Model  
 Tab 3. Fixed Asset Listing

Asset Type	Asset #	Asset Description	Acquired	Date In Service	Acquisition		Cost/Basis	ENR CCI Index	ENR CCI Ratio	RCN Value
					Year					
Fleet	814	Heavy Duty Pu - Rehab Unit 209	May-18	5/1/2018	2018		109,256	12,115.37	1.09	119,318.35
Fleet	829	Unit 223 - F250 (Ops Sup Vehicle), Truck 33,203.70	12/30/2018	1/1/2019	2019		34,887	12,764.52	1.04	36,162.29
Fleet		National Auto Fleet: Replace Unit 206	12/9/2019	1/1/2020	2020		46,794	13,168.76	1.00	47,016.06
Fleet		Replace Unit 208	1/20/20	2/1/2020	2020		54,957	13,168.76	1.00	55,217.28
Fleet		National Auto Fleet: 2019 Ford F-550, Unit 226 (Cc)	1/20/20	2/1/2020	2020		52,899	13,168.76	1.00	53,149.59
Fleet		Harben Jetter: Underground Inc: Pipehunter Unit 226	2/27/20	3/1/2020	2020		167,172	13,168.76	1.00	167,964.49
Fleet		2020 Ford Ranger Truck	8/24/20	8/24/2020	2020		42,738	13,168.76	1.00	42,940.64
Fleet		Pipehunter (Hoses & Camera Reel Spares)	10/8/2020	10/8/2020	2020		23,250	13,168.76	1.00	23,359.81
Fleet		New Super Duty F350 With Crane, Unit 217	8/25/20	9/1/2020	2020		87,290	13,168.76	1.00	87,703.47
<b>Total Fleet</b>							<b>2,814,646</b>			<b>3,537,808.44</b>
Plant & Admin	484	Base Mapping System	7/95		1995		65,087	6,558.16	2.02	131,313.79
Plant & Admin	497	Roof Repair-Corp Yard	9/96		1996		35,254	6,629.61	2.00	70,359.32
Plant & Admin	531	Telemetry System	2/01		2001		80,182	7,399.07	1.79	143,383.24
Plant & Admin	550	Tsurumi Heavy Duty Trash Pump	07/02	7/1/2002	2002		20,529	7,644.46	1.73	35,531.94
Plant & Admin	435	Generator-110 Kw Mq125 W/Watt	3/01		2001		42,043	7,399.07	1.79	75,182.03
Plant & Admin		needs asset #	06/04		2004		126,387	8,228.39	1.61	203,229.50
Plant & Admin	631	Asphalt Roller (Pape)	10/06	11/1/2006	2006		25,340	9,108.66	1.45	36,809.07
Plant & Admin	637	Air Compressor (Ingersol)	01/07	2/1/2007	2007		31,806	9,131.81	1.45	46,084.16
Plant & Admin	660	Trailer Jetter Model #Usj4018-600	9/6/2007	10/1/2007	2007		51,307	9,131.81	1.45	74,339.84
Plant & Admin	715	K2Reel Portable Mainline Inspection System	6/1/11	7/1/2011	2011		59,978	10,204.79	1.30	77,765.75
Plant & Admin	729	District Office Upgrades	12/31/11	1/12/2012	2012		9,067	10,355.09	1.28	11,585.33
Plant & Admin	747	Narrow Band- Mobile, Portable And Base Radios	3/31/13	4/1/2013	2013		23,763	10,898.84	1.21	28,848.78
Plant & Admin	787	Cusi Billing Software	6/30/16	7/1/2016	2016		82,906	11,609.44	1.14	94,487.27
Plant & Admin	801	Flow Meters	2/17/17	3/1/2017	2017		138,523	12,014.72	1.10	152,548.12
Plant & Admin	802	Cusi Billing Software	3/17/17	4/1/2017	2017		45,194	12,014.72	1.10	49,769.78
Plant & Admin	816	Sewer System Model Software	3/31/2018	4/1/2018	2018		45,000	12,115.37	1.09	49,144.45
Plant & Admin	817	Flow Meters	5/1/2018	6/1/2018	2018		46,334	12,115.37	1.09	50,601.80
Plant & Admin		Cctv Mainline Camera	8/2/2019	8/1/2019	2019		30,075	12,764.52	1.04	31,174.88
Plant & Admin		Standby Generator	2/12/2020	3/1/2020	2020		79,609	13,168.76	1.00	79,985.95
Plant & Admin		Mudmaster Cctv Camera	3/11/2020	4/1/2020	2020		40,008	13,168.76	1.00	40,197.44
Plant & Admin		Flo Dar Equipment	5/20/20	6/1/2020	2020		33,979	13,168.76	1.00	34,139.84
Plant & Admin		Purchase Cctv Mainline Camera 9/2020	10/27/2020	11/1/2020	2020		23,835	13,168.76	1.00	23,947.65
<b>Total Plant &amp; Admin</b>							<b>1,136,207</b>			<b>1,540,429.95</b>
Buildings	405	Corporation Yard Remodel	4/92		1992		396,743	6,294.84	2.10	833,917.21
Buildings	686	Admin Building (Xfer From Cip & G12000)	06/2009	7/1/2008	2008		2,484,679	9,781.67	1.35	3,360,902.22
Buildings	716	Maintenance Bldg Remodel	6/1/11	7/1/2011	2011		25,052	10,204.79	1.30	32,481.99
Buildings		Ferff Improvements	2019-20	7/1/2020	2020		23,960	13,168.76	1.00	24,073.17
<b>Total Buildings</b>							<b>2,930,433</b>			<b>4,251,374.60</b>
Flow Equalization	433	Flow Equalization	7/93	7/1/1993	1993		2,692,039	6,477.95	2.04	5,498,477.34
Flow Equalization	435	Fe Dewatering/Aeration			1993		46,158	6,477.95	2.04	94,277.02
Flow Equalization	470	Flowmeters	6/95	7/1/1995	1995		38,090	6,558.16	2.02	76,847.97
<b>Total Flow Equalization</b>							<b>2,776,288</b>			<b>5,669,602.33</b>
<b>Grand Total</b>							<b>17,094,313</b>			<b>27,173,311</b>

## **APPENDIX B: CAPITAL IMPROVEMENT PLAN**

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	A	B	C	D	E	F	G	H	I	J	K
1		West Bay Sanitary District									
2		Sewer Rate Study									
3		Table 4. Capital Projects									
4											
5											
6											
7		<b>Administration</b>									Notes
8		Corporate Yard Renovation Feasibility Study									FY 2021-22 based on budget, future years per 10-year CIP approved Feb 2021
9		Administration Subtotal									Per District 10 year plan
10		<b>Collection Facilities</b>									
11		Metal Storage Building 1									
12		Metal Storage Building 2									
13		FERRF (Levee)									
14		FEF									
15		Collection Facilities Subtotal									Per District 10 year plan
16		<b>Equipment Replacement</b>									
17		Flo Dar Equipment (Flow Meters)									
18		Jet Truck, Superduty F550 4x4, 1/2in Jetter - Unit 228									
19		Large Diameter Trunkline Cleaning & CCTV									
20		Equipment Replacement Subtotal									Per District 10 year plan
21		<b>Subsurface Lines &amp; Other Capital</b>									
22		Pump & Valve Replacement Program									
23		Flow Monitoring Study									
24		Subsurface Lines & Other Subtotal									
25											
26		<b>Pipe Replacement and Rehabilitation</b>									
27		Levee Survey & GPS Update									
28		Pump Station Miscellaneous									
29		Gilbert									
30		Isabella, Gilbert & Bay North Phase 2									
31		Willow Road PS - Piping									
32		Santa Margarita									
33		Camino al Lago									
34		Santa Cruz									
35		Avy									
36		Vine									
37		Marsh Road CIPP (Remaining)									
38		Westminster									
39		Stowe Lane Pump Station									
40		Stowe Lane PS xcrossing SFPUC sag									
41		ECR @ Glenwood									
42		University									
43		Alameda Campo Bello to Harrison (Bad Soil)									
44		Hermosa									
45		Santa Cruz									
46		Flood Park									
47		East Palo Alto									
48		MacBain									
49		Berkeley									
50		Bayfront Entry Improvements									36" pipe replacement project ~300'
51		Pipe Replacement and Rehabilitation Subtotal									Per District 10 year plan
52		<b>Capacity</b>									
53		Lower Ringwood									
54		Capacity Subtotal									Per District 10 year plan
55		<b>Other</b>									
56		Manhole Raising									FY 2020-21 currently reflect PY Rate Study amounts
57		Allow for Unanticipated Cap Exp									FY 2020-21 currently reflect PY Rate Study amounts
58		Other Subtotal									
59											
60		<b>Total Capital Expenses</b>									





## **APPENDIX C: RETIRED DEBT SERVICE**

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	<b>West Bay Sanitary District</b>														
2	<b>Connection Fee Model</b>														
3	<b>Tab 5. SVCW Retired Debt Calculation</b>														
4															
5															
6			<b>FY 2009-10</b>	<b>FY 2010-11</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>	<b>FY 2016-17</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>TOTAL</b>
7															
8	<b>2008 Wastewater Revenue Bonds</b>														
9	Principal	-	85,000	90,000	90,000	95,000	100,000	105,000	\$110,000	110,000	115,000	120,000	125,000	1,145,000	
10	Interest	127,919	116,078	112,578	108,978	105,278	101,378	97,278	92,978	88,578	83,934	78,940	73,578	1,187,492	
11	Total	127,919	201,078	202,578	198,978	200,278	201,378	202,278	202,978	198,578	198,934	198,940	198,578	2,332,492	
12															
13															
14	<b>2009 Wastewater Revenue Bonds</b>														
15	Principal	-	210,000	265,000	270,000	275,000	285,000	295,000	300,000	315,000	325,000	340,000	350,000	3,230,000	
16	Interest	612,729	1,053,592	1,048,121	1,039,806	1,029,525	1,017,389	1,003,487	987,862	970,430	951,286	930,394	906,811	11,551,430	
17	Refundable Credit	(214,455)	(368,757)	(366,842)	(363,932)	(331,672)	(330,271)	(326,453)	(322,069)	(316,719)	(311,634)	(305,448)	(297,706)	(3,855,960)	
18	Total	398,274	894,834	946,278	945,874	972,853	972,118	972,034	965,793	968,711	964,652	964,946	959,105	10,925,470	
19															
20															
21	<b>2014 Wastewater Revenue Bonds</b>														
22	Principal	-	-	-	-	-	243,057	289,001	299,375	314,195	330,498	343,837	361,621	2,181,584	
23	Interest	-	-	-	-	-	746,228	856,509	844,949	829,980	814,270	801,050	783,858	5,676,844	
24	Total	-	-	-	-	-	989,284	1,145,509	1,144,324	1,144,175	1,144,768	1,144,887	1,145,480	7,858,427	
25															
26	<b>2015 Wastewater Revenue Bonds</b>														
27	Principal	-	-	-	-	-	-	-	240,000	260,000	265,000	275,000	590,000	-	
28	Interest	-	-	-	-	-	-	198,553	1,064,450	1,059,450	1,051,550	1,040,750	1,020,500	5,435,253	
29	Payments from Escrow	-	-	-	-	-	-	(91,660)	(492,500)	(492,500)	(492,500)	(246,250)	-	(1,815,410)	
30	Total	-	-	-	-	-	-	106,893	811,950	826,950	824,050	1,069,500	1,610,500	5,249,843	
31															
32	<b>2018 Wastewater Revenue Bonds</b>														
33	Principal	-	-	-	-	-	-	-	-	-	580,000	525,000	555,000	1,660,000	
34	Interest	-	-	-	-	-	-	-	-	-	1,258,480	1,309,713	1,282,713	3,850,905	
35	Total	-	-	-	-	-	-	-	-	-	1,838,480	1,834,713	1,837,713	5,510,905	
36															
37	<b>SRF - Admin Building</b>														
38	Total	-	-	-	-	220,077	220,077	220,077	220,077	220,077	220,077	220,077	220,077	1,760,620	
39															
40	<b>SRF - WWTP Improvements</b>														
41	Total	-	-	-	-	-	-	-	-	506,765	506,765	506,765	506,765	2,027,061	
42															
43	<b>Total</b>	526,193	1,095,912	1,148,856	1,144,851	1,393,207	2,382,857	2,646,791	3,345,121	3,865,257	5,697,727	5,939,828	6,478,217	<b>35,664,819</b>	
44															
45	Source: from SVCW														



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