

2022 Sewer Rate and Capacity Charge Study

Presentation to Board



January 31, 2022



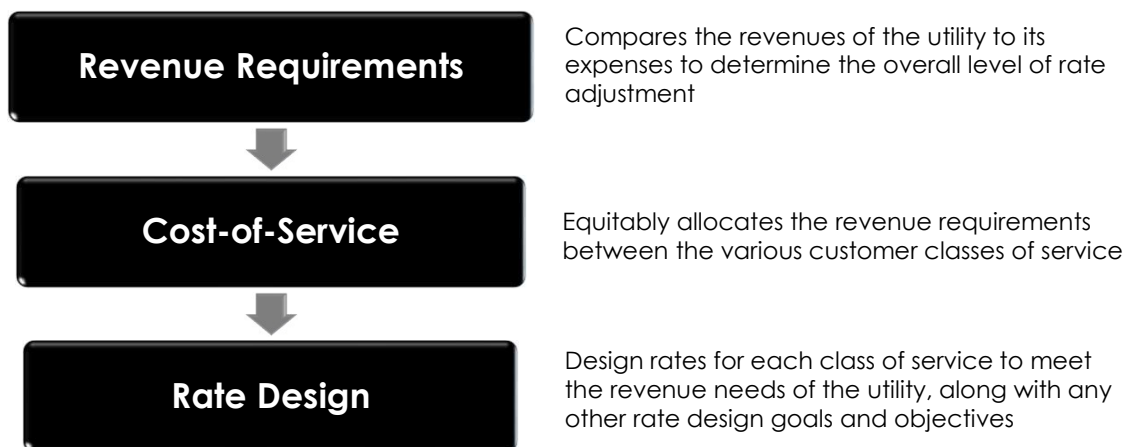
Agenda

1. Sewer Rate Study
 - Financial Plan
 - Includes Collection System Asset Management
 - Cost of Service / Rate Design
 - Proposed Rates
 - Survey
2. Capacity Charges
3. Project Schedule

Sewer Rate Study

3

The Rate Setting Process



4

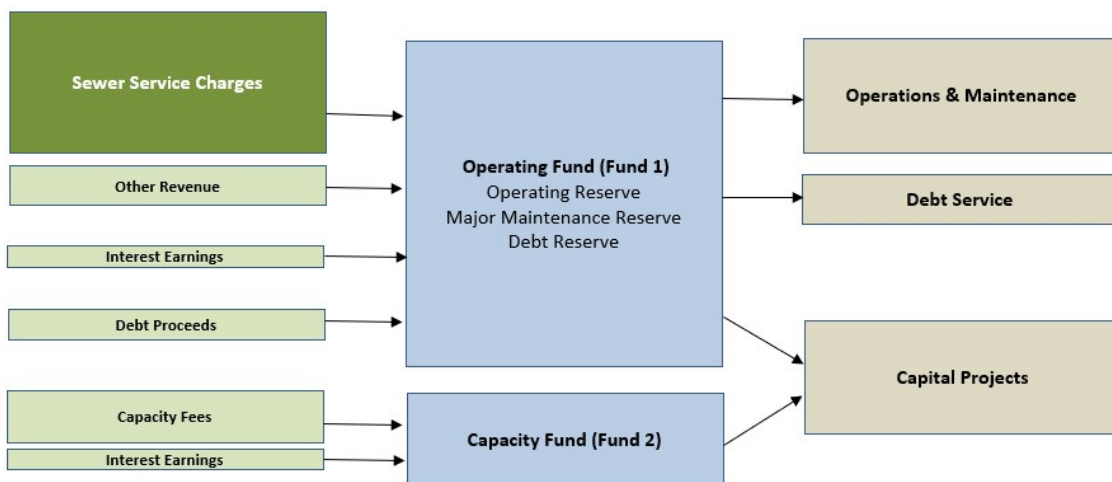
Legal Requirements for Setting Sewer Rates In California

Proposition 218 (Article XIII D, Section 6 of California Constitution)

- Revenues shall not exceed funds required to provide service; nor used for another purpose
- Amount shall not exceed the proportional cost of the service attributable to the parcel
- Service must be actually used or immediately available
- Approval process includes 45-day notice, public hearing, and written majority protest. Does not require a voting process (unlike taxes).

5

Schematic of Utility Funds/Reserve Structure



6

Cash Balances

Fiscal Year beginning July 1, 2021

Fund 1

Operating Reserve	\$5,090,000
Major Maintenance Reserve	\$38,574,000
Debt Reserve	\$1,069,000

Total Fund 1: \$44,733,000

Fund 2 - Restricted Capacity Fund: \$12,431,000

7

7

Revenue

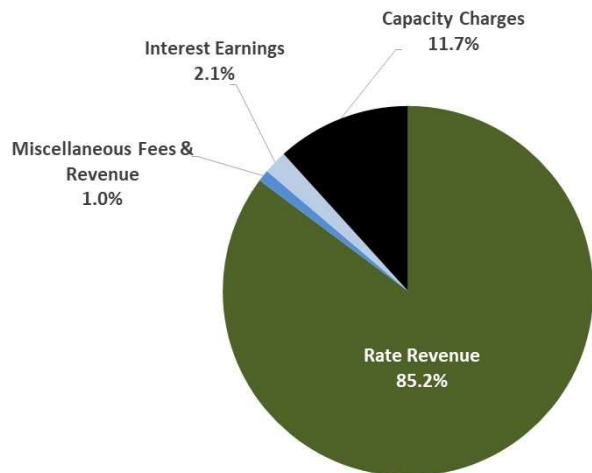
FY2021/22 Budget

Rate Revenue	\$30,613,000*
--------------	---------------

Non-Rate Revenue

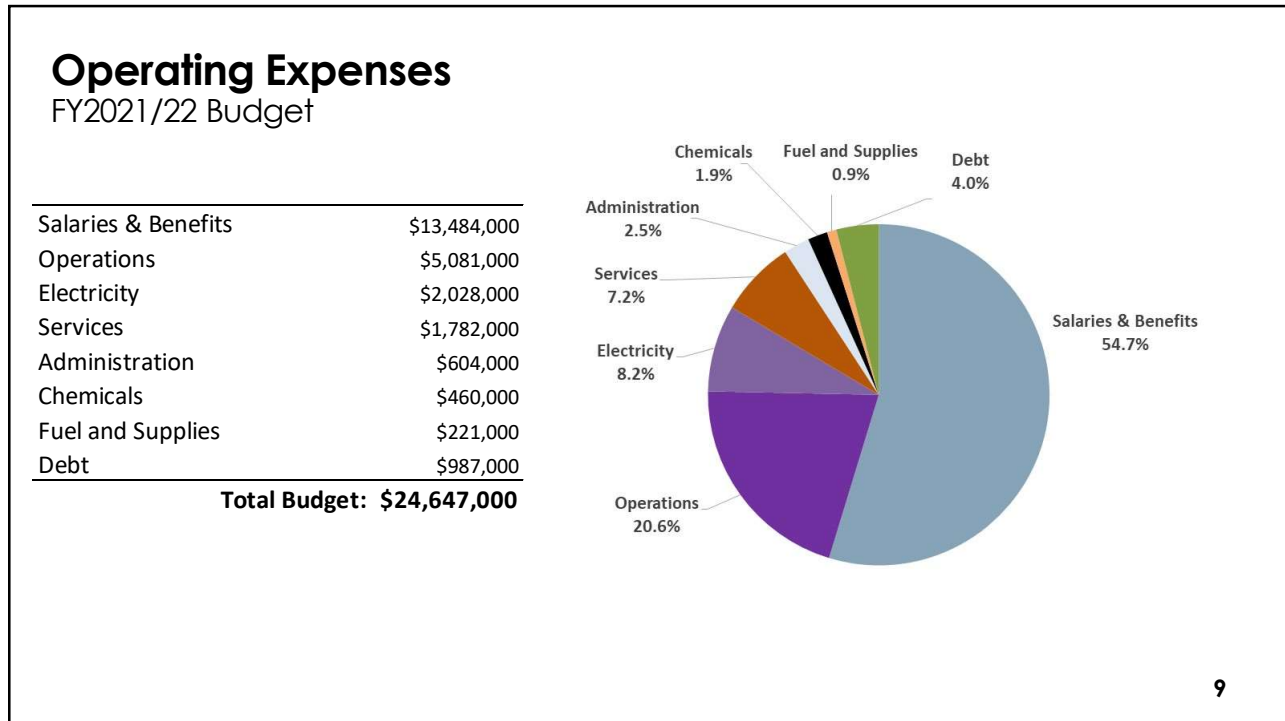
Miscellaneous Fees & Revenue	\$363,000
Interest Earnings	\$739,400
Capacity Charges	\$4,210,100

Total: \$35,925,500



* Based on projections using FY2020/21 actuals

8



- ### Project Highlights
- ✓ 2020 Collection System Asset Management Plan rehabilitation projects (\$5.9M per year, see slide 14)
 - ✓ Peabody-Walters Relief Sewer Phase 2 (\$3.2 million)
 - ✓ Bioenergy Generation Project (\$12.7 million)
 - ✓ Multiple phases of Electrical Replacement Project (totaling \$21.7 million)
 - ✓ Suisun Force Main Rehabilitation (\$12 million)
- 10

Project Highlights (1)

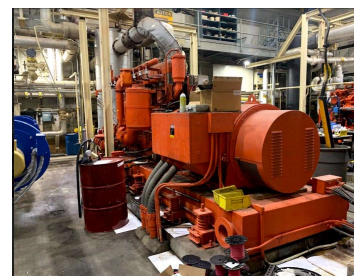
- **Collection System Rehabilitation and Replacement (ongoing)**
 - Resulting from the Asset Management Planning Study, funds are budgeted for future District, Fairfield, and Suisun City collection system projects
- **Peabody-Walters Relief Sewer (Phase 2 – 2022; Phase 3 – 2029)**
 - Increase sewer capacity to accommodate growth in Northeast Fairfield



11

Project Highlights (2)

- **Electrical Replacement Project (Phase 2 – 2023; Phase 3 – 2026; Phase 4 - 2028)**
 - Continue replacing aging electrical distribution infrastructure at the treatment plant and pump stations
- **Bioenergy Generation Project (2023)**
 - Replacing aging cogeneration unit with new, upsized engine to produce electricity from biogas



12

Project Highlights (3)

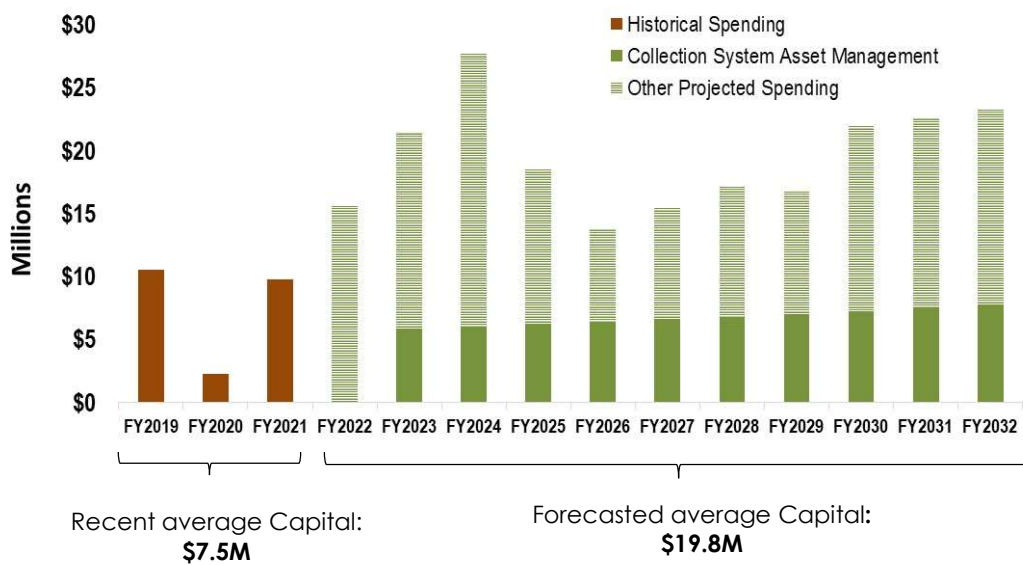
- **Force Main Reliability Project (2025)**
 - Plan, design, and construct a redundancy/reliability project for the 36" diameter Suisun Force Main

- **Facility Major Maintenance (ongoing)**
 - Structural condition assessment and repairs
 - Replacement of aging mechanical equipment
 - Pavement rehabilitation
 - Coating/cathodic protection rehabilitation
 - Energy efficiency upgrades



13

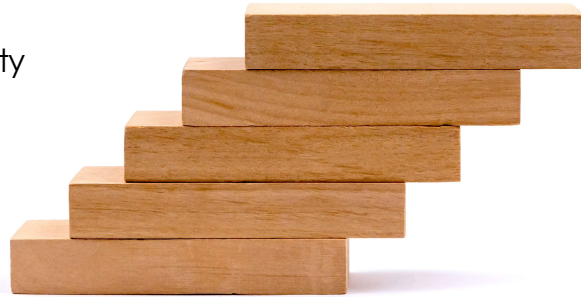
Projected Capital Spending



14

Rate Increase Drivers

- Capital spending
- Electrical costs – PG&E rate structure
- Chemical costs
- Biosolids processing
- Implementation of social security
- Pension funding plan



15

Reserve Policies

Reserve policies are important for protecting the District against unforeseen circumstances, stabilizing revenue requirements, and contributing towards the District's credit rating.

The following reserve targets are proposed by this Study and are consistent with recent District practices.

“Minimum Reserve” { **Operating Reserve:** Maintain a reserve equal to 25% of O&M budget (reserve target is currently \$7.0 million)
Debt Reserve: Maintain a reserve equal to one year of debt service (reserve target is currently \$1.07 million)

“Target Reserve” **Major Maintenance Reserve (recommendation):** Target a reserve level equal to 100% of 5-year average annual capital spending (a target of \$19 million currently). Current policy describes a minimum contribution of 1% of facility replacement costs.

16

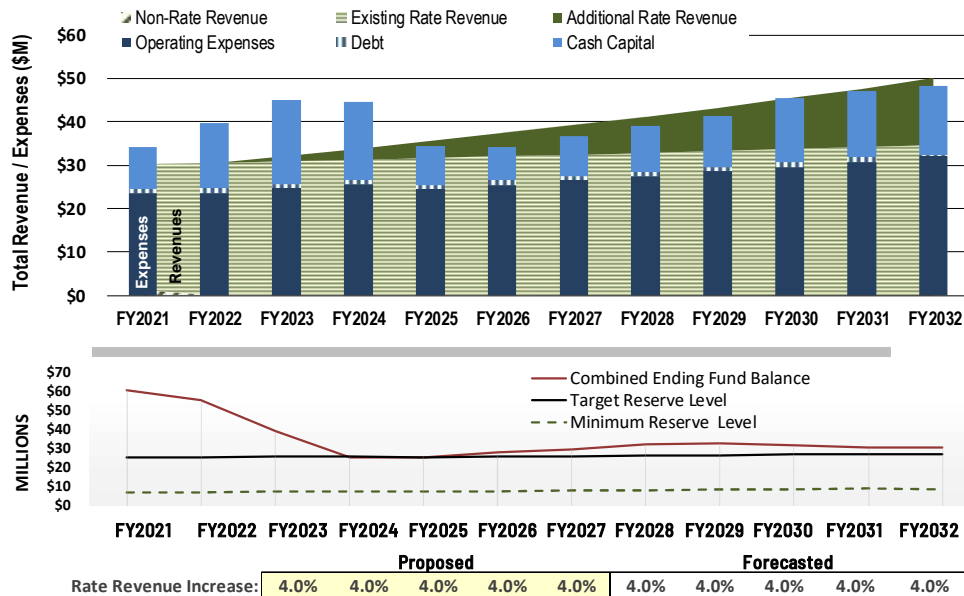
Collection System Asset Management Plan Funding Requirements

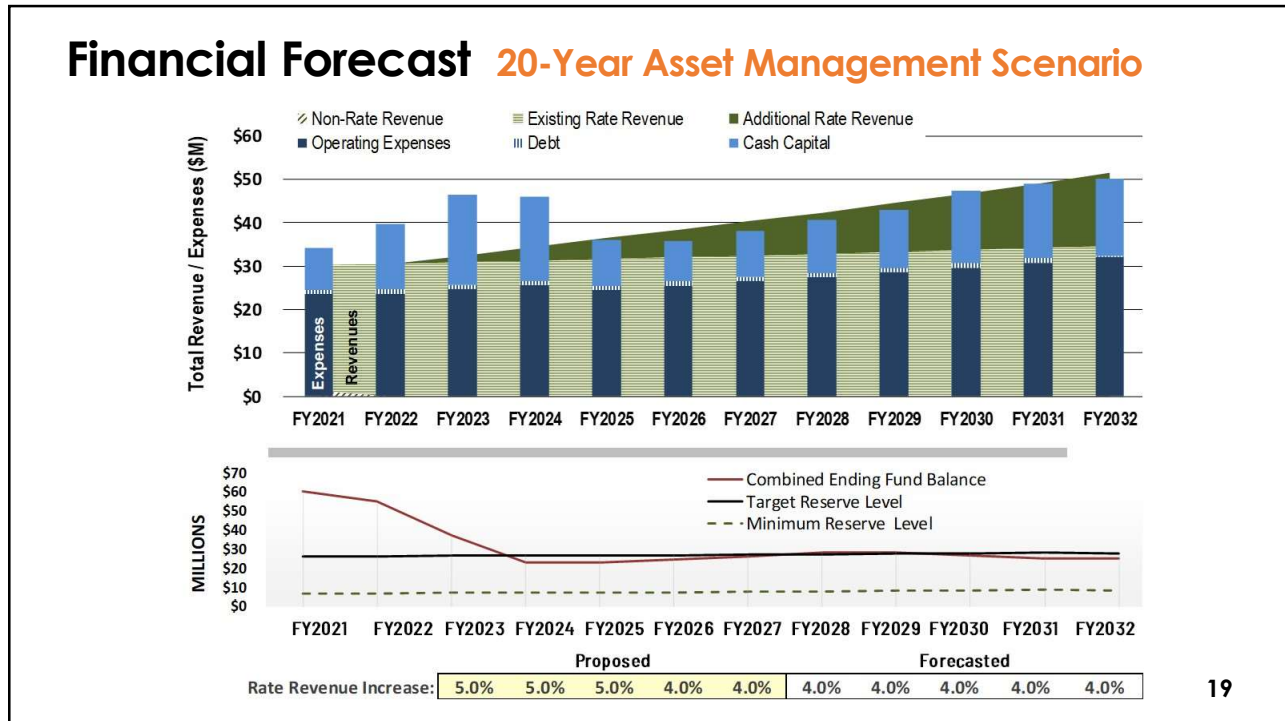


ASSUMES: 20-year rolling average, 3% escalation, no deficits allowed

- Funding need determined by averaging expected rehab/replacement costs over next 20 years
- Even so, funding needs will significantly increase in 2032 and beyond as infrastructure ages (peak R&R required between 2050 – 2080)
- The asset model will be updated prior to each rate study (every 5 years) to adapt as new CCTV inspection data is collected

Financial Forecast 10-Year Asset Management Scenario





Current Sewer Rates

Residential (monthly)	\$43.35 per dwelling unit
Commercial	
Regular Strength Volumetric or	\$3.46 per HCF
High Strength Volumetric	\$5.62 per HCF
Case-by-Case	
Volumetric and	\$2,804.04 per MG
BOD (by weight) and	\$492.32 per thousand lbs
TSS (by weight)	\$209.18 per thousand lbs
Travis Air Force Base Volumetric	\$2.71 per HCF

HCF = hundred cubic feet (748 gallons) MG = million gallons

20

Cost of Service and Rate Structure Changes

1. Addition of monthly fixed “Account Charge”
 - Recovers fixed costs
2. Changes to flow and loading (strength) inputs
 - Decreases to residential flows have been sustained (as identified in 2017 study). Consequently, concentrations have increased.
 - Industrial customers have instituted pretreatment
3. Collection system costs been parsed into “local collection” costs and “general collection” costs
 - Customers that deliver wastewater directly to 12” and larger pipes are only charged for general collection costs

21

Cost Allocation

Account Charge (per account or dwelling unit)

- Customer service costs and other fixed operating costs

Usage Charge (based on estimated wastewater flows)

- For collection and treatment flow-related costs
- Collection system costs parsed into “local” vs. “general”

Strength Charges (based on loadings)

- Allocated based on estimated BOD & TSS strength

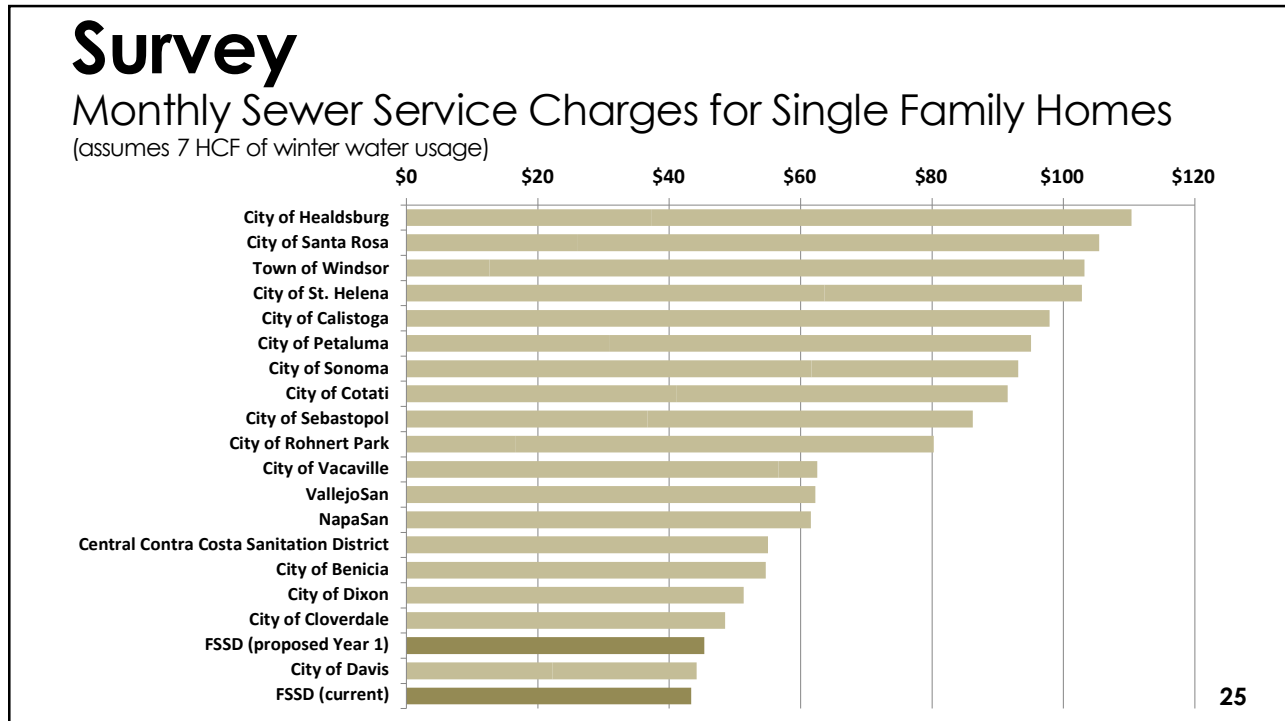
22

Current Sewer Rates		Proposed Sewer Rates		Change
Residential (monthly)	\$43.35 per dwelling unit	Residential (monthly)	\$45.02 per dwelling unit	3.9%
Commercial		Commercial		
Regular Strength Volumetric or High Strength Volumetric	\$3.46 per HCF	Monthly Account Charge and Regular Strength Volumetric or High Strength Volumetric	\$11.97 per account per mo.	(new)
	\$5.62 per HCF		\$3.60 per HCF	4.0%
			\$6.23 per HCF	10.9%
Case-by-Case		Case-by-Case		
Volumetric and	\$2,804.04 per MG	Monthly Account Charge and Volumetric (direct connect) or Volumetric (through local collection) and	\$11.97 per account per mo.	(new)
BOD (by weight) and TSS (by weight)	\$492.32 per thousand lbs		\$2,994.65 per MG	6.8%
	\$209.18 per thousand lbs	BOD (by weight) and TSS (by weight)	\$4,398.40 per MG	56.9% *
			\$503.54 per 1000 lbs	2.3%
			\$255.55 per 1000 lbs	22.2%
Travis Air Force Base Volumetric	\$2.71 per HCF	Travis Air Force Base Volumetric	\$2.90 per HCF	7.0%

* This rate doesn't apply to any existing District customers

Proposed 5-Year Rate Schedule

Rate Revenue Increase:	5.00%	5.00%	5.00%	4.00%	4.00%	
Effective Date:	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025	July 1, 2026	
Residential (monthly)	\$45.02	\$47.27	\$49.63	\$51.62	\$53.68	per dwelling unit
Commercial						
Monthly Account Charge and Regular Strength Volumetric or High Strength Volumetric	\$11.97	\$12.57	\$13.20	\$13.73	\$14.28	per account per mo.
	\$3.60	\$3.78	\$3.97	\$4.13	\$4.30	per HCF
	\$6.23	\$6.54	\$6.87	\$7.14	\$7.43	per HCF
Case-by-Case						
Monthly Account Charge and Volumetric (direct connect) or Volumetric (through local collection) and BOD (by weight) and TSS (by weight)	\$11.97	\$12.57	\$13.20	\$13.73	\$14.28	per account per mo.
	\$2,994.65	\$3,144.39	\$3,301.61	\$3,433.67	\$3,571.02	per MG
	\$4,398.40	\$4,618.32	\$4,849.24	\$5,043.21	\$5,244.94	per MG
	\$503.54	\$528.72	\$555.16	\$577.37	\$600.46	per 1000 lbs
	\$255.55	\$268.33	\$281.75	\$293.02	\$304.74	per 1000 lbs
Travis Air Force Base (volumetric)	\$2.90	\$3.05	\$3.20	\$3.33	\$3.46	per HCF



Capacity Charge Study

26

Capacity Charges

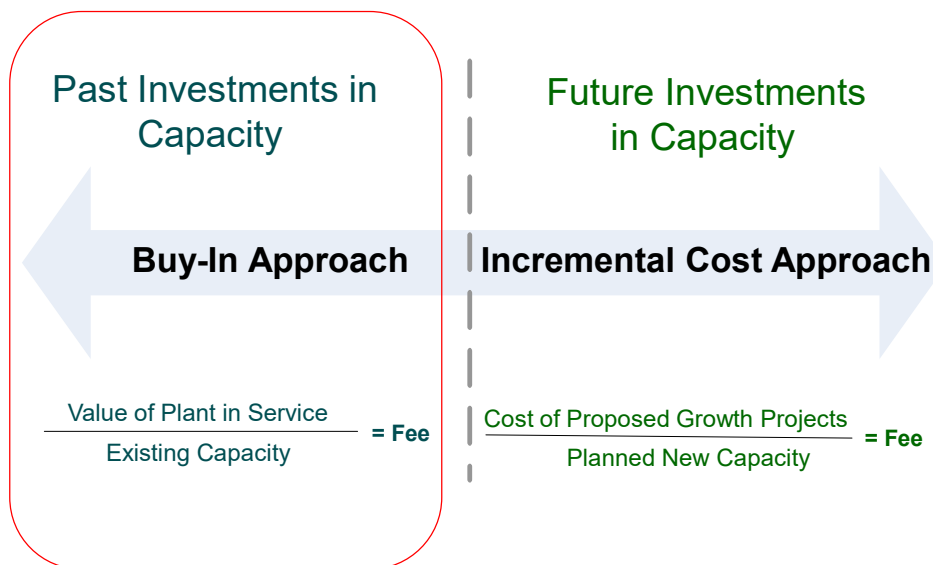
- Capacity charges are the one-time fees charged to new development for capacity in the sewer system.
- Fee calculations were last calculated in 2017; fee amounts have not been adjusted annually for inflation.

Legal Standard

- Section 66013 of the Government Code states that capital facility fees shall not exceed the **estimated reasonable cost** of providing the service for which the charges are imposed.

27

Common Capacity Charge Approaches



28

Estimated System Value

Replacement Cost: ¹	\$706,412,000
Estimated Depreciation: ²	59.1%
 Replacement Cost Net Less Depreciation (RCNLD):	 \$417,516,000
 Less outstanding principal on long-term debt:	 -\$11,440,000
 Plus existing Major Maintenance Fund reserves:	 \$40,567,000
Total System Value:	\$446,643,000

¹ Based on District budget

² Based on available asset register

Unit Cost Calculation

	Total	Flow (HCF per year)	BOD (lbs/year)	SS (lbs/year)
		Functional Allocation ¹		
		74.81%	19.73%	5.46%
Existing System Value:	\$446,643,000	\$334,134,000	\$88,123,000	\$24,387,000
 Estimated Current Flow & Loadings ² :		11,558,000	27,800	24,000
		gpd	(lbs/year)	(lbs/year)
 Unit Cost:	\$28.91	\$3,169.89	\$1,016.13	
		\$ / gpd	\$ / annual lbs	\$ / annual lbs

¹ Based on previous asset-value costs allocation study

² Based rate study analysis

Residential Capacity Charge

Average Residential Flow

178.4 gpd x \$28.91 / gpd = **\$5,157**

+

Average Residential Loadings

0.457 lbs BOD x \$3,169.89 per lbs BOD = **\$1,417**

+

0.304 lbs TSS x \$1,016.13 per lbs TSS = **\$309**

= **\$6,883 per EDU**

(current charge is \$6,281*, which is a 10% increase)

* FSSD capacity charges have not been increased since 2017. Inflation since that time has been 8.3%.

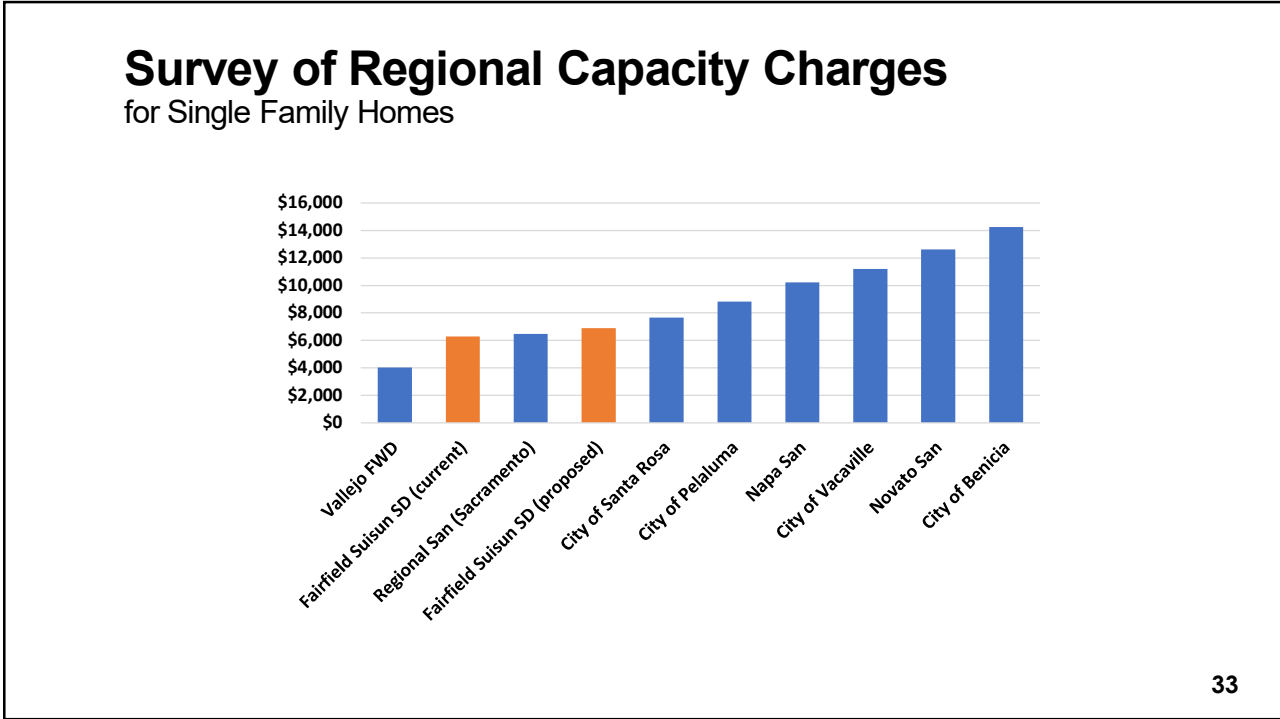
31

Application of Capacity Charges

- **Residential**
 - All dwelling units (single family, multifamily, etc.) will receive the same charge based on fact that most dwelling units have the same potential for capacity needs

- **Non-Residential**
 - Staff is currently working to update the methodology for equitably applying Capacity Charges to non-residential customers

32



- ### Next Steps
1. Receive comments
 2. Present findings to Board – [January 31](#)
 3. Mail Prop 218 Notices – [by February 10](#)
 4. Hold Public Hearing – [March 28](#)
 5. Implement Rates - [July 1](#)
- 34