



CITY OF BAKERSFIELD

SEWER RATE STUDY

Budget and Finance Committee Meeting
February 28, 2022





PRESENTATION OUTLINE

- Introduction
- Rate-Making Objectives & Considerations
- Rate Study Process
 - Revenue requirement
 - Cost-of-service analysis
 - Rate Design
- Next Steps

RATE-MAKING OBJECTIVES & CONSIDERATIONS

1. Provide revenue sufficiency and financial stability to fund the projected capital and operations and maintenance (O&M) costs of the City's enterprise
2. Meet the City's wastewater reserve fund targets
3. Rate payer equity
 - Each Customer class pays their proportionate share of expenses
 - Each Customer, within each class, pays their proportionate share of expenses via consumption and service capacity
4. Customers understand and accept rates
5. Balance rate increases with future capital funding approach

RATE BACKGROUND

- Residential customers pay a fixed annual charge
- Commercial customers pay an annual fixed charge plus a monthly sewer surcharge to account for actual flow that exceeds the assumed water use included in their respective fixed charge

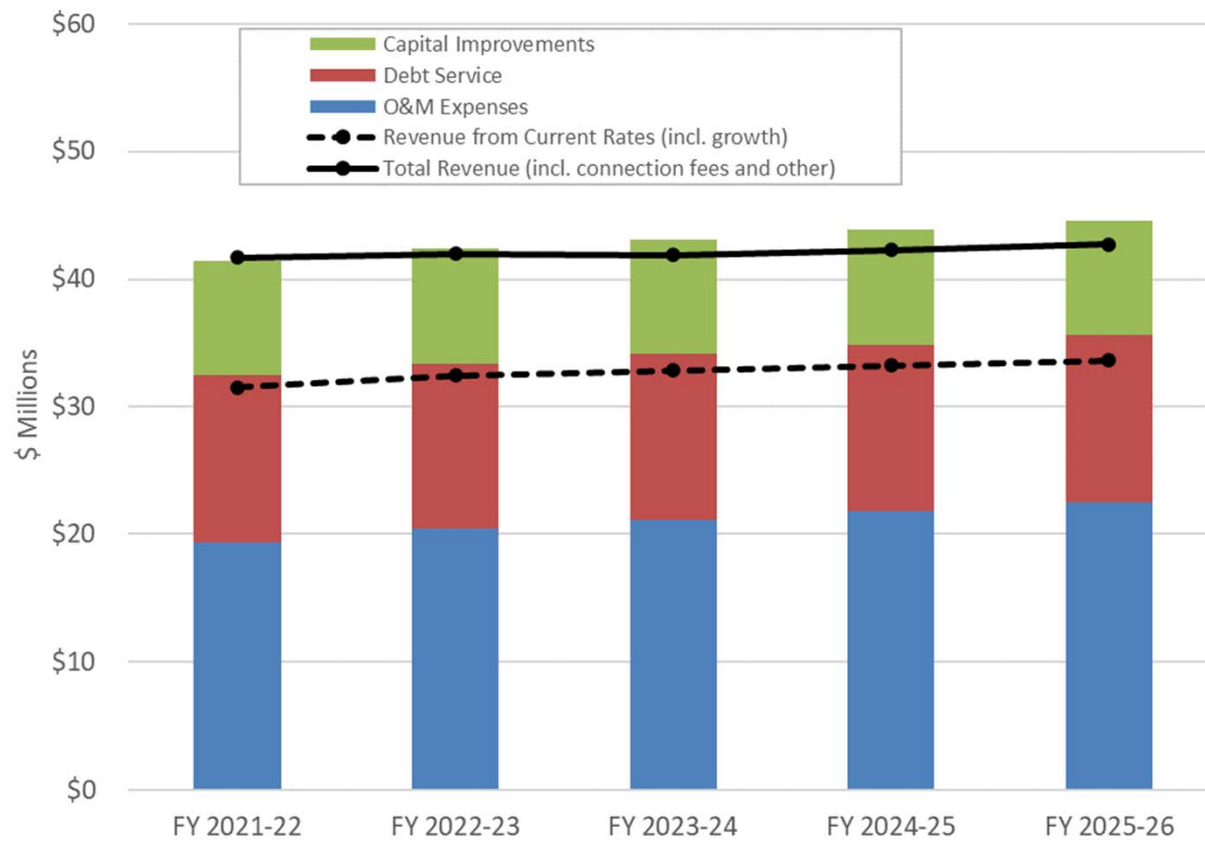
RECENT RATE AND CONNECTION FEE HISTORY

- Last rate increase to Single Family occurred July 1, 2016. Rates changed from \$210 to \$215.
- Connection fees for Single Family increased from \$4,000 per connection to \$5,000 per connection. This change occurred over 5 years from 2017 through 2021.

RATE STUDY PROCESS

- **STEP 1: Revenue requirement projections**
 - Determines how much revenue is needed annually from rates
- **STEP 2: Cost of service allocations**
 - Determines how much of the revenue should come from fixed and variable charges and from each customer class
 - Allocations are proportionate to the cost of providing service
- **STEP 3: Rate design**
 - Fixed service charge, sewer surcharge, Industrial User rates
 - Balance rate-making objectives

REVENUE REQUIREMENT PROJECTIONS



KEY ASSUMPTIONS - CAPITAL

- Average annual capital need = \$9 million

		Projected					Total
		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	
1	Sewer Repairs Var Loc	\$1,594,100	\$600,000	\$600,000	\$600,000		\$3,394,100
2	Centrifuge Rehab Plt3	\$165,920	\$80,000				\$245,920
3	Repl 6 Sldge Recirc Pumps	\$412,097					\$412,097
4	Rev Program Study Update	\$95,040					\$95,040
5	Repl Vfd Influent Pumps	\$220,000	\$60,000				\$280,000
6	Rehab/Repl Unfluent Pumps	\$991,180	\$120,000				\$1,111,180
7	Primary Clarif 1-4 Rehab	\$1,328,000	\$1,300,000				\$2,628,000
8	Replace Flare	\$156,180					\$156,180
9	Repl Primary Sludge Pumps	\$155,565					\$155,565
10	Polymer Pump Replacement	\$123,296					\$123,296
11	Aeration Basin Rehab	\$499,380					\$499,380
12	Wwtp Misc Improvements	\$820,694	\$600,000	\$600,000	\$600,000		\$2,620,694
13	Sewer Lift & Strm Pump Sta	\$1,694,150	\$1,000,000	\$1,000,000	\$1,000,000		\$4,694,150
14	Sewer Lift Rehab-Bank St			\$1,228,000			\$1,228,000
15	Swrlftrhb-Sandra/Meredith		\$1,166,000				\$1,166,000
16	Swrlftrhb-Ming/Grnd Lakes			\$1,132,000			\$1,132,000
17	Swrlftrhb-Eucalyptus		\$1,193,000				\$1,193,000
18	Swrlftrhb-Taft Hwy/S H St			\$1,228,000			\$1,228,000
19	Rehab Effluent Pump Stat	\$0	\$500,000				\$500,000
20	Demo Old Headworks Bldg		\$250,000				\$250,000
21	Knudsen Drive Storm Drain	\$300,000					\$300,000
22	Swrcln:Bv And Mccutchen	\$139,205					\$139,205

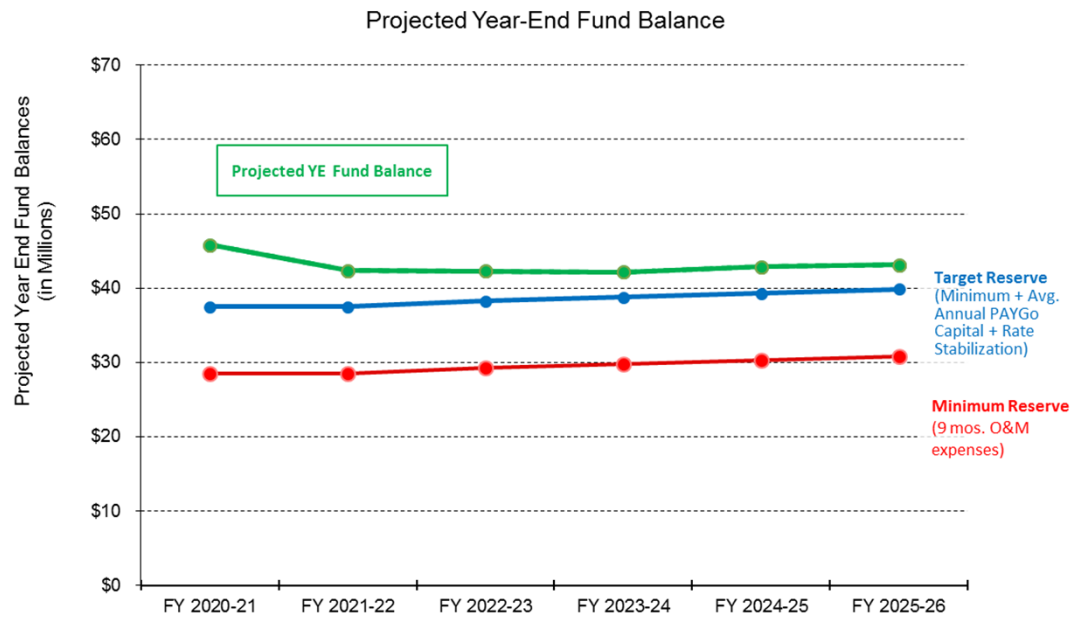
KEY ASSUMPTIONS - CAPITAL

- Average annual capital need = \$9 million

		Projected					Total
		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	
23	Storm Lift - Taslisman	\$415,730					\$415,730
24	Wwtp Energy Upgrade	\$150,000					\$150,000
25	Wwtp# 3 Arterial Roads	\$209,772					\$209,772
26	Portalogic Syst. Upgrade	\$60,000					\$60,000
27	Chem Dosing Syst Rehab	\$350,000					\$350,000
28	Daf Rehab	\$500,000					\$500,000
29	Hvac Units Repl	\$450,000					\$450,000
30	Plc Upgrade	\$750,000					\$750,000
31	Tertiary Expansion Wwtp 3	\$100,000					\$100,000
32	Return Act Sludge Pump	\$94,300					\$94,300
33	Solids Train Upgrade	\$250,205					\$250,205
34	Rehab Grit Clarifiers	\$59,200					\$59,200
35	Maint Bldg Repair And Remod	\$425,000					\$425,000
36	Misc Storm Drain Improv	\$200,000					\$200,000
37	Digester Engineer Study	\$208,000					\$208,000
38	Digester Gas Reuse Altern	\$171,735					\$171,735
39	Maintenance Mgmt Software	\$11,955					\$11,955
40	Misc Projects		\$2,000,000	\$2,200,000	\$4,533,455	\$6,733,455	\$15,466,909
41	Total CIP - PAYGo	\$13,100,704	\$8,869,000	\$7,988,000	\$6,733,455	\$6,733,455	
42	Inflationary Index	1.000	1.021	1.043	1.066	1.089	
43	Total Inflated CIP - PAYGo	\$13,100,704	\$9,059,186	\$8,334,261	\$7,175,984	\$7,329,865	
44					average annual	\$9,000,000	

5-YEAR RATE INCREASE SUMMARY

<i>Fiscal Year:</i>	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Overall Revenue Increases		0.0%	0.0%	CPI	CPI	CPI
<i>Cumulative Increase</i>		0.0%	0.0%	CPI	CPI	CPI
						Avg Annual PAYGo
Capital Spending per Capital Improvement Plan	\$13,100,704	\$9,059,186	\$8,334,261	\$7,175,984	\$7,329,865	\$9,000,000
Projected Connection Fee Revenue	\$7,600,000	\$7,000,000	\$6,500,000	\$6,500,000	\$6,500,000	
Debt coverage ratio (1.25 minimum)	1.79	1.74	1.65	1.63	1.61	



- Projected year-end fund balances are greater than the Target Reserve Balance
- Maintain debt coverage ratio

COST-OF-SERVICE BY CUSTOMER CLASS – FY 2022-23

- Overall revenue increase is not necessary for FY 2022-23
- However, the cost-of-service study indicates a re-balancing between customer classes is warranted

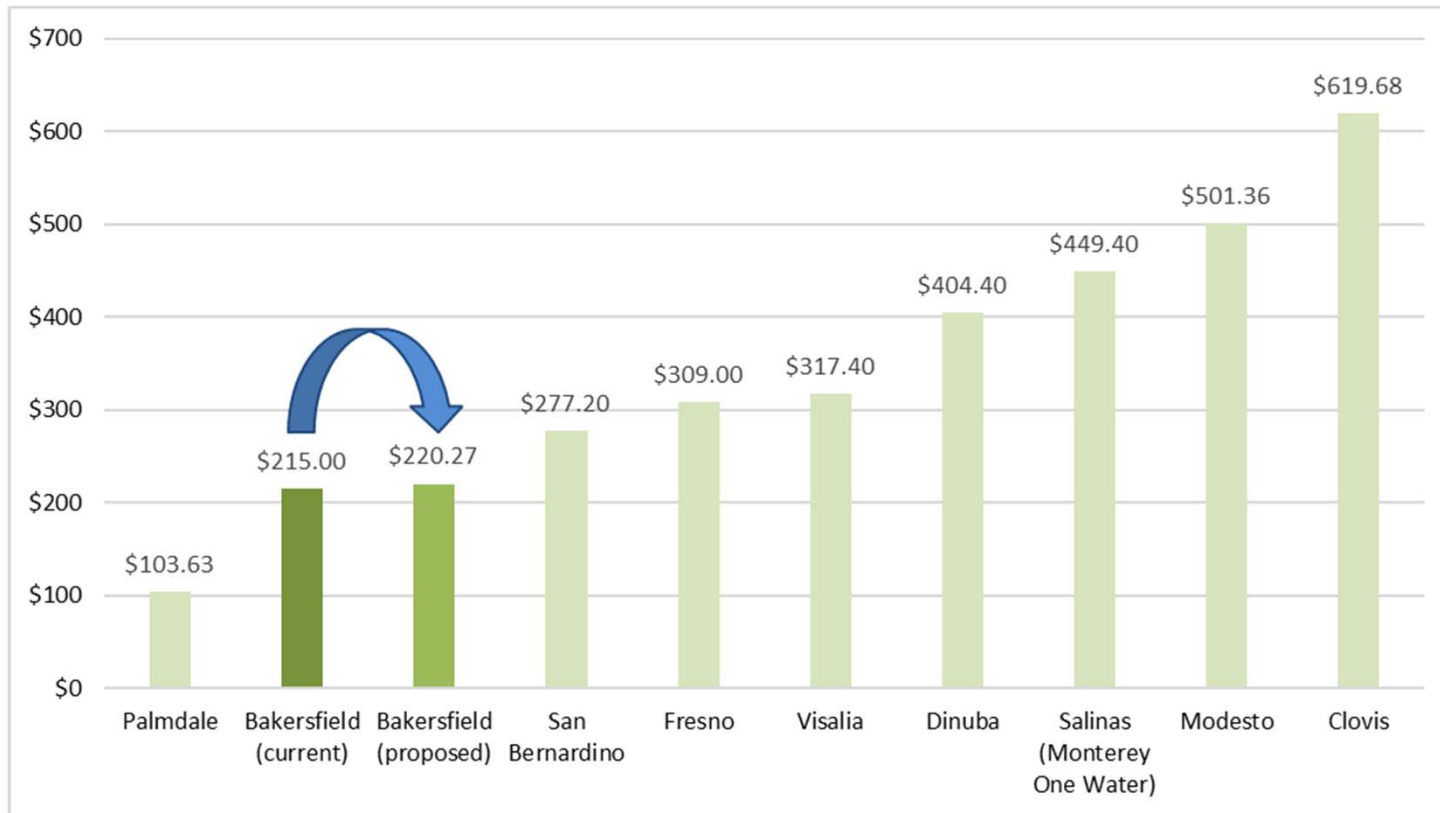
Customer Classes	Current Revenue	COS Revenue	\$ Change	% Change
	a	b	c=b-a	d=c/a
1 Residential	\$24,699,254	\$25,302,223	\$602,970	2.4%
2 Commercial	\$7,612,154	\$7,000,930	(\$611,224)	-8.0%
3 Industrial	\$986,800	\$995,054	\$8,254	0.8%
4 Total	\$33,298,208	\$33,298,208	\$0	0.0%

RATE DESIGN: ANNUAL FIXED SERVICE CHARGE (PER SFDE)

Cost per SFDE	Acct	Flow	BOD	TSS	
Single Family Characteristics	1	220 gpd	240 mg/l	280 mg/l	
Annualize	1	107 hcf/yr	161 lbs/yr	188 lbs/yr	
Unit Costs	\$24.99	\$1.43	\$0.15	\$0.09	
Annual Cost per SFDE	\$24.99	\$153.84	\$24.34	\$17.09	Total \$220.27

- Single family rates increase from \$215.00 annual charge to \$220.27 annual charge
 - \$5.27 increase to annual charge
 - Equivalent to a \$0.44 increase per month
- A combination of changes in single family water use patterns, strength characteristics, and costs contribute to the increase
 - Flow: 250 gpd to 220 gpd
 - BOD: 250 mg/L to 240 mg/L
 - TSS: 250 mg/L to 280 mg/L

RATE COMPARISON – SINGLE FAMILY



RATE DESIGN: COMMERCIAL (CURRENT)

- Fixed charge on the Tax Roll varies by Customer Type (24+ different commercial Customer Types)
- Surcharge for water use which exceeds their respective minimum varies among 24+ Customer Types

User Group	Units	SFDE/Unit
Schools	Average Daily Attendance	0.04
Hospital	Bed	0.60
Churches	Parcel	1.00
Rest Home	Parcel	1.50
Small Store or Office	Store or Office	1.00
Combination Store & Restaurant	Parcel	1.75
Large Store	Store	1.50
Big Box Store	Store	1.50
Markets	Store	1.50
Shopping Center w/ Dining	Business	1.00
Office Bldg.	Building	0.60
Mortuary	Parcel	1.50
Food or Beverage	Restaurant	1.50
Recreational	Business	1.50
Medical Lab	Business	1.50
Car Wash	Business	1.50
Service Shop	Business	1.50
Petroleum	Business	1.50
Sales	Business	1.50
Nurseries	Business	1.00
Hotel-Motels, RV Parks	Room or Space	0.300
Hotel-Motels, RV Parks - w/ rest.	Room or Space	0.300
Mobile Home Park	Dwelling Unit	0.75
Light & Heavy Industry	Business	1.50
Timber & Produce Plant	Business	1.50
Food Processing	Business	1.50
Storage-Warehouse	Business	1.50
OS - Commercial/Industrial	Business	1.50
Laundromat	Machine	0.60

User Group	Surcharge
Schools	none
Hospital	\$1.50
Churches	\$1.57
Nursing Home	\$1.60
Small Store	\$1.57
Combination Store & Residence	\$1.60
Large Store	\$1.57
Markets (Grocery Store)	\$2.62
Shopping Center w/ Dining (unit)	\$2.17
Office Bldg.	\$1.50
Mortuary	\$2.62
Food or Beverage	\$2.69
Recreational	\$1.68
Medical Lab	\$1.59
Car Wash	\$1.44
Service Shop	\$1.68
Petroleum	\$1.68
Sales	\$1.50
Nurseries	\$1.59
Hotel-Motels, RV Parks	none
Light & Heavy Industry	\$1.60
Timber & Produce Plant	\$1.60
Food Processing	\$1.60
Storage-Warehouse	\$1.68
OS - Commercial/Industrial	\$1.57
Big Box Store	none
Hotel-Motels, RV Parks (w/ restaurant)	\$2.20
Laundromat	none

RATE DESIGN: COMMERCIAL FIXED CHARGES (PROPOSED)

Customer Type	Current SFDE/Unit	Proposed SFDE/Unit	Notes:
Schools	0.05	1.00	current = per ADA; proposed = per school
Hospital	0.60	1.00	current = per bed; proposed = per hospital
Churches	1.00	1.00	
Rest Home	1.50	1.00	
Small Store or Office	1.00	1.00	
Combination Store & Res	1.75	1.00	
Large Store	1.50	1.00	
Big Box Store	1.50	1.00	
Markets	1.50	1.00	
Shopping Center w/ Dining	1.00	1.00	
Office Bldg.	1.50	1.00	
Mortuary	1.50	1.00	
Food or Beverage (Restaurant)	1.50	1.00	
Recreational	1.50	1.00	
Medical Lab	1.50	1.00	
Car Wash	1.50	1.00	
Service Shop	1.50	1.00	
Petroleum	1.50	1.00	
Sales	1.50	1.00	
Nurseries	1.00	1.00	
Hotel-Motels, RV Parks	0.30	1.00	current = per room/space; proposed = per business
Hotel-Motels, RV Parks - w/ restaurant	0.30	1.00	current = per room/space; proposed = per business
Light & Heavy Industry	1.50	1.00	
Timber & Produce Plant	1.50	1.00	
Food Processing	1.50	1.00	
Storage-Warehouse	1.50	1.00	
OS - Commercial/Industrial	1.50	1.00	
Laundromat	1.50	1.00	

- Simplify rate structure
- Fixed charges the same regardless of Customer Type
- Differences in sewerage water use among customers is captured in the commercial surcharge

RATE DESIGN: COMMERCIAL SEWER SURCHARGE (PROPOSED)

User Group	Current Surcharge	Proposed Surcharge	Change in Rate	% Difference	Strength Classification
Schools	none	\$1.69	N/A	N/A	low
Churches	\$1.57	\$1.69	\$0.12	7.6%	low
Small Store	\$1.57	\$1.69	\$0.12	7.6%	low
Combination Store & Residence	\$1.60	\$1.69	\$0.09	5.6%	low
Large Store	\$1.57	\$1.69	\$0.12	7.6%	low
Office Bldg.	\$1.50	\$1.69	\$0.19	12.7%	low
Car Wash	\$1.44	\$1.69	\$0.25	17.4%	low
Sales	\$1.50	\$1.69	\$0.19	12.7%	low
Nurseries	\$1.59	\$1.69	\$0.10	6.3%	low
Laundromat	none	\$1.69	N/A	N/A	low
Hospital	\$1.50	\$1.69	\$0.19	12.7%	low
Nursing Home	\$1.60	\$1.69	\$0.09	5.6%	low
Medical Lab	\$1.59	\$1.69	\$0.10	6.3%	low
Service Shop	\$1.68	\$1.69	\$0.01	0.6%	low
Light & Heavy Industry	\$1.60	\$1.69	\$0.09	5.6%	low
Timber & Produce Plant	\$1.60	\$1.69	\$0.09	5.6%	low
Food Processing	\$1.60	\$1.69	\$0.09	5.6%	low
OS - Commercial/Industrial	\$1.57	\$1.69	\$0.12	7.6%	low
Recreational	\$1.68	\$1.85	\$0.17	10.1%	medium
Storage-Warehouse	\$1.68	\$1.85	\$0.17	10.1%	medium
Petroleum	\$1.68	\$1.85	\$0.17	10.1%	medium
Hotel-Motels, RV Parks	none	\$1.85	N/A	N/A	medium
Big Box Store	none	\$2.38	N/A	N/A	medium high
Shopping Center w/ Dining (unit)	\$2.17	\$2.38	\$0.21	9.7%	medium high
Hotel-Motels, RV Parks (w/ restaurant)	\$2.20	\$2.38	\$0.18	8.2%	medium high
Mortuary	\$2.62	\$3.09	\$0.47	17.9%	high
Food or Beverage	\$2.69	\$3.09	\$0.40	14.9%	high
Markets (Grocery Store)	\$2.62	\$3.09	\$0.47	17.9%	high

- Propose reducing commercial customer classes to four – low, medium, medium high, and high strength customers
- Include all commercial customer classes (i.e., schools, laundromats, big box stores, and hotels/motels without restaurants)
 - These customer classes were not previously subject to the flow-based surcharge

PROPOSED CONNECTION FEES (CURRENT AND PROPOSED)

Sewer Connection Fees			
Single-Family Residential	\$5,000.00 per dwelling unit		
Commercial	\$227.00 per fixture unit		
Industrial	Flow	BOD	TSS
	\$1.18	\$800.00	\$254.00
	per gpd	per lb/day	per lb/day

	RCN	RCNLD
City's Sewer System Assets		
Plant 2 & 3 Assets	\$890,215,891	\$550,677,088
5-Year Future CIP	\$45,000,000	\$45,000,000
Cash Reserves	\$35,800,000	\$35,800,000
System Value	\$971,015,891	\$631,477,088
Current EDUs	151,746	151,746
Connection Fee per EDU	\$6,398.93	\$4,161.40

Single Family - Proposed

	RCN	RCNLD
Connection Fee per EDU	\$6,398.93	\$4,161.40
Fixture Units per EDU	25	25
Connection Fee per Fixture Unit	\$255.96	\$166.46

Commercial - Proposed

- Changes in connection fees are not subject to Proposition 218 procedural requirements
- Periodic update of fees are good practice, in order to reflect increase value of system which benefits growth

	Flow	BOD	TSS
Total System Allocation	85.4%	9.1%	5.5%
Total Value: \$631,477,088			
Total System Assets	\$539,462,109	\$57,575,420	\$34,439,560
Total Loadings	16,289,299	24,404,605	28,472,039
Unit Costs	\$33.12	\$2.36	\$1.21
Units	HCF/yr	lb/yr	lb/yr
Proposed Unit Cost Conn Fee	\$16.16	\$861.11	\$441.50
Units	\$/gpd	\$/lb/day	\$/lb/day

Industrial - Proposed (assumes RCN)



QUESTIONS/COMMENTS

NEXT STEPS

- **Update model / Recommended increase based on feedback**
- **March 16 Council Meeting**
 - Request authorization to mail Proposition 218 notices to ratepayers for change in sewer rates
- **June – Rate adjustments presented to City Council**
 - Barring a successful protest (50% + 1), Council may adopt proposed rates included in the Proposition 218 notice
- **July 1, 2022- Adopted rates enacted for FY 2022-23**