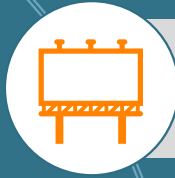


Tahoe Truckee Sanitation Agency Sewer Rate Study

February 15, 2023





Purpose of the Presentation



Overview of the Rate Study



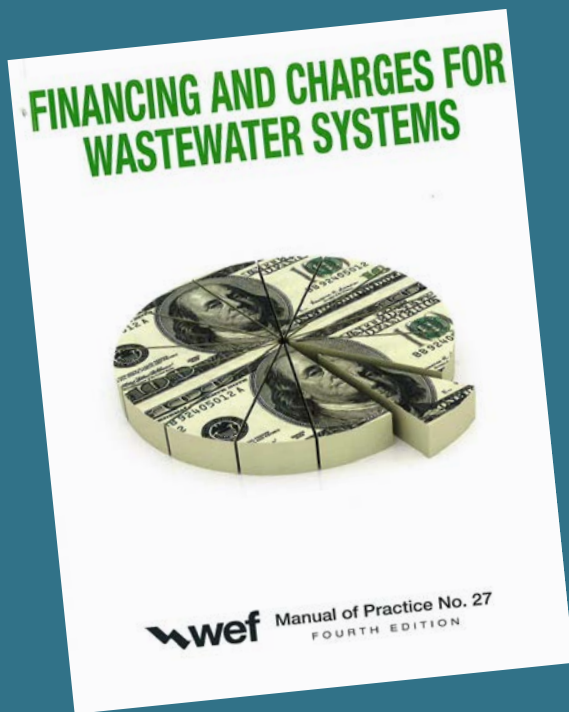
Rate Study Results and Alternatives



Questions / Discussion

Purpose of the Presentation

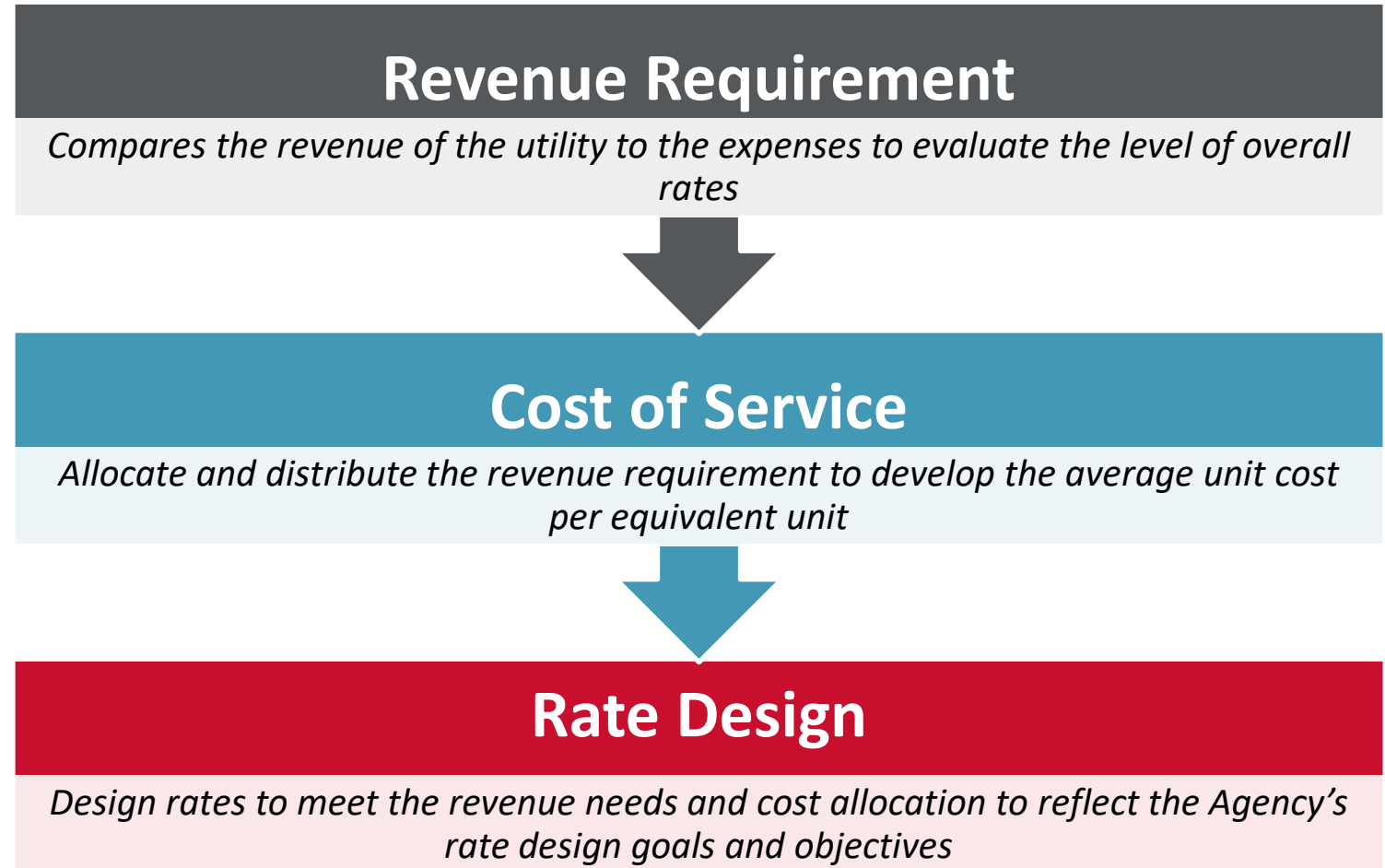
- Review prior Board direction
- Provide an overview of the Sewer Rate Charge update
- Gain input and feedback from the Board
 - Develop final technical analysis and written report
- Next steps
 - Set public hearing
 - Send out Proposition 218 customer notification
 - Hold public hearing
 - Adopt sewer service charge at Board desired level



Purpose of the Rate Study

- Provide sufficient revenue to operate and maintain the Agency's sewer infrastructure
- Develop proposed sewer rates that are proportional and cost-based
 - Meet the intent of Proposition 218
- Reflect prudent financial planning criteria
 - Maintain target debt service coverage (DSC) ratio
 - Prudent level of rate funding for capital projects
 - Meet Agency minimum target reserve balances
 - Adequately fund identified capital improvement needs
- Develop the study using generally accepted methodologies tailored to TTSA's system and customer characteristics

Establishing Cost-Based Rates



Study Results and Alternatives

Capital Improvement Planning

- Agency recently completed a comprehensive master plans
 - Plans identified deficiencies and betterments necessary to maintain and improve the level of service
- Provided the basis for the rate study capital funding analysis
 - Study included annual inflationary increases to projects
- Staff reviewed and made revisions to project timing and costs
- Rate study developed a funding analysis for expansion (Fund 2) and renewal and replacement (Fund 6 and 10)
 - Connection fee is the funding for expansion projects
 - Rate study, and subsequent service charges, reflect the funding of renewal and replacements
- Funding is provided through a mix of existing reserves, long—term debt, tax revenues, and annual service charge revenues
 - Service charge funding reflects industry standard approach to funding a portion, or all, of renewal and replacement needs through “rates”

Fund 6 Renewal and Replacement Plan

Total \$82M
Years FY24 – FY33

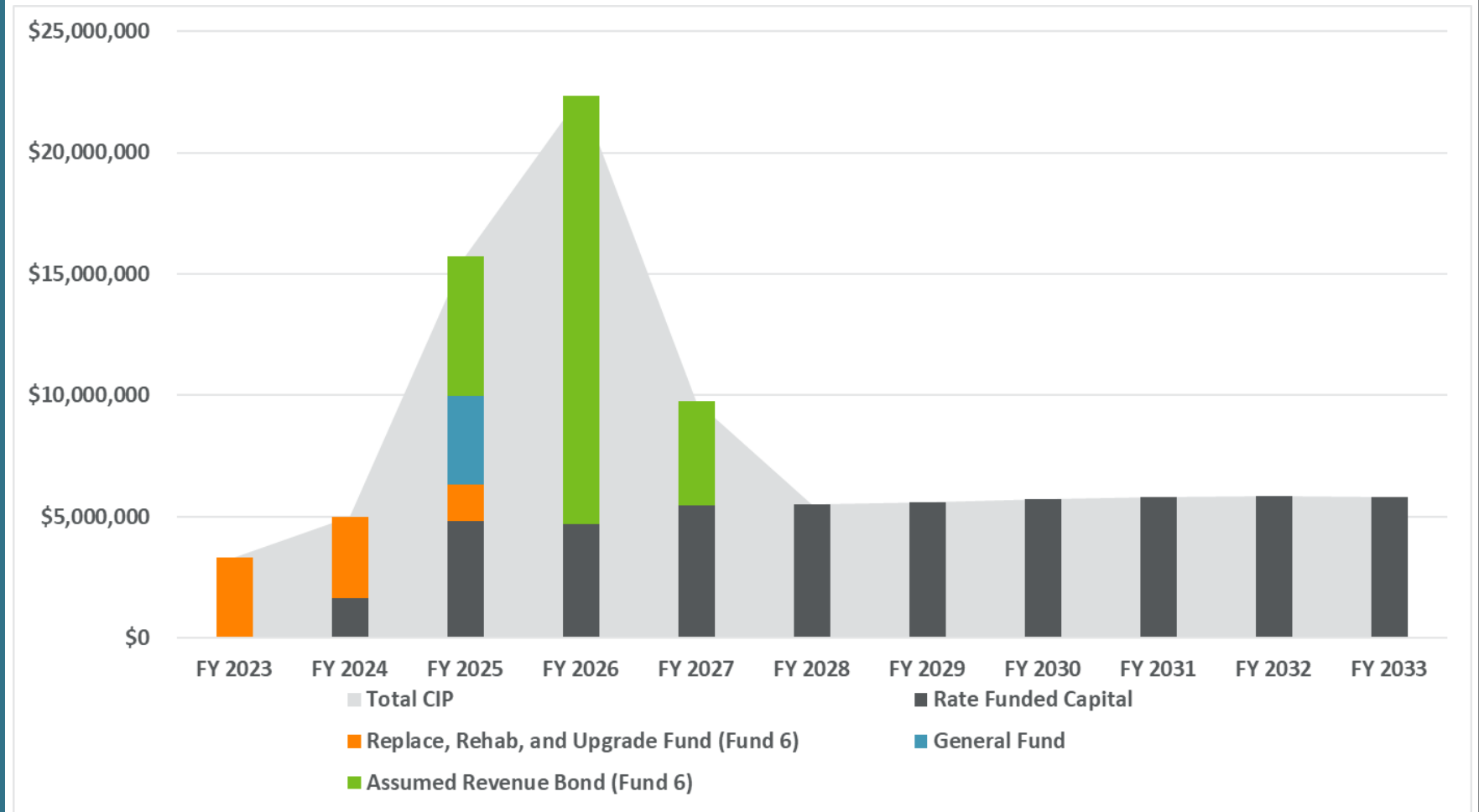
FY24 & FY25
Includes Inflation
10% + 3.8%

FY26 – FY33
Includes Inflation
3.8%

	Total	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
Replace, Rehab, and Upgrade Funded											
River Crossing, Gravity Main (MH 33 and MH 35)	\$2,374,795	\$461,356	\$1,913,439	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
River Crossing, Gravity Main (MH 65 and MH 66)	553,031	0	0	49,209	91,942	76,349	79,250	82,262	85,387	88,632	0
River Crossing, Gravity Main (MH 88 and MH 89)	377,067	0	0	33,552	62,688	52,056	54,034	56,087	58,219	60,431	0
TRI Renewal Program	5,721,138	0	0	0	0	866,876	899,818	934,011	969,503	1,006,344	1,044,585
Visible Reinforcement Study	84,508	0	0	0	0	15,665	16,260	16,878	17,520	18,185	0
Plant Coating Improvements	625,779	0	625,779	0	0	0	0	0	0	0	0
Lab Equipment Replacements	93,658	30,448	63,210	0	0	0	0	0	0	0	0
Lime Systems Improvements	200,957	200,957	0	0	0	0	0	0	0	0	0
Translucent Panel Rehab	71,111	0	71,111	0	0	0	0	0	0	0	0
Communications Network Replacement	248,890	0	248,890	0	0	0	0	0	0	0	0
Odorous Air Biofilter Media Replacement	55,919	0	0	55,919	0	0	0	0	0	0	0
Maintenance/E&I Shop Improvements	807,048	0	0	0	807,048	0	0	0	0	0	0
Plant-wide NFPA 820 Compliance Evaluation	125,598	125,598	0	0	0	0	0	0	0	0	0
Chemical Storage and Feed System Improvements	455,044	0	0	0	0	84,350	87,555	90,882	94,336	97,921	0
Primary and Secondary Treatment Repairs	513,513	0	53,191	225,869	234,452	0	0	0	0	0	0
Phosphorus Removal and Recarb Rehabilitation	3,584,523	0	371,296	1,576,657	1,636,570	0	0	0	0	0	0
Plant Wide Electrical Improvements (Phase 1)	616,414	0	302,460	313,954	0	0	0	0	0	0	0
Harmonic Filter Replacement For Area 71	148,434	148,434	0	0	0	0	0	0	0	0	0
Plant Wide Electrical Improvements (Phase 2)	5,342,997	0	0	0	0	990,413	1,028,049	1,067,115	1,107,665	1,149,756	0
Condition Assessment and Inspection	148,434	148,434	0	0	0	0	0	0	0	0	0
Plant Wide Electrical Improvements (Phase 3)	339,890	0	0	0	0	0	0	0	0	0	339,890
Digestion Improvements Project	22,360,112	1,849,716	6,731,870	13,778,526	0	0	0	0	0	0	0
2-Water System Improvements	210,630	39,963	170,667	0	0	0	0	0	0	0	0
Grit System Improvements	2,471,279	0	0	0	0	458,093	475,500	493,569	512,325	531,793	0
LEL Equipment Replacement	379,260	0	379,260	0	0	0	0	0	0	0	0
Primary & Secondary Treatment Rehab Project	10,219,918	0	1,058,610	4,495,244	4,666,063	0	0	0	0	0	0
Recarbonation Improvements	617,820	0	0	0	0	114,523	118,875	123,392	128,081	132,948	0
TWAS Pump Replacement Project	143,021	0	0	0	143,021	0	0	0	0	0	0
Solids Dewatering Improvements	583,496	0	0	0	0	108,161	112,271	116,537	120,966	125,562	0
Filtration Rehabilitation Project	1,407,256	0	0	0	0	260,858	270,771	281,060	291,740	302,827	0
AWT Improvements	1,910,665	0	0	0	0	354,173	367,632	381,602	396,103	411,155	0
Building Roof Replacements	6,818,849	0	1,268,152	0	1,552,104	605,874	628,897	652,795	677,601	703,350	730,077
Asphalt Sealing and Replacement Project	742,262	0	201,482	0	0	81,940	85,054	88,286	91,641	95,123	98,738
MPPS Improvements Project	654,224	0	0	0	0	0	0	0	0	0	654,224
Misc Plant Rehab Project	1,045,224	0	0	0	0	0	0	0	0	0	1,045,224
Plant Air System Upgrades	1,733,210	0	891,736	841,474	0	0	0	0	0	0	0
Odorous Air VFD Replacement	39,963	39,963	0	0	0	0	0	0	0	0	0
Replace Servers	976,953	0	0	0	0	301,250	312,697	0	0	0	363,006
Upgrade Networks	383,953	188,397	195,556	0	0	0	0	0	0	0	0
Replace Pilot PLCs (4)	763,863	227,104	314,312	222,447	0	0	0	0	0	0	0
Replace WRP PLCs (13)	2,104,057	0	421,216	397,475	412,579	428,257	444,530	397,475	0	0	0
Replace RTUs (14)	687,768	0	0	162,446	168,619	175,026	181,677	0	0	0	0
BNR Blower Replacement	56,505	28,545	0	27,960	0	0	0	0	0	0	0
Filter Press Feed Pump VFD Replacement	51,381	51,381	0	0	0	0	0	0	0	0	0
Front Entry Landscape Improvements	1,260,392	856,350	404,042	0	0	0	0	0	0	0	0
2-Water Valve Replacements	85,635	85,635	0	0	0	0	0	0	0	0	0
VFD Replacements	67,806	34,254	0	33,552	0	0	0	0	0	0	0
Gravity Main between MH 57 and MH 62	1,042,553	0	0	0	0	0	0	0	0	0	1,042,553
WAS Thickening Improvements Project	437,001	0	0	0	0	0	0	0	0	0	437,001
Maintenance Carts	31,111	0	31,111	0	0	0	0	0	0	0	0
Cashman CAT Skid Steer Loader	78,208	78,208	0	0	0	0	0	0	0	0	0
Cashman CAT 938M Wheel Loader w/ stand equip	297,240	297,240	0	0	0	0	0	0	0	0	0
Light vehicle replacement	215,639	103,800	0	111,839	0	0	0	0	0	0	0
Total Replace, Rehab, and Upgrade Funded	\$82,366,000	\$4,995,783	\$15,717,390	\$22,326,122	\$9,775,086	\$4,973,863	\$5,162,870	\$4,384,476	\$4,551,086	\$4,724,027	\$5,755,297

Wastewater Capital Improvement Plan (Fund 6)

Replacement, Rehabilitation & Upgrade Fund



Overview of the Revenue Requirement (Cash Basis)

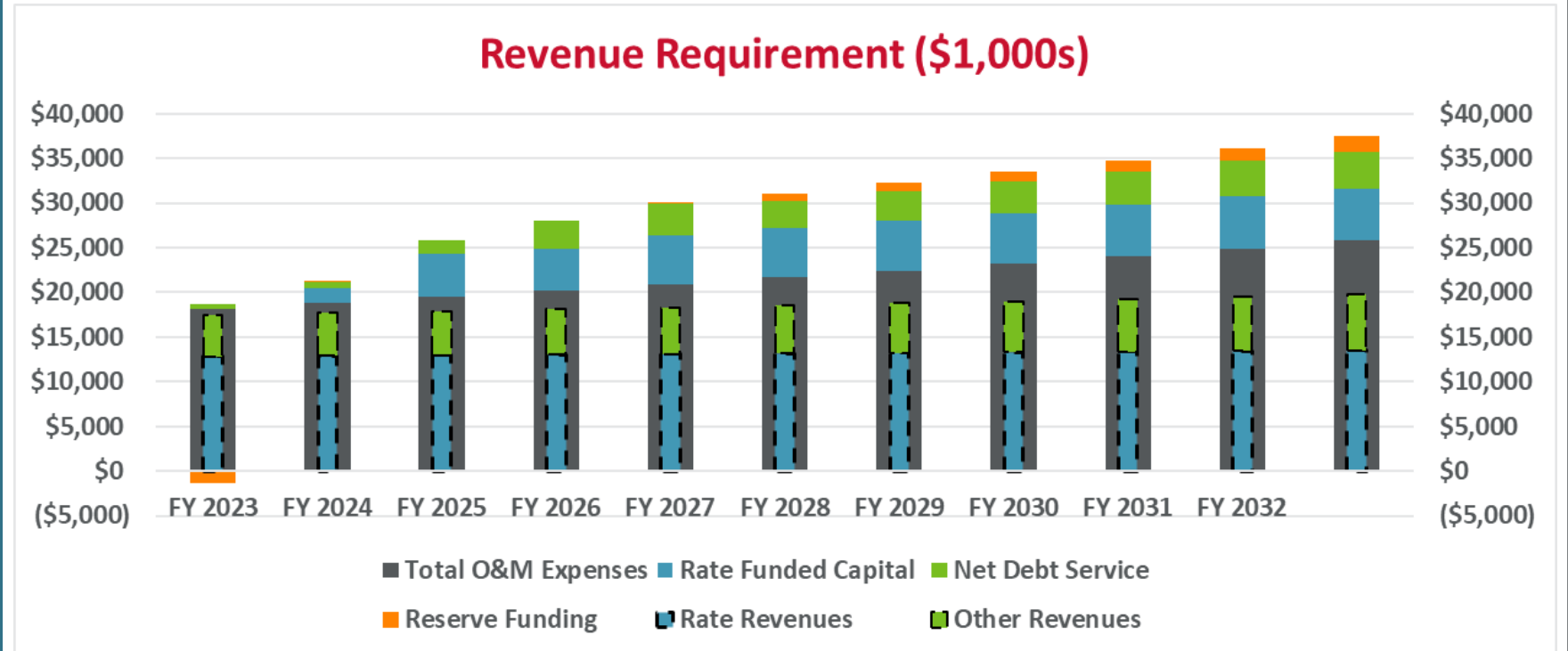
(\$28M @4.5% for 20 years)

- + O&M Expenses
- + Taxes/Transfer Payments
- + Debt Service (P+I)
- + Capital Projects Funded from Rates
- = Revenue Requirements
- Miscellaneous Revenues
- = Balance Required from Rates

- = Total Capital Improvement Projects
- Outside Funding Sources
 - ✓ Long-Term Debt
 - ✓ Growth Related Fees
 - ✓ Reserves
 - ✓ Grants
- = Capital Projects Funded from Rates

\$55M from Rates

Revenue Requirement Summary (\$000s)

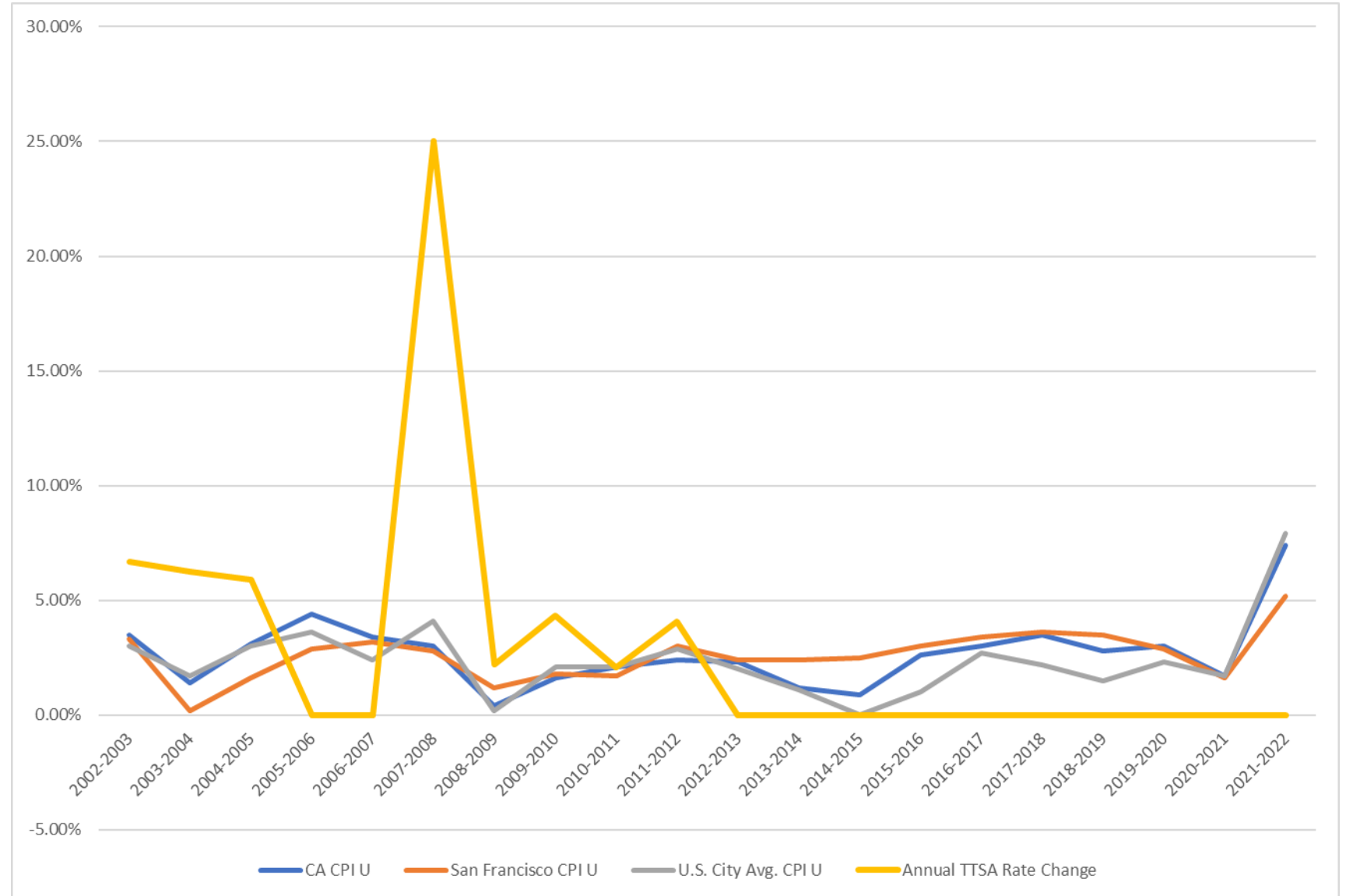


Reflects un-restricted funding needs (Sewer Service Charge)

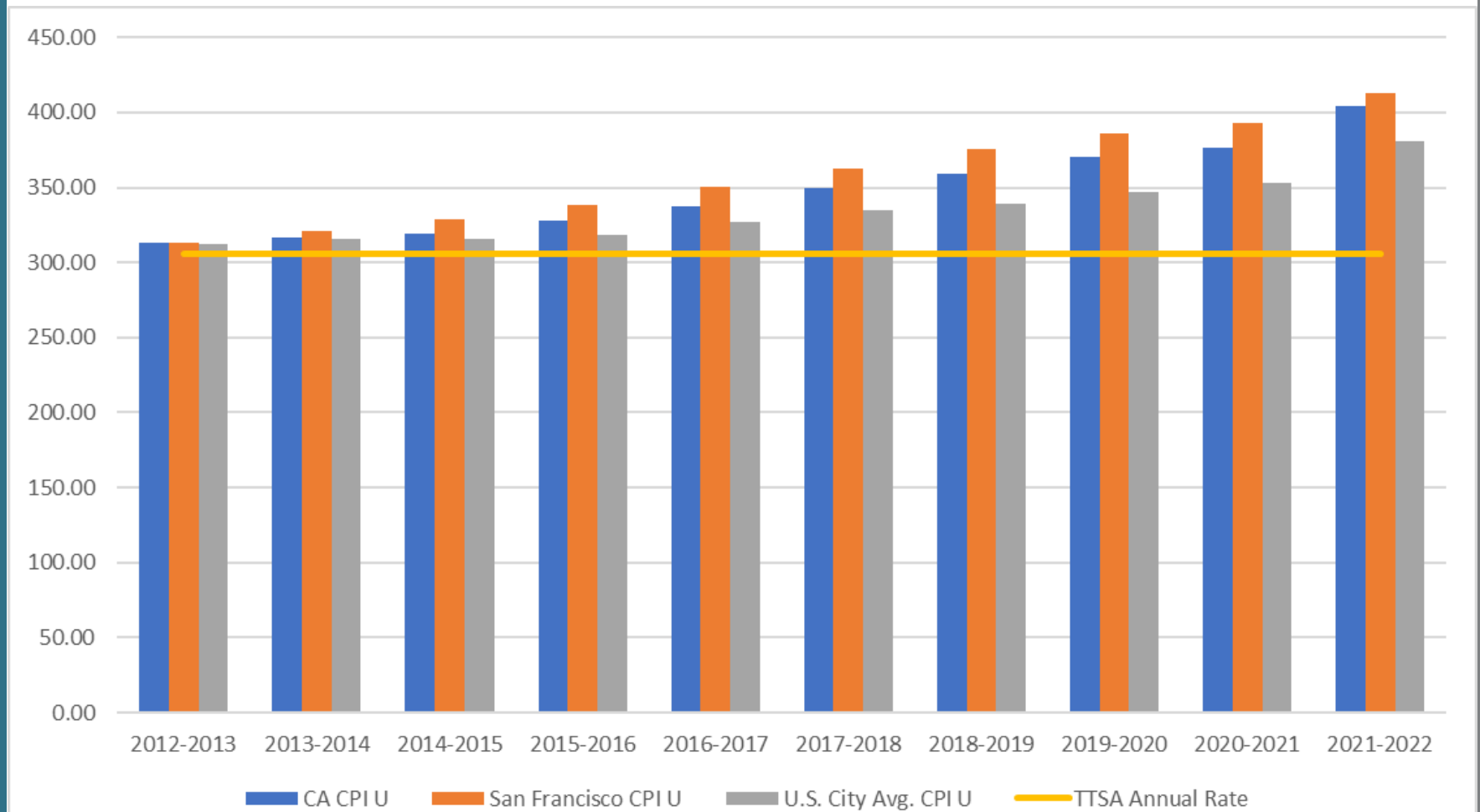
Revenue Requirement Summary

- Rate adjustments are necessary to meet projected O&M expenses
 - Projected funding of RRU capital with long-term debt
 - ~\$28.0M (FY 2025 – FY 2028); 20 years @ 4.5%
 - Targeting reserve funds at Board Policy levels
 - Investing in the sewer system renewal and replacement on an annual basis
 - Developed alternative transition plans for Board consideration

Annual CPI U and Annual TTSA Rate Adjustments



2011-2012 TTSA Rate with inflation



Revenue Requirement Summary – Avg. Bill Comparison

Alternative 1	Present	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Annual Change		\$81.09	\$102.58	\$46.52	\$40.21	\$20.17
Annual Customer Bill (1 EDU)	\$306.00	\$387.09	\$489.67	\$536.19	\$576.40	\$596.58
Monthly Change		\$6.76	\$8.55	\$3.88	\$3.35	\$1.68
Monthly Customer Bill (1 EDU)	\$25.50	\$32.26	\$40.81	\$44.68	\$48.03	\$49.71
% Change		26.5%	26.5%	9.5%	7.5%	3.5%
DSC Ratio	0.00	0.92	1.82	1.51	1.59	3.11

- Target Reserves:
 - Operating – Meet 6 Months O&M + UAL in FY 2036
 - Capital (Fund 2) – 50% of 5-Year Capital over time period
 - R&R (Fund 6) – 50% of 5-Year R&R Capital met in FY 2039
 - Emergency – \$4 Million over time period

Revenue Requirement Summary – Avg. Bill Comparison

Alternative 2	Present	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Annual change		\$91.80	\$73.59	\$63.64	\$45.48	\$20.32
Annual Customer Bill (1 EDU)	\$306.00	\$397.80	\$471.39	\$535.03	\$580.51	\$600.83
Monthly Change		\$7.65	\$6.13	\$5.30	\$3.79	\$1.69
Monthly Customer Bill (1 EDU)	\$25.50	\$33.15	\$39.28	\$44.59	\$48.38	\$50.07
% Change		30.0%	18.5%	13.5%	8.5%	3.5%
DSC Ratio	0.00	1.09	1.59	1.50	1.62	3.17

- Target Reserves:
 - Operating – Meet 6 Months O&M + UAL in FY 2035
 - Capital (Fund 2) – 50% of 5-Year Capital over time period
 - R&R (Fund 6) – 50% of 5-Year R&R Capital met in FY 2039
 - Emergency – \$4 Million over time period

Revenue Requirement Summary – Avg. Bill Comparison

Alternative 3	Present	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Annual Change		\$214.20	\$18.21	\$18.84	\$19.50	\$20.19
Annual Customer Bill (1 EDU)	\$306.00	\$520.20	\$538.41	\$557.25	\$576.76	\$596.94
Monthly Change		\$17.85	\$1.52	\$1.57	\$1.63	\$1.68
Monthly Customer Bill (1 EDU)	\$25.50	\$43.35	\$44.87	\$46.44	\$48.06	\$49.75
% Change		70.0%	3.5%	3.5%	3.5%	3.5%
DSC Ratio	0.00	3.13	2.79	1.93	1.92	4.60

- Target Reserves:
 - Operating – Meet 6 Months O&M + UAL in FY 2034
 - Capital (Fund 2) – 50% of 5-Year Capital over time period
 - R&R (Fund 6) – 50% of 5-Year R&R Capital met in FY 2039
 - Emergency – \$4 Million over time period

Summary of the Cost of Service

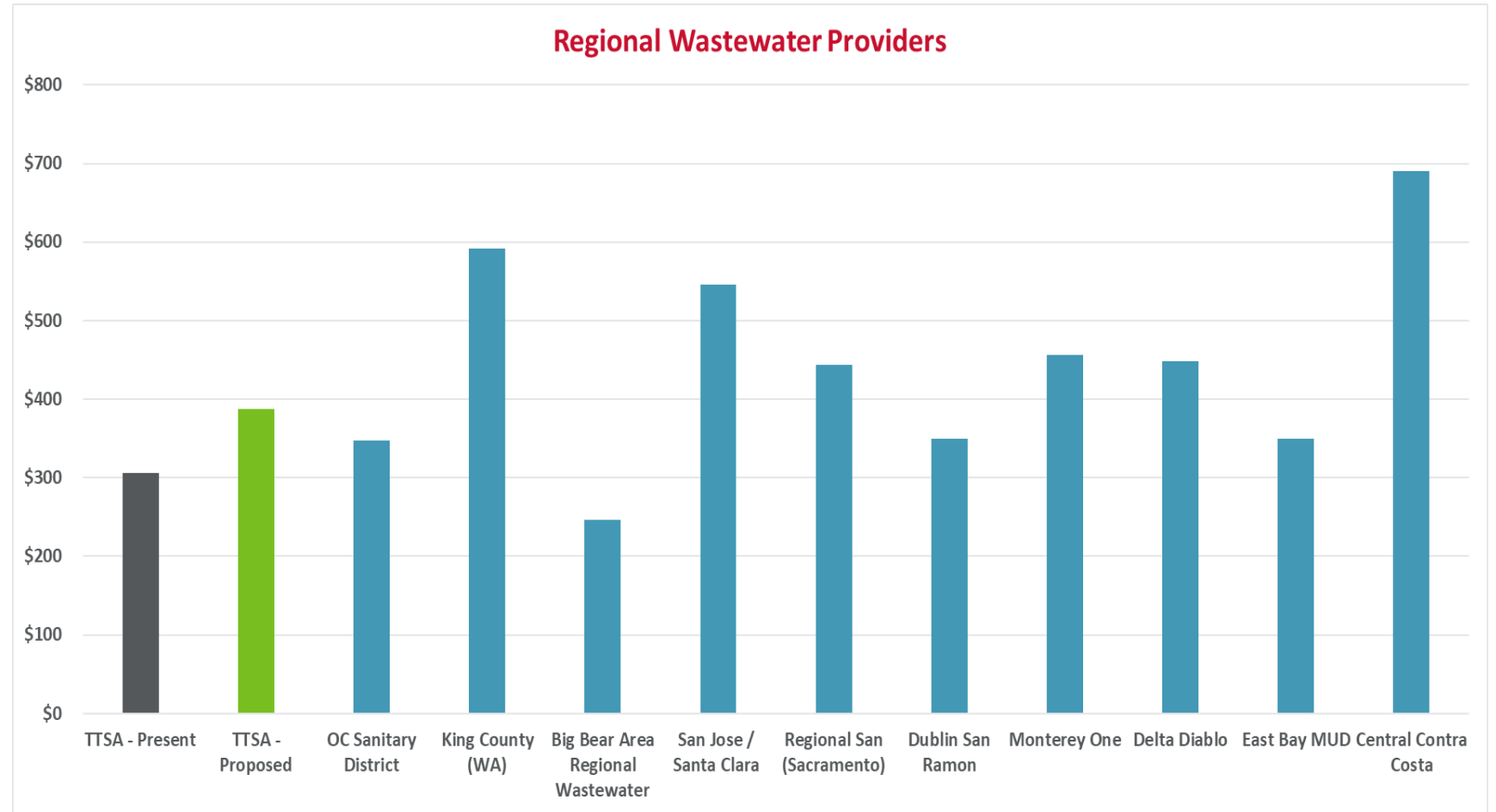
- Agency establishes the rate on a per EDU on an annual basis
- Study reviewed the assumptions for an EDU
 - Flow and strength
- HDR recommends maintaining the current EDU approach
- Cost of service reflects the cost on a per EDU basis
 - EDU is calculated for various customer types to reflect the estimated flows and strength levels
- Cost of service provides the basis for the proposed annual rate

Proposed Rates (Taxable Area) – Alternative 2

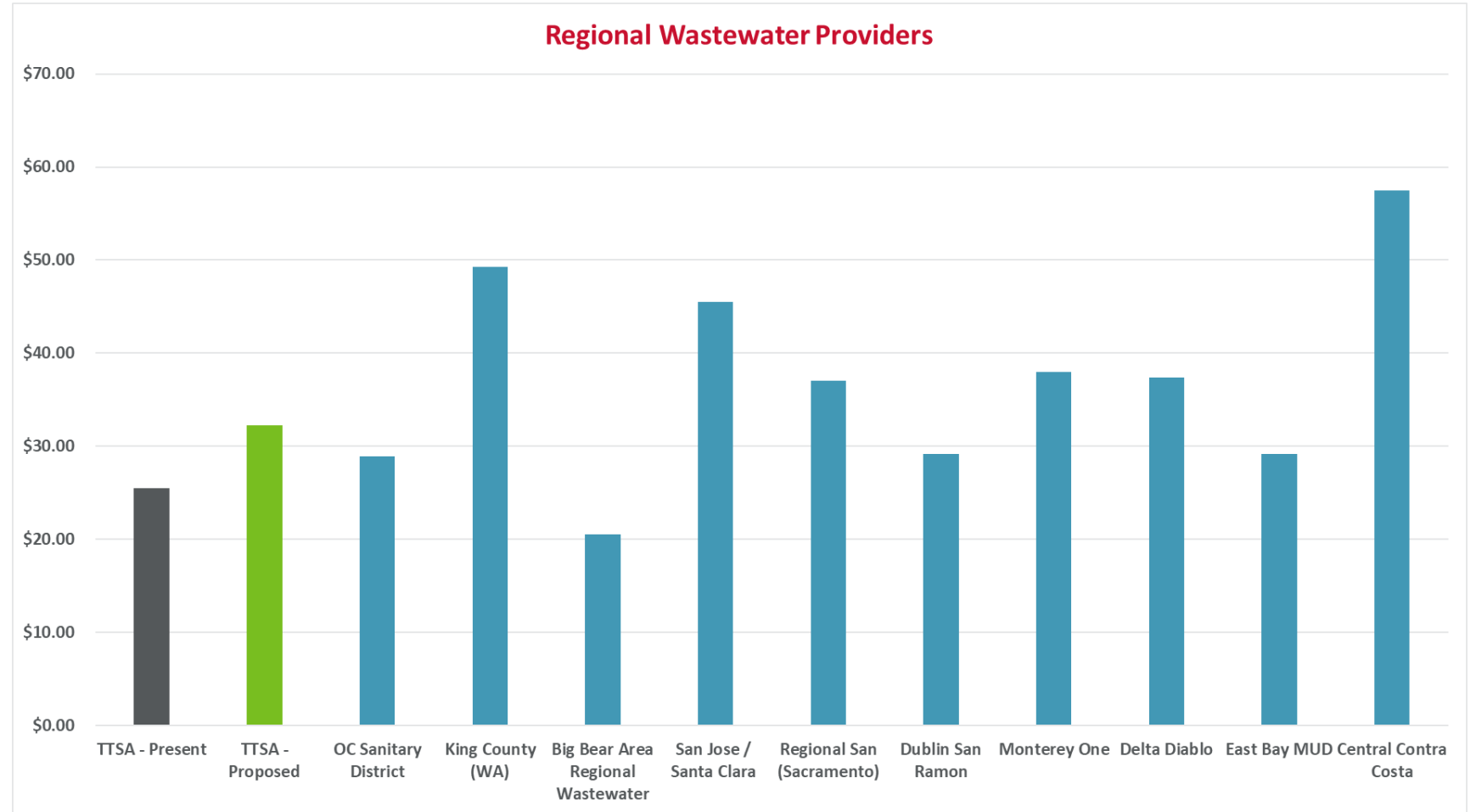
Sewer Service - Taxable Area	TTSA Code	Units	Existing Per Unit Charge (\$)	Proposed FY 2024 Per Unit Charge (\$)	Proposed FY 2025 Per Unit Charge (\$)	Proposed FY 2026 Per Unit Charge (\$)	Proposed FY 2027 Per Unit Charge (\$)	Proposed FY 2028 Per Unit Charge (\$)
Beauty/Barber Shop	A	# of service chairs	\$138.36	\$179.96	\$213.42	\$242.36	\$263.16	\$272.20
Commercial Establishments (1) (unless otherwise noted)	B	# of fixture units	39.24	51.04	60.53	68.73	74.63	77.20
Dump Station	D	# of stations	306.00	398.00	472.00	536.00	582.00	602.00
Restaurant or Bar	F	# of seats inside	30.00	39.02	46.27	52.55	57.06	59.02
	Z	# of seats outside	10.80	14.05	16.66	18.92	20.54	21.25
	Z	# of seats banquet	10.80	14.05	16.66	18.92	20.54	21.25
Grocery	G	# of fixture units	60.60	78.82	93.47	106.15	115.26	119.22
Industrial User	I	as calculated pursuant to Table A-2	306.00	398.00	472.00	536.00	582.00	602.00
Car Washes	J	# of bays, Automatic	459.00	597.00	708.00	804.00	873.00	903.00
		# of bays, Automatic - Recycled	367.20	477.60	566.40	643.20	698.40	722.40
		# of bays, Self-Serve	306.00	398.00	472.00	536.00	582.00	602.00
		# of bays, Self-Serve - Recycled	244.80	318.40	377.60	428.80	465.60	481.60
Campsite with Sewer Connection	K	# of sites	164.16	213.52	253.21	287.55	312.23	322.96
Laundromat	L	# of washing machines	163.32	212.42	251.92	286.08	310.63	321.30
Motel or Hotel Unit	M	# of units	153.00	199.00	236.00	268.00	291.00	301.00
Motel or Hotel Unit with Kitchen	N	# of units	201.96	262.68	311.52	353.76	384.12	397.32
Swimming Pool or Spa	P	# of P units, see table A-1	5.64	7.34	8.70	9.88	10.73	11.10
Campsite without Sewer Connection	Q	# of sites	138.84	180.58	214.16	243.20	264.07	273.14
Residential Unit	R	# of dwelling units	306.00	398.00	472.00	536.00	582.00	602.00
Other	S	As Determined by General Manager	5.64	7.34	8.70	9.88	10.73	11.10
Assembly Hall	T	# of seats	2.28	2.97	3.52	3.99	4.34	4.49
Public Schools	---	Per 1,000 gallons						

Additional rate schedule for properties outside Agency's taxable service area

Annual Residential Treatment Customer Bill Comparison

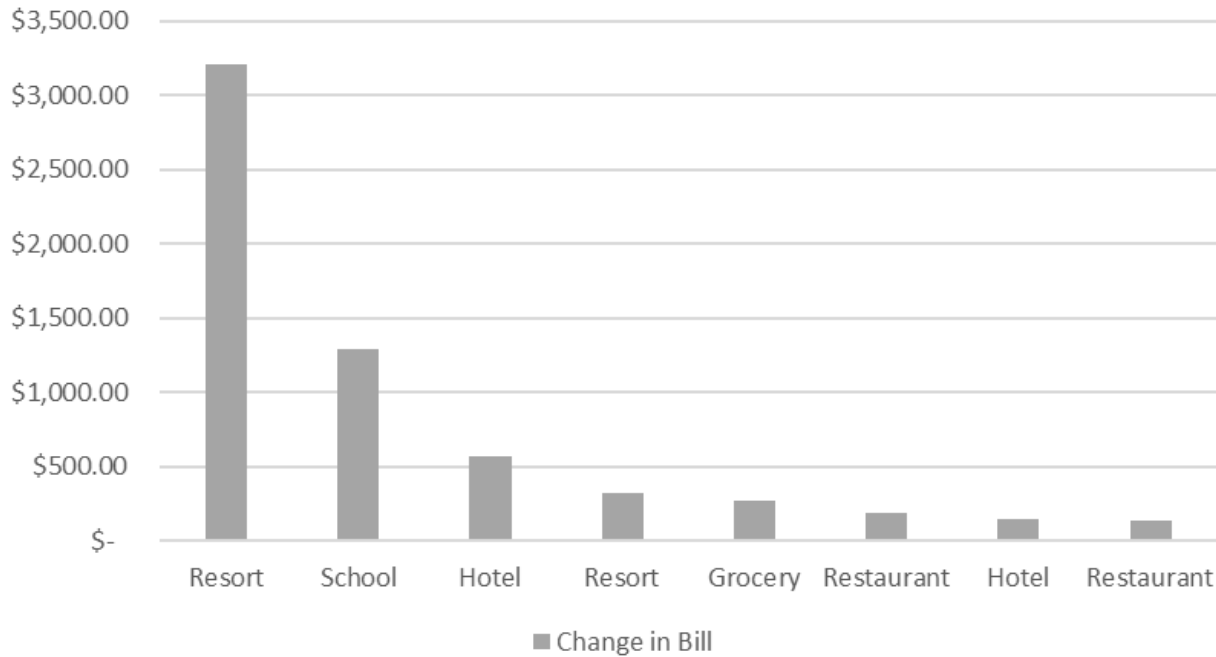


Monthly Residential Treatment Customer Bill Comparison

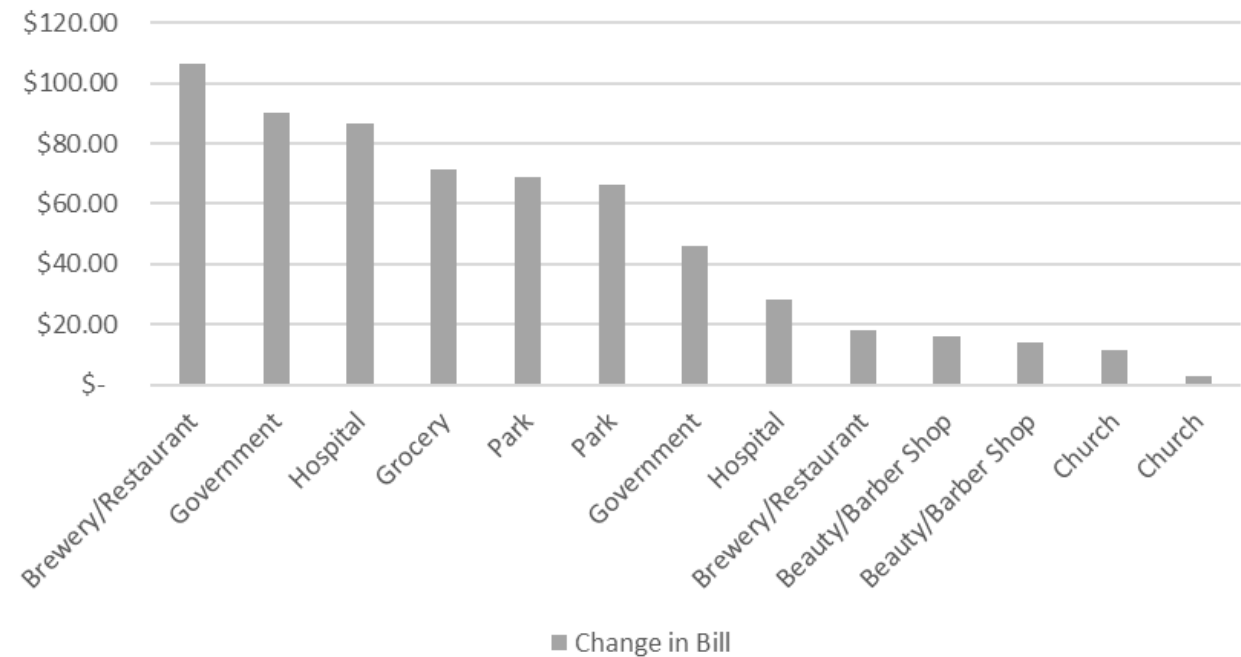


Monthly Commercial Bill Change (Alternative 2; Year 1 adjustment)

Monthly Commercial Bill Change



Monthly Commercial Bill Change



Next Steps

- Gain feedback and input on the study
 - Rate transition plan, and alternative proposed rates
- Finalize technical analyses
- Develop written report
- Final presentation and recommendations to the Board for action on March 15, 2023
- Rate Study:
 - Board accepts the rate study
 - Board sets public hearing for the rate study (May 17th; or special meeting)
 - At public hearing, if no majority protest (i.e., 50% + 1), Board may adopt rates
- Connection fee study
 - Continuation of prior discussions and final study calculations

Thank You
and Discussion

