



City of St. Helena
Water and Wastewater Rate Study Advisory
Committee
Regular Meeting
Fire Department Training Room, 1500 Main
Street, St. Helena, CA 94574
Thursday, January 12, 2023 @ 6:00 PM

PLEASE NOTE: Any person who wishes to speak regarding an item on the agenda or make a comment under the "Oral Communication" portion of the agenda may do so, but please observe the time limit of four minutes.

Page

1. CALL TO ORDER
2. ROLL CALL
Chair: Mario Trinchero
Vice Chair: Walter Nirenberg
Committee Members: Arlene Corsetti, Garry Rose, Sean Maher, Mark Smithers and Peter McCrea.
Staff Liaison: Mandy Kellogg, Assistant Administrative Services Director
3. PUBLIC FORUM:
An opportunity for the public to directly address the Committee on items of interest to the public that are not listed on the agenda. Any person addressing the Committee should provide his or her name and address, and limit comments to four minutes. Because of restrictions imposed by **the Brown Act, the Committee may not engage in substantive discussion, nor take action on matters not described on the agenda.**
4. REPORTS BY STAFF AND BOARD
Reports by staff and/or Committee on items of general interest. Brief questions for clarification may be posed and answered, and Committee may request that items be placed on a future agenda. Except under certain circumstances, **the Brown Act prohibits any other discussion or action by the Water and Wastewater Rate Study Advisory Committee.**
5. NEW BUSINESS:
 - 5.1. Review Updates to the Financial Plan Options and Discuss Preliminary Water and Wastewater Rate Structure (*Materials provided 01-11-2023)
Recommendation:
Receive and file.
[St. Helena Rate Studies Preliminary Rates Presentation](#)
[Public Comment.Garry Rose](#)
[Public Comment.Tom Belt](#)
[Public Comment.Mark Smithers](#)
6. ADJOURNMENT

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The next regular Water and Wastewater Rate Study Advisory Committee meeting is scheduled for TBD at 10:00 a.m.

This agenda was posted at City Hall, 1572 Railroad Avenue, and at [Place], St. Helena, California on January 10, 2023.

Cindy Tzaopoulos, City Clerk

In Compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please call the City Clerk's Office (707) 968-2742. Notification 72 hours prior to the meeting as required by Section 202 of the Americans with Disabilities Act will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

City of St. Helena

Water and Wastewater Rate Study

Rate Study Advisory Committee Meeting – January 12, 2023



Agenda

- Final Financial Plan Options
- Preliminary Water Rates
- Preliminary Wastewater Rates

Financial Plan Scenarios



Water Financial Plan Scenarios

Scenario 1:

- “Recommended CIP”
- CIP start adjusted by one-year (FY 2023-24 start year)
- Full recycled water distribution costs
- 30% revenue adjustment in FY 2024, followed by 8% revenue adjustments in FY 2025 – FY 2028, and 5% for each remaining year
- Assumes proposed debt of \$20M in FY 24, \$15M in FY 26, and \$24M in FY 29

Scenario 2:

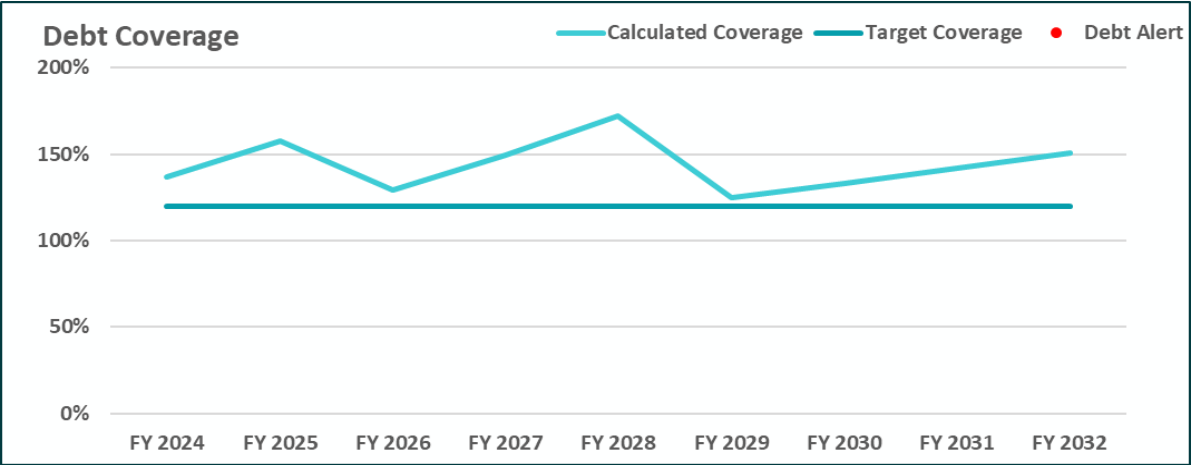
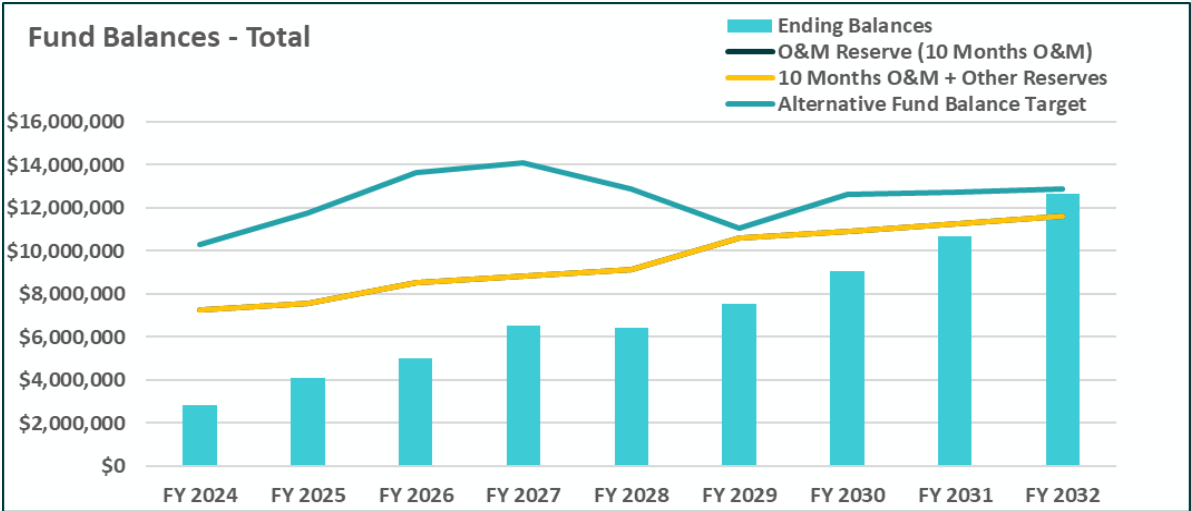
- “Hybrid CIP”
- Scenario 1 CIP with reduced recycled water costs from Scenario 2
- 28% revenue adjustment in FY 2024, followed by 8% revenue adjustments in FY 2025 – FY 2028, and 5% for each remaining year
- Assumes proposed debt of \$10.5M in FY 24, \$23M in FY 26, and \$24M in FY 29

Scenario 3:

- “Hybrid CIP”
- Scenario 1 CIP with reduced recycled water costs from Scenario 2
- 18% revenue adjustment in FY 2024, 14% revenue adjustment in FY 2025, 12% revenue adjustment in FY 2026, 8% revenue adjustments in FY 2027 – FY 2028, and 5% for each remaining year
- Assumes proposed debt of \$8M in FY 24, \$25M in FY 26, and \$24M in FY 29

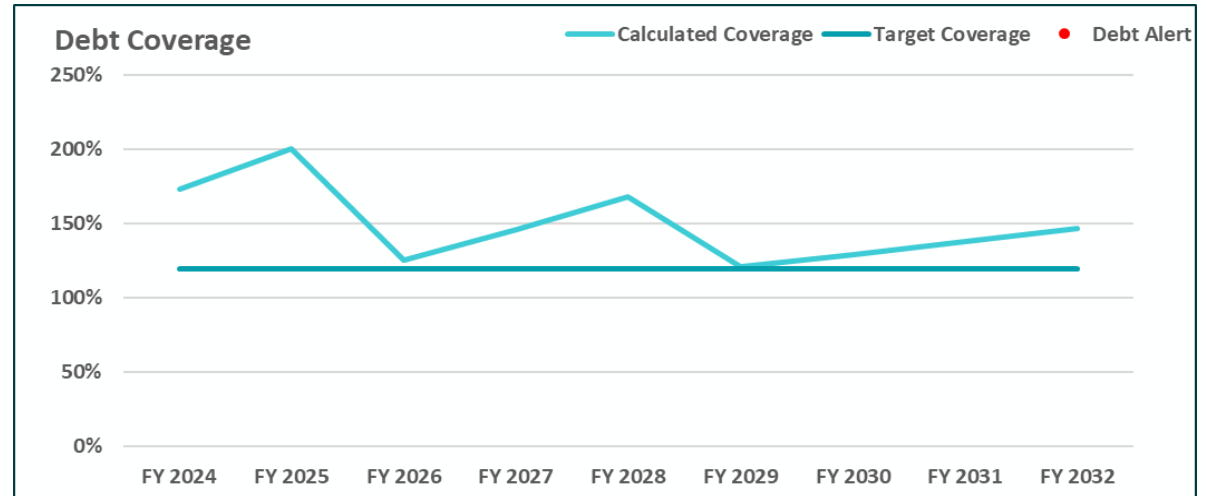
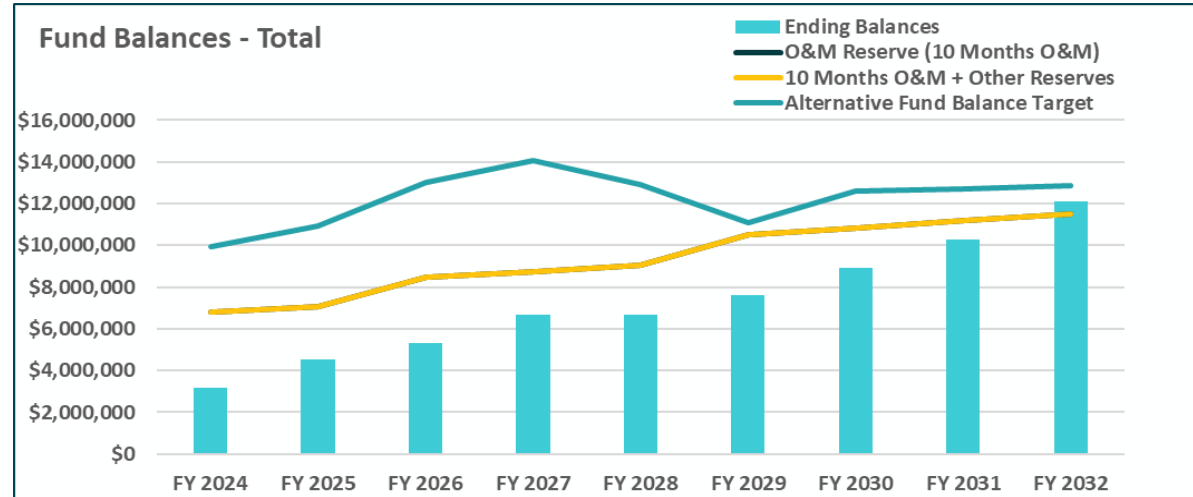
Scenario 1 (Recommended CIP)

Fiscal Year	Revenue Adjustment	Proposed Debt
FY 2024	30%	\$20,000,000
FY 2025	8%	\$0
FY 2026	8%	\$15,000,000
FY 2027	8%	\$0
FY 2028	8%	\$0
FY 2029	5%	\$24,000,000
FY 2030	5%	\$0
FY 2031	5%	\$0
FY 2032	5%	\$0



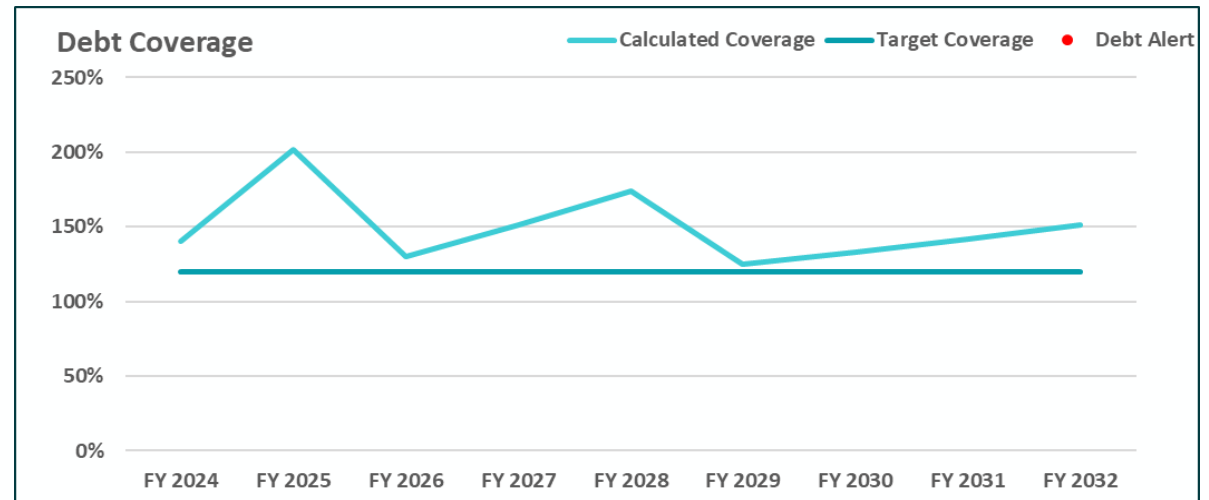
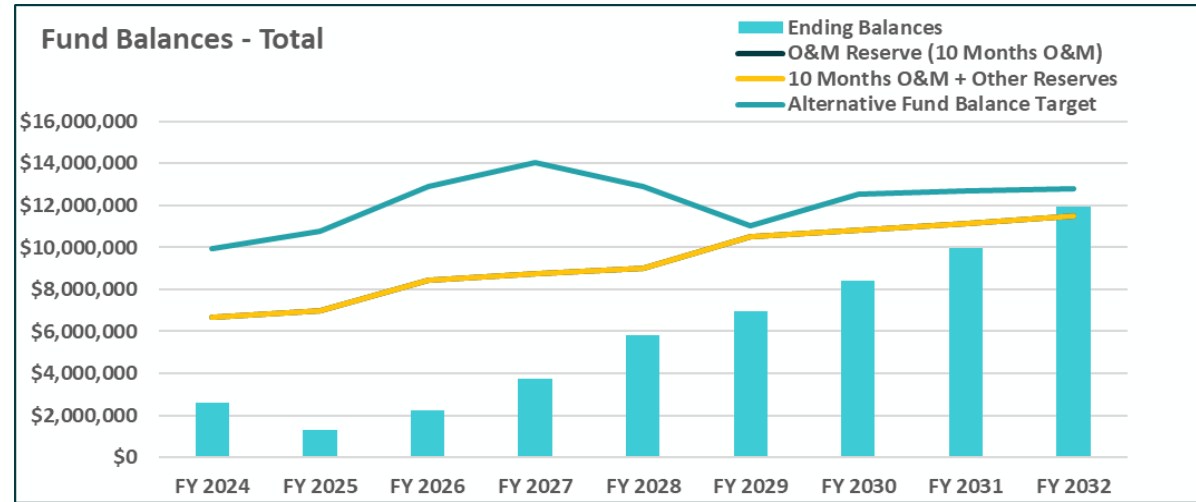
Scenario 2 (Hybrid CIP)

Fiscal Year	Revenue Adjustment	Proposed Debt
FY 2024	28%	\$10,500,000
FY 2025	8%	\$0
FY 2026	8%	\$23,000,000
FY 2027	8%	\$0
FY 2028	8%	\$0
FY 2029	5%	\$24,000,000
FY 2030	5%	\$0
FY 2031	5%	\$0
FY 2032	5%	\$0



Scenario 3 (Hybrid CIP)

Fiscal Year	Revenue Adjustment	Proposed Debt
FY 2024	18%	\$8,000,000
FY 2025	14%	\$0
FY 2026	12%	\$25,000,000
FY 2027	8%	\$0
FY 2028	8%	\$0
FY 2029	5%	\$24,000,000
FY 2030	5%	\$0
FY 2031	5%	\$0
FY 2032	5%	\$0



Water Financial Plan Discussion

- Scenarios 2 and 3 omit most recycled water capital until a more detailed recycled water study can be completed
- Scenario 2 reduces year-one rate increases modestly and maintains higher cash reserves in the short term
 - › Also modestly reduces future borrowing relative to Scenario 1
- Scenario 3 reduces the year-one rate impact, spreading it over three years; however, cash reserves are drawn down to approximately \$1 million on hand in FY 2025 before rebounding in future years

Financial Plan Scenarios

Scenario 1:

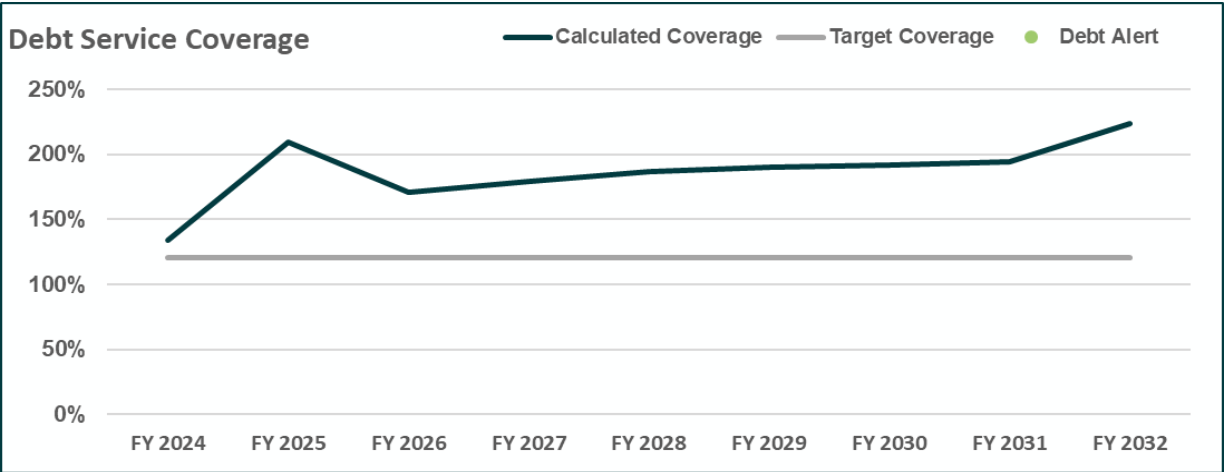
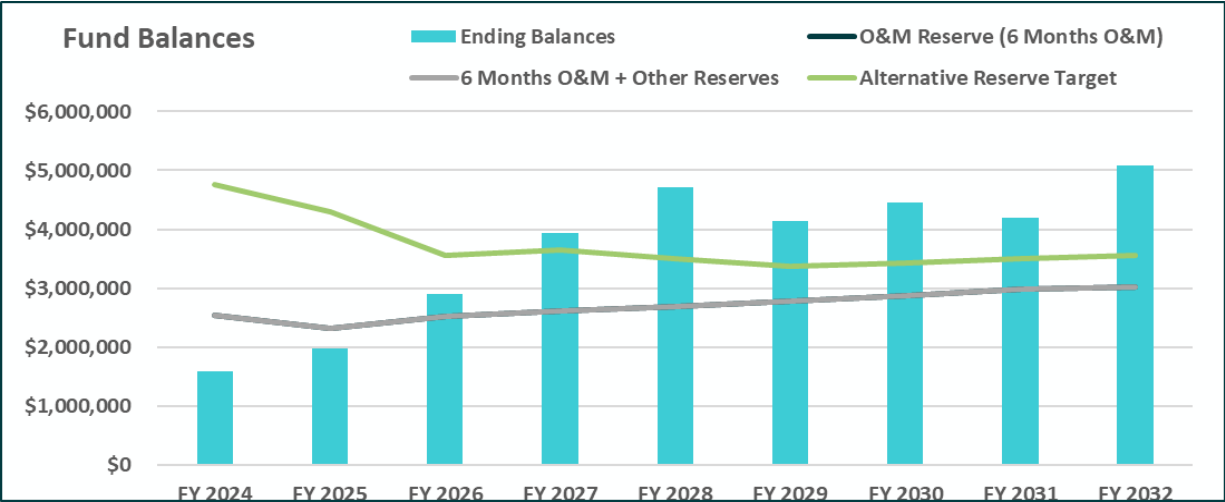
- “Recommended CIP”
- CIP start adjusted by one-year (FY 2023-24 start year)
- Full recycled water distribution costs
- 55% Revenue adjustment in FY 2024, followed by 4% in FY 2025 – FY 2028, and 3% for each remaining year
- Assumes internal fund loans in FY 2023 of \$873,610, and \$1,000,000 in FY 2024
- Assumes proposed debt of \$5M in FY 2024, and \$4M in FY 2026

Scenario 2:

- “Hybrid CIP”
- Scenario 1 CIP with reduced recycled water costs from Scenario 2
- 50% revenue adjustment in FY 2024, followed by 4% in FY 2025 – FY 2028, and 3% for each remaining year
- Assumes internal fund loans in FY 2023 of \$873,610, and \$1,000,000 in FY 2024
- Assumes proposed debt of \$3M in FY 2024

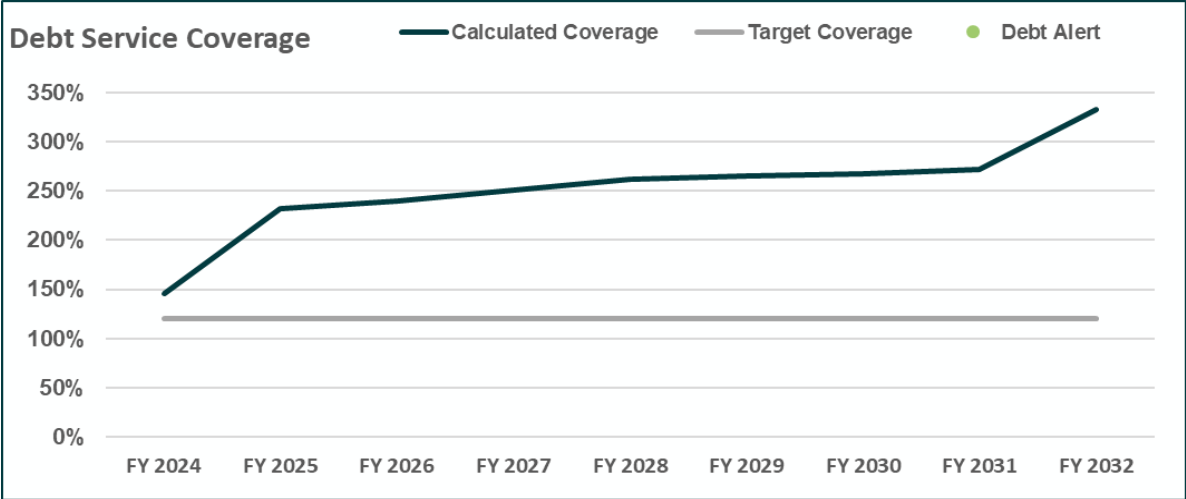
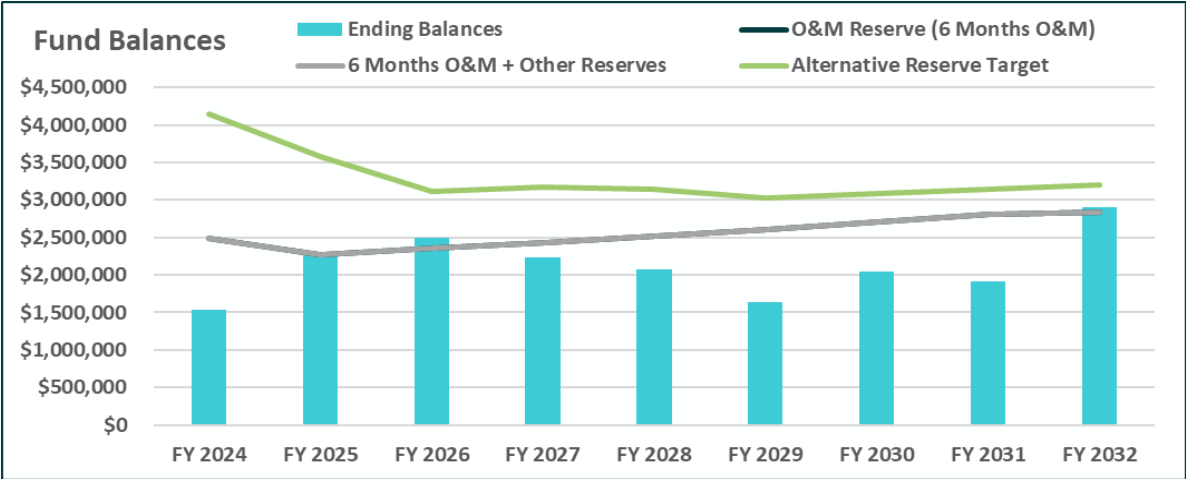
Scenario 1 (Recommended CIP)

Fiscal Year	Revenue Adjustment	Proposed Debt	Proposed Interfund Loan
FY 2023	0%	\$0	\$873,610
FY 2024	55%	\$5,000,000	\$1,000,000
FY 2025	4%	\$0	\$0
FY 2026	4%	\$4,000,000	\$0
FY 2027	4%	\$0	\$0
FY 2028	4%	\$0	\$0
FY 2029	3%	\$0	-\$873,610
FY 2030	3%	\$0	\$0
FY 2031	3%	\$0	-\$1,000,000
FY 2032	3%	\$0	\$0



Scenario 2 (Hybrid CIP)

Fiscal Year	Revenue Adjustment	Proposed Debt	Proposed Interfund Loan
FY 2023	0%	\$0	\$873,610
FY 2024	50%	\$3,000,000	\$1,000,000
FY 2025	4%	\$0	\$0
FY 2026	4%	\$0	\$0
FY 2027	4%	\$0	\$0
FY 2028	4%	\$0	\$0
FY 2029	3%	\$0	-\$873,610
FY 2030	3%	\$0	\$0
FY 2031	3%	\$0	-\$1,000,000
FY 2032	3%	\$0	\$0



Financial Plan Discussion

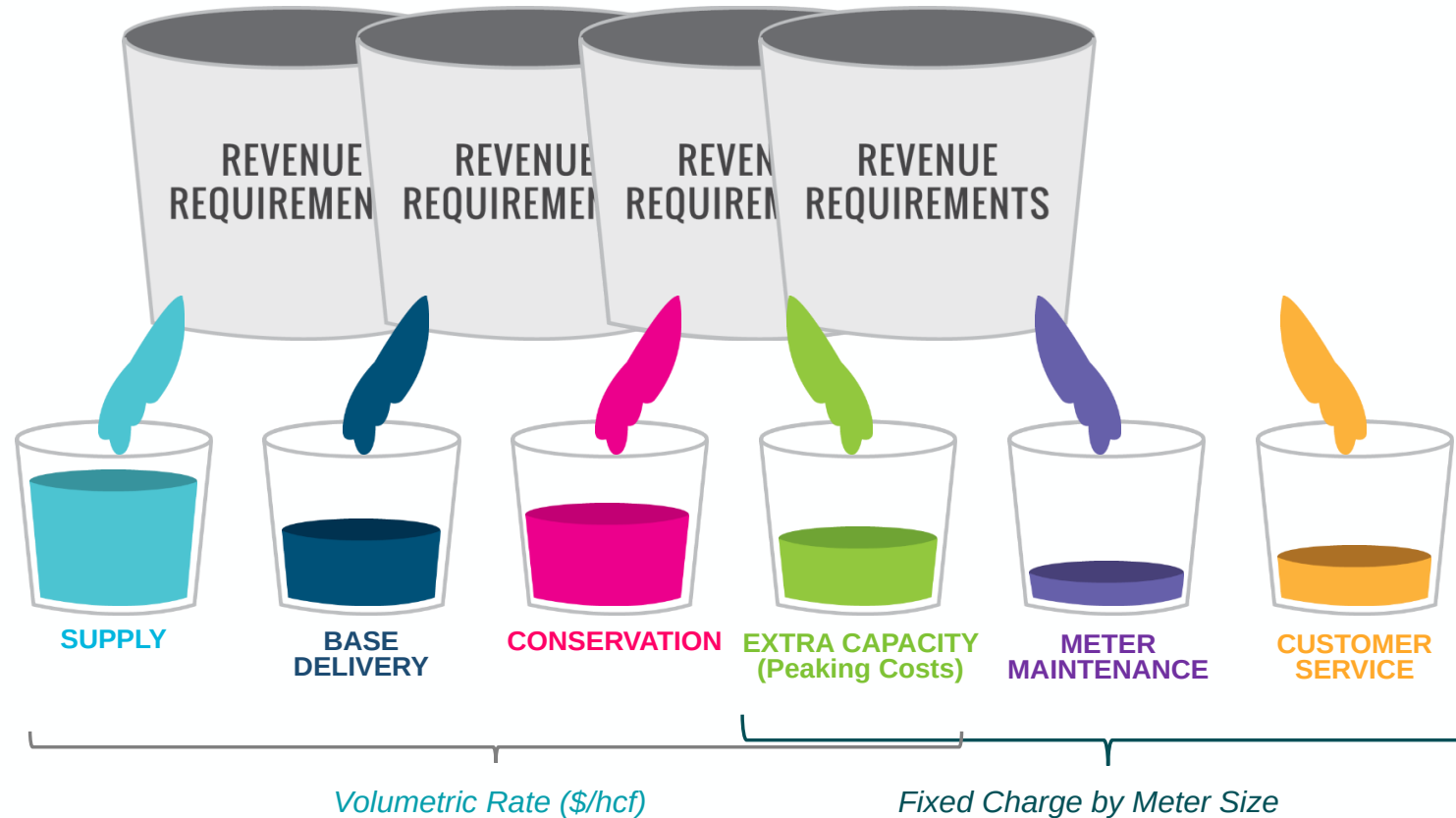
- Omitting most recycled water costs reduces the year one rate increase by 5% (50% increase versus 55% increase)
- Scenario 2 also reduces the borrowing needs of the utility while maintaining strong debt capacity, should future borrowing be required

Water Rates



BASE-EXTRA CAPACITY METHOD

AWWA MANUAL M1



COS - Indirect Allocations & Reallocations

- All costs identified as “General” are reallocated pro rata to the direct cost components
- All non-rate revenues are reallocated pro rata to the direct cost components
- Derivation of system fire costs are based on fire flow requirements identified in the 2020 St Helena Utilities Master Plan
- 75% of extra-capacity costs are reallocated to the meter component for revenue stability
 - › Achieves approximately 35% fixed charge revenues

COS Results – Revenue Neutral

	Existing COS			Updated COS			% Change
Customer Class	Commodity	Fixed	Total	Commodity	Fixed	Total	% Difference
Residential (SFR* & MFR**)	\$2,192,306	\$2,139,991	\$4,332,297	\$2,557,224	\$1,567,104	\$4,124,328	-5%
Commercial	\$969,221	\$682,187	\$1,651,408	\$1,092,338	\$566,893	\$1,659,231	0%
Industrial	\$855,411	\$168,146	\$1,023,557	\$1,036,503	\$167,468	\$1,203,971	18%
Fire	\$1,766	\$19,554	\$21,320	\$0	\$32,963	\$32,963	55%
Landscape	\$91,416	\$88,930	\$180,347	\$110,504	\$68,187	\$178,691	-1%
Elevation	\$0	\$0	\$0	\$1,092,338	\$0	\$13,776	N/A
Total	\$4,110,121	\$3,098,808	\$7,208,929	\$4,796,569	\$2,402,614	\$7,212,960	0%

*SFR = Single Family Residential

16 **MFR = Multi-Family Residential

KEY OBJECTIVES – RATE STRUCTURES

Financial Stability

- Maintain a high level of fixed charges
- Evaluate tiered water rates with few tiers
- Evaluate a fixed wastewater charge for Residential users

Conservation

- Aggressive tier breakpoints (smaller allocation in the lower tier(s))
- Maximize tiered rate differential to the greatest degree possible
- Higher level of variable rate revenues

Equity

- Evaluate several water rate classes (e.g., Residential, MFR, Irrigation, Commercial, etc.)
- Maintain numerous non-residential wastewater strength classes
- Follow through evaluation of Inside/Outside City rates and elevation surcharges

Disclaimer

- All rates shown in this presentation are preliminary and are subject to:
 - › Further internal (Raftelis) review
 - › Further City staff review
 - › Revised cost allocations
 - › Legal review
- All rates shown are *inclusive* of the proposed 28% year-one increase (Financial Plan Scenario 2)

Proposed Fixed Service Charges, by Meter Size (Recovers 35% of Total Rate Revenues)

Meter Size	Number of Accounts	AWWA Ratio 5/8 Base	Eq Meter	Meters	Customer	Proposed Rates (Monthly)	Current Rates (Monthly)	Difference (\$)	Difference (%)
5/8"	2,020	1.00	2,020	\$43.01	\$17.08	\$60.09	\$69.89	(\$9.80)	-14%
3/4"	35	1.00	35	\$43.01	\$17.08	\$60.09	\$69.89	(\$9.80)	-14%
SRF 1"	263	1.00	263	\$43.01	\$17.08	\$60.09	\$69.89	(\$9.80)	-14%
1"	124	2.50	310	\$107.54	\$17.08	\$124.62	\$128.22	(\$3.60)	-3%
1 1/2"	71	5.00	353	\$215.07	\$17.08	\$232.15	\$225.64	\$6.51	3%
2"	63	8.00	506	\$344.11	\$17.08	\$361.19	\$324.00	\$37.19	11%
3"	8	17.50	141	\$752.75	\$17.08	\$769.83	\$654.72	\$115.11	18%
4"	11	31.50	347	\$1,354.95	\$17.08	\$1,372.03	\$1,011.98	\$360.05	36%
6"	13	70.00	913	\$3,010.99	\$17.08	\$3,028.07	\$1,981.63	\$1,046.44	53%
Total	2,608		4,888	\$2,523,036	\$534,623	\$3,057,658	\$3,079,254		

Proposed Rate Structures

- Three-Tier Residential

Residential	Tier Width (Bi-Monthly)	Tier Definition
Tier 1	1-8	SFR Winter Water Use / Efficient Indoor 2 pph
Tier 2	8-16	SFR Average Annual Demands
Tier 3	>16	All use greater than Tier 2

- All other classes modeled as a:
 - Uniform structure or
 - 2-tier rate structure (Tier 1 based on low winter period average (Table below))

Non-Residential	Commercial	Industrial	Landscape
Tier 1	40	400	10
Tier 2	>40	>400	>10

Rate Design - Commodity Rate Components

- Water Supply – source water costs for Bell Canyon surface water, Stonebridge Wells groundwater, and purchased water from City of Napa
- Base – system costs for providing water during average daily demand conditions
- Peaking – system extra-capacity costs for providing water during maximum day and maximum hour demand conditions
- Conservation – costs of outreach, messaging, public information, efficiency programs, rebates, and other conservation-specific programs

Water Supply Rate Component Options – Residential Tiers

Residential	Uniform	Partially Differentiated	Fully Differentiated
Tier 1	\$4.64	\$3.88	\$1.46
Tier 2	\$4.64	\$4.61	\$7.69
Tier 3	\$4.64	\$6.32	\$8.62

- Uniform is the average cost of supply across all units of demand
- Partially Differentiated spreads purchased Napa water across all demand and then differentiates supply between Bell Canyon and Stonebridge Wells
- Fully Differentiated allocates water from lowest cost source to highest cost to maximize the differential

Water Supply Rate Component Options – Non-Residential Tiers

Non-Residential	Uniform	Partially Differentiated	Fully Differentiated
Commercial			
Tier 1	\$4.64	\$3.88	\$0.46
Tier 2	\$4.64	\$5.02	\$6.76
Industrial			
Tier 1	\$4.64	\$3.88	\$0.46
Tier 2	\$4.64	\$4.87	\$5.89
Landscape			
Tier 1	\$4.64	\$3.88	\$0.46
Tier 2	\$4.64	\$4.75	\$5.27

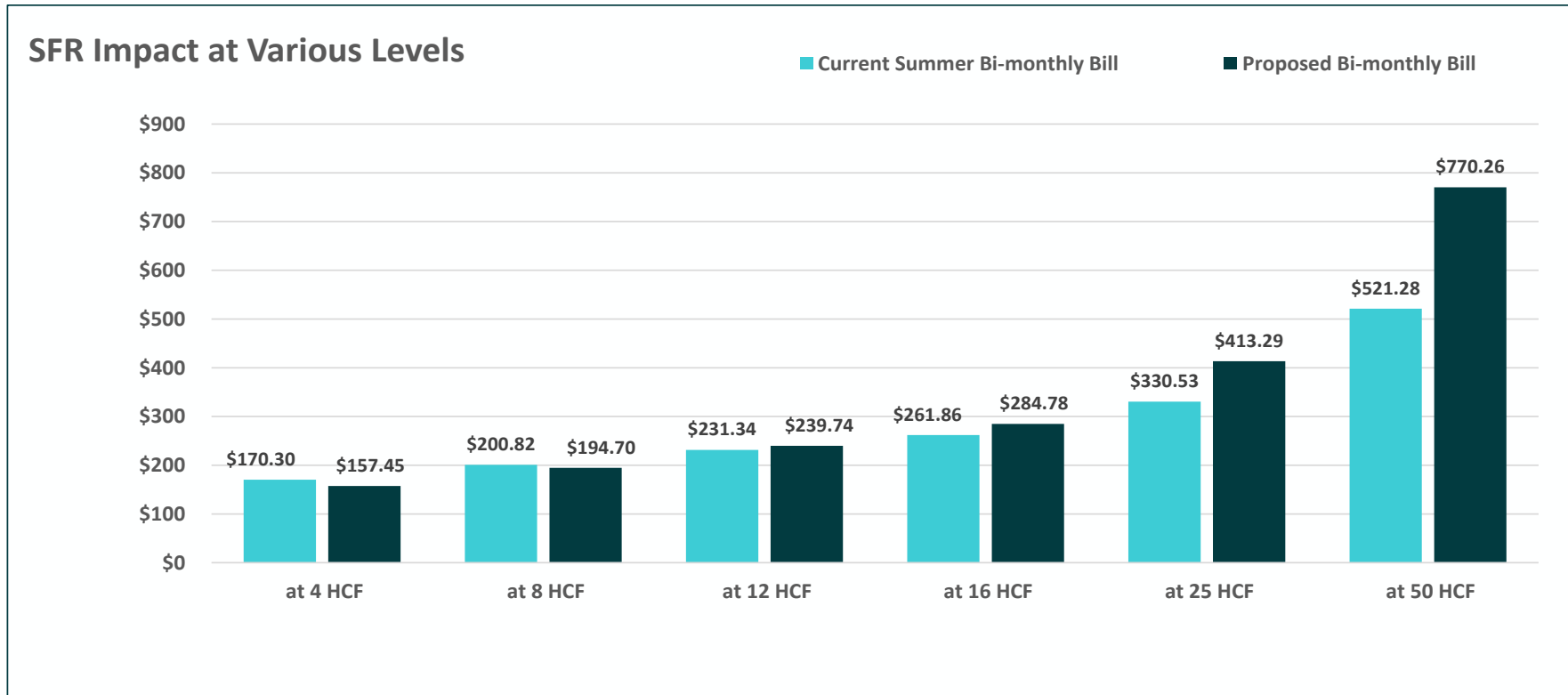
Commodity Rate Components - (Partially Differentiated Supply)

Customer Class	Surface Water	Groundwater	Napa Water	Base	Peaking	Conservation
Residential						
Tier 1	✓		✓	✓	✓	
Tier 2	✓	✓	✓	✓	✓✓	✓
Tier 3		✓	✓	✓	✓✓✓	✓
Commercial						
Tier 1	✓		✓	✓	✓	✓
Tier 2	✓	✓	✓	✓	✓	✓
Industrial						
Tier 1	✓		✓	✓	✓	✓
Tier 2	✓	✓	✓	✓	✓✓	✓
Landscape						
Tier 1	✓		✓	✓	✓	✓
Tier 2	✓	✓	✓	✓	✓✓	✓

Commodity Rates (Partial Supply Differential) (Recovers 65% of Total Rate Revenues)

Customer Class	Water Supply	Base	Peaking	Conservation	Proposed Rate (\$/hcf)	Current Rate (\$/hcf)	Estimated Difference (\$/hcf)
Residential					\$10.97 Avg. Rate		
Tier 1 (0-8 hcf)	\$3.88	\$5.23	\$0.20	\$0.00	\$9.31	\$6.87	\$2.44
Tier 2 (9-16 hcf)	\$4.61	\$5.23	\$0.75	\$0.66	\$11.26	\$7.63	\$3.63
Tier 3 (>16 hcf)	\$6.32	\$5.23	\$2.06	\$0.66	\$14.28	\$7.63	\$2.28
Commercial					\$10.52 Avg. Rate		
Tier 1 (0-40 hcf)	\$3.88	\$5.23	\$0.37	\$0.31	\$9.81	\$6.87	\$2.94
Tier 2 (>40 hcf)	\$5.02	\$5.23	\$0.30	\$0.31	\$10.88	\$7.63	\$3.25
Industrial					\$11.34 Avg. Rate		
Tier 1 (0-400 hcf)	\$3.88	\$5.23	\$0.48	\$0.31	\$9.91	\$6.87	\$3.04
Tier 2 (>400 hcf)	\$4.87	\$5.23	\$1.34	\$0.31	\$11.76	\$7.63	\$4.13
Landscape					\$11.55 Avg. Rate		
Tier 1 (0-10 hcf)	\$3.88	\$5.23	\$0.45	\$0.31	\$9.88	\$6.87	\$3.01
Tier 2 (>10 hcf)	\$4.75	\$5.23	\$1.49	\$0.31	\$11.79	\$7.63	\$4.16

SFR Bill Impacts – Water



Key Points on Proposed Water Rates



Class peaking is the primary differentiator in the costs to serve



Fixed charges are updated to reflect more historic revenue recovery while maintaining a relatively strong fixed revenue base



Commodity rate and fixed charge changes move in opposite directions, mitigating impacts to Residential and low volume customers



Water supply costs can be utilized for more or less rate differentiation; the tradeoff is between conservation price signaling and revenue stability

Calculated Elevation Surcharges

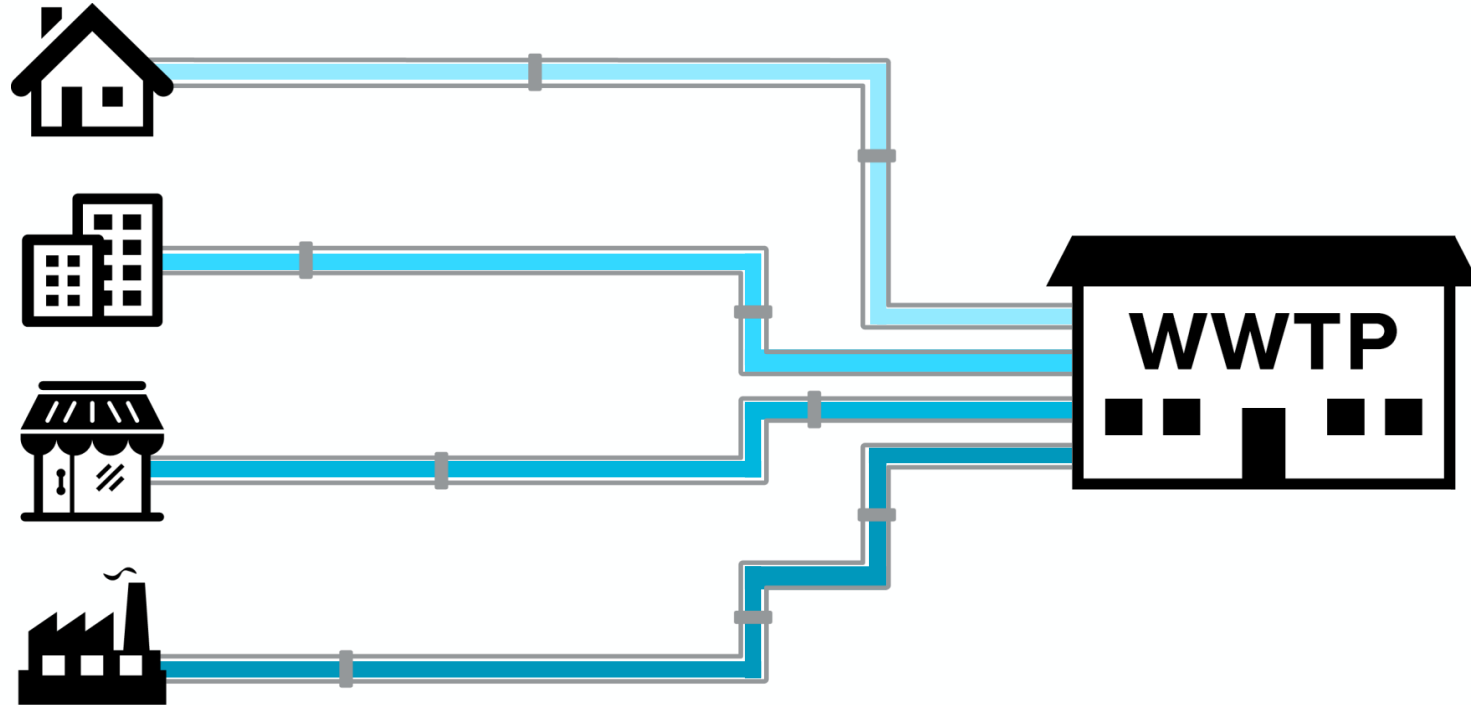
Elevation Zone	Annual Water Use (hcf)	Costs (\$)	Calculated Rate (\$/hcf)
Zone 2	3,205	\$5,596	\$1.75
Zone 3	3,816	\$2,369	\$0.62
Zone 4	9,815	\$3,493	\$0.36
Total	16,836	\$11,458	

- Captures total billed energy costs within each zone
- Represents a de minimis amount of cost and revenue relative to the total revenue requirement
- If these costs were continued to be recovered from all water system users, it translates into an additional two cents per hcf (\$0.02/hcf)

Wastewater Rates



COS Concepts



Wastewater System Cost Components

- Flow – collection and treatment costs related to the volume of wastewater generated
- Strength – Parameters of Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) which vary by user class
- Billing – customer-related costs
- General – indirect costs reallocated pro rata to the other cost components

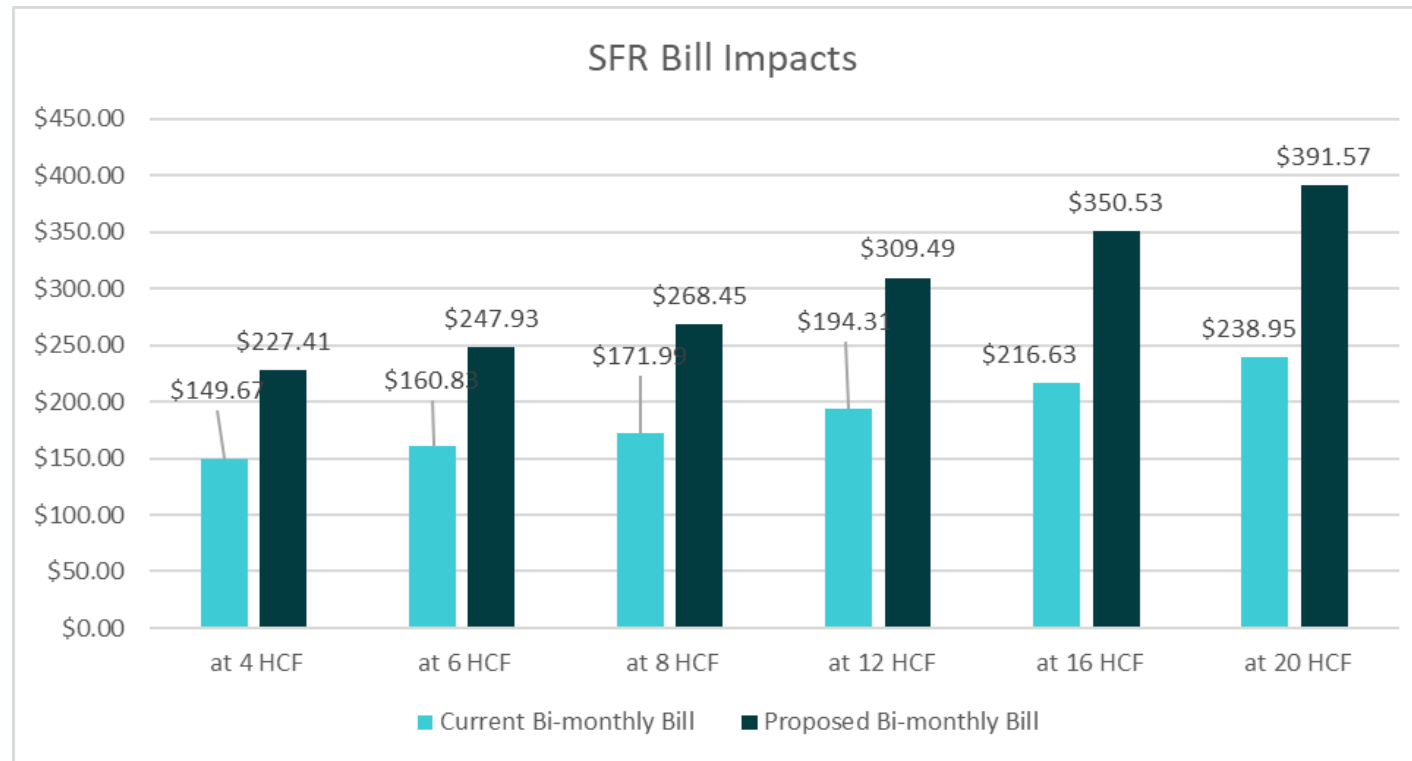
Wastewater Rate Structure

- Proposed rates maintain the existing rate structure for all classes
 - › SFR: Fixed Base Charge + Average Winter Consumption (AWC) variable charge
 - › MFR & Mobile Home: Fixed Charge by Meter Size + AWC variable charge
 - › Commercial: Fixed Charge by Meter Size + variable charge based on metered water use
- All rates presented are inclusive of the proposed 50% revenue adjustment (Financial Plan Scenario 2)

SFR – Proposed Wastewater Rates – (w/50% revenue increase)

Residential Fixed + Variable	Dwelling Units Count / AWC Units	Proposed Rate		Current Rate		\$ Change		% Change
SFR (Base Charge per Unit)	1,541	\$	186.37	\$	127.35	\$	59.02	46%
AWC Flow Rate (\$/HCF)	121,589	\$	10.26	\$	5.58	\$	4.68	84%

SFR Bill Impacts – Wastewater



Proposed Non-Residential Fixed Charges (Includes Commercial users and MFR/Mobile Home)

Meter Size	Count of Meters	Meter Component	Customer Component	COS Rate (\$)	Current Rate (\$)	\$ Change	% Change
5/8"	145	\$223.79	\$39.77	\$263.57	\$176.68	\$86.89	49%
1"	86	\$559.49	\$39.77	\$599.27	\$441.72	\$157.55	36%
1.5"	39	\$1,118.97	\$39.77	\$1,158.75	\$883.42	\$275.33	31%
2"	29	\$1,790.36	\$39.77	\$1,830.14	\$1,413.48	\$416.66	29%
3"	4	\$3,580.72	\$39.77	\$3,620.50	\$2,826.98	\$793.52	28%
4"	4	\$5,594.87	\$39.77	\$5,634.65	\$4,417.14	\$1,217.51	28%
6"	3	\$11,189.75	\$39.77	\$11,229.52	\$8,834.28	\$2,395.24	27%

Proposed Non-Residential Flow Rates (\$/HCF)

Non-Residential User Class	Annual Water Use (HCF)	Proposed Rate (\$/HCF)	Current Rate (\$/HCF)	\$ Change	% Change
Car Wash	582	\$6.13	\$3.86	\$2.27	59%
Religious Places/CC	1,774	\$6.63	\$4.29	\$2.34	55%
Commercial	18,875	\$7.66	\$5.07	\$2.59	51%
Groceries and Mortuaries	1,144	\$18.74	\$13.62	\$5.12	38%
Laundry	4,699	\$6.79	\$4.42	\$2.37	54%
Mixed Retail	2,398	\$12.27	\$8.52	\$3.75	44%
Lodging with Food	12,061	\$14.37	\$10.22	\$4.15	41%
Lodging without Food	8,861	\$8.19	\$5.54	\$2.65	48%
Restaurant	8,688	\$18.43	\$13.50	\$4.93	37%
Napa Valley College	589	\$6.53	\$4.22	\$2.31	55%
Service Station	591	\$8.68	\$5.83	\$2.85	49%
Winery Pre-Treated	1,555	\$8.62	\$5.39	\$3.23	60%
Winery Non-Treated	1,074	\$31.08	\$23.75	\$7.33	31%
Schools	7,517	\$6.53	\$2.10	\$4.43	211%

Next

- January 24th City Council Meeting
 - › Financial Plan Options
 - › Preliminary Water and Wastewater
- February 2nd Rate Study Advisory Committee Meeting
 - › Preliminary Drought Rates
 - › Revised/Final Base Rates
- February 28th City Council Meeting
 - › Final Rate Study Presentation



Thank you

Contacts:

Kevin Kostiuik – 213.262.9309 / kkostiuk@raftelis.com

Nick Kennedy – 213.262.9301 / nkennedy@raftelis.com

Wastewater Flow Assumptions

- Residential based on average winter consumption (AWC) calculation
- Non-Residential based on actual period water use

Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
	Actuals	Projected	Projected	Projected	Projected	Projected
Residential (Average Winter Consumption)						
Single Family	77,832	78,203	78,576	78,950	79,326	79,704
Multi Unit	29,124	29,373	29,623	29,876	30,131	30,388
Mobile Home	13,164	13,276	13,390	13,504	13,619	13,735
Non-Residential (Water Use)						
Car Wash	504	542	582	582	582	582
Religious Places/Community Centers	1,535	1,650	1,774	1,774	1,774	1,774
Commercial	16,333	17,558	18,875	18,875	18,875	18,875
Groceries and Mortuaries	990	1,064	1,144	1,144	1,144	1,144
Laundry	4,066	4,371	4,699	4,699	4,699	4,699
Mixed Retail	2,075	2,231	2,398	2,398	2,398	2,398
Lodging with Food	10,437	11,220	12,061	12,061	12,061	12,061
Lodging without Food	7,668	8,243	8,861	8,861	8,861	8,861
Restaurant	7,518	8,082	8,688	8,688	8,688	8,688
Napa Valley College	510	548	589	589	589	589
Service Station	511	549	591	591	591	591
Winery Pre-Treated	1,555	1,555	1,555	1,555	1,555	1,555
Winery Non-Treated	929	999	1,074	1,074	1,074	1,074
Schools	6,505	6,993	7,517	7,517	7,517	7,517
Total - Usage (ccf)	181,256	186,457	191,997	192,739	193,485	194,237

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Commodity Rates (Fully Differentiated Supply) (Recovers 65% of Total Rate Revenues)

Customer Class	Water Supply	Base	Peaking	Conservation	Proposed Rate (\$/hcf)	Current Rate (\$/hcf)	Estimated Difference (\$/hcf)
Residential					\$10.97 Avg. Rate		
Tier 1 (0-8 hcf)	\$3.88	\$5.23	\$0.20	\$0.00	\$9.31	\$6.87	\$2.44
Tier 2 (9-16 hcf)	\$4.61	\$5.23	\$0.75	\$0.66	\$11.26	\$7.63	\$3.63
Tier 3 (>16 hcf)	\$6.32	\$5.23	\$2.06	\$0.66	\$14.28	\$7.63	\$.28
Commercial					\$10.52 Avg. Rate		
Tier 1 (0-40 hcf)	\$3.88	\$5.23	\$0.37	\$0.31	\$9.81	\$6.87	\$2.94
Tier 2 (>40 hcf)	\$5.02	\$5.23	\$0.30	\$0.31	\$10.88	\$7.63	\$3.25
Industrial					\$11.34 Avg. Rate		
Tier 1 (0-400 hcf)	\$3.88	\$5.23	\$0.48	\$0.31	\$9.91	\$6.87	\$3.04
Tier 2 (>400 hcf)	\$4.87	\$5.23	\$1.34	\$0.31	\$11.76	\$7.63	\$4.13
Landscape					\$11.55 Avg. Rate		
Tier 1 (0-10 hcf)	\$3.88	\$5.23	\$0.45	\$0.31	\$9.88	\$6.87	\$3.01
Tier 2 (>10 hcf)	\$4.75	\$5.23	\$1.49	\$0.31	\$11.79	\$7.63	\$4.16

Water and Wastewater Rate Study Advisory Committee
January 12, 2023

Comments by Garry Rose

Summary

The following comments are NOT to establish rates but to provide a basis to discuss water rates and how they will be proportioned to each rate payer account. It is important to note the significant effect that meter capacity has on the fixed portion of the rates. The focus seems to be on CUSTOMER CLASS, but for this to work each account needs careful analysis on which class they belong to.

Currently St. Helena lists customers by CUSTOMER CLASS, but CUSTOMER CLASS is NOT used for water rate calculation. Current rate calculation consists of two parts: fixed charge and water use charge. The fixed charge is based on meter size with Private Fire Protection having a different fixed rate than "base". The variable charge is subdivided into non-drought and drought periods with each of these periods assigned an off-peak and on-peak charge per hundred cubic feet (HCF).

The consensus seems to be that the water rates should consist of 2 parts, fixed charge based on meter size and variable charge based on water consumption. The variable charge should be calculated using tiered rates as opposed to the current method.

The following have significant effects on the base rate.

- 1) Meter size ratios. Meter capacities by size must be verified and agreed upon.
- 2) Fire Connections meter pricing compared to potable meter pricing. Fire connections must be carefully considered.
- 3) Number of Private Fire Connections. There is a discrepancy between Raftelis (84) and 2016 rate study (126).
- 4) Percentage of total revenue obtained from fixed charges. Examples are shown at 50% fixed and 50% water use.

Assumptions

Base year – 2024

Revenue Required – \$9,407,677

50% obtained from fixed charges

50% obtained from water use charges

Meter Capacities – GPM, (Based on Badger compound meter specifications)

5/8"	20
3/4"	30
1"	50
1-1/2"	100
2"	170
3"	400
4"	800
6"	1,500
8"	3,500

Fixed Charge by Meter Size

The following table calculates the fixed charge required based on meter size, where 50% of the revenue is distributed to each meter size based on the percentage of water meter capacity for each meter size group. The assumed meter capacity is shown in the last column. For example, a 5/8" meter is assumed to have a nominal capacity of 20 gpm. Multiplying 20 gpm by 2,020 meters yields a resulting capacity of 40,400 gpm. This is done for each meter size and the total nominal capacity is calculated as the sum of individual meter size group capacities. The percentage of each meter size group is calculated, and this is used to distribute the total annual dollar requirement to each meter size group. Monthly and Bi-monthly costs per account are the meter size portion of the total divided by the number of meters in each class. **Shaded rows are Private Fire Connections.** The 2016 St. Helena rate study listed 126 Fire Connections, while the Raftelis documents show 84 Fire connections. The number of fire connections must be confirmed.

Table 1 shows the fixed charge per month and bi-monthly assuming NO contribution from Private Fire connections. Table 2 assumes 5% of nominal meter capacities for these Fire connections. Table 3 assumes 10% of nominal meter capacities for the Fire connections. Notice the very significant effect of the Private Fire connections depending on what proportion of the fixed cost they contribute. The contribution of Private Fire connections needs to be carefully considered. Refer to the section **Private Fire Service** later in this document.

A fixed bi-monthly meter charge is the current method used by the city for the fixed part of the monthly cost for each customer.

Meter Size	Quantity (ea)	Capacity (gpm)	% of Total	\$9,407,677	50%	Monthly (\$)	Bi-Monthly (\$)	meter cap. (gpm)	Meter Ratio
5/8	2047	40,940	38.7%	\$ 3,641,739	\$ 1,820,869	\$ 74.13	\$ 148.26	20	1
3/4	303	9,090	8.6%	\$ 808,583	\$ 404,292	\$ 111.19	\$ 222.38	30	1.5
1	125	6,250	5.9%	\$ 555,957	\$ 277,978	\$ 185.32	\$ 370.64	50	2.5
1 1/2	71	7,100	6.7%	\$ 631,567	\$ 315,783	\$ 370.64	\$ 741.28	100	5
2	64	10,880	10.3%	\$ 967,809	\$ 483,905	\$ 630.08	\$ 1,260.17	170	8.5
3	8	3,200	3.0%	\$ 284,650	\$ 142,325	\$ 1,482.55	\$ 2,965.10	400	20
4	11	8,800	8.3%	\$ 782,787	\$ 391,394	\$ 2,965.10	\$ 5,930.20	800	40
6	13	19,500	18.4%	\$ 1,734,585	\$ 867,292	\$ 5,559.57	\$ 11,119.13	1500	75
4	79	0	0.0%	\$ 0	\$ 0	\$ 0.00	\$ 0.00	0	0
6	33	0	0.0%	\$ 0	\$ 0	\$ 0.00	\$ 0.00	0	0
8	14	0	0.0%	\$ 0	\$ 0	\$ 0.00	\$ 0.00	0	0
Total	2768	105,760	100.0%	\$ 9,407,677	\$ 4,703,839				

Table 1. Fixed Charges ignoring Private Fire Connections

Meter Size	Quantity (ea)	Capacity (gpm)	% of Total	\$9,407,677	50%	Monthly (\$)	Bi-Monthly (\$)	meter cap. (gpm)	Meter Ratio
5/8	2047	40,940	36.0%	\$ 3,383,111	\$ 1,691,556	\$ 68.86	\$ 137.73	20	1
3/4	303	9,090	8.0%	\$ 751,160	\$ 375,580	\$ 103.29	\$ 206.59	30	1.5
1	125	6,250	5.5%	\$ 516,474	\$ 258,237	\$ 172.16	\$ 344.32	50	2.5
1 1/2	71	7,100	6.2%	\$ 586,714	\$ 293,357	\$ 344.32	\$ 688.63	100	5
2	64	10,880	9.6%	\$ 899,078	\$ 449,539	\$ 585.34	\$ 1,170.67	170	8.5
3	8	3,200	2.8%	\$ 264,435	\$ 132,217	\$ 1,377.26	\$ 2,754.53	400	20
4	11	8,800	7.7%	\$ 727,195	\$ 363,598	\$ 2,754.53	\$ 5,509.06	800	40
6	13	19,500	17.1%	\$ 1,611,399	\$ 805,699	\$ 5,164.74	\$10,329.48	1500	75
4	79	3,160	2.8%	\$ 261,129	\$ 130,565	\$ 137.73	\$ 275.45	40	2.00
6	33	2,475	2.2%	\$ 204,524	\$ 102,262	\$ 258.24	\$ 516.47	75	3.75
8	14	2,450	2.2%	\$ 202,458	\$ 101,229	\$ 602.55	\$ 1,205.11	175	8.75
Total	2768	113,845	100.0%	\$ 9,407,677	\$ 4,703,839				

Table 2. Fixed Charges with Private Fire Connections at 5% of nominal Meter Capacity

Meter Size	Quantity (ea)	Capacity (gpm)	% of Total	\$9,407,677	50%	Monthly (\$)	Bi-Monthly (\$)	meter cap. (gpm)	Meter Ratio
5/8	2047	40,940	33.6%	\$ 3,158,782	\$ 1,579,391	\$ 64.30	\$ 128.59	20	1
3/4	303	9,090	7.5%	\$ 701,351	\$ 350,676	\$ 96.45	\$ 192.89	30	1.5
1	125	6,250	5.1%	\$ 482,227	\$ 241,114	\$ 160.74	\$ 321.48	50	2.5
1 1/2	71	7,100	5.8%	\$ 547,810	\$ 273,905	\$ 321.48	\$ 642.97	100	5
2	64	10,880	8.9%	\$ 839,461	\$ 419,731	\$ 546.52	\$ 1,093.05	170	8.5
3	8	3,200	2.6%	\$ 246,900	\$ 123,450	\$ 1,285.94	\$ 2,571.88	400	20
4	11	8,800	7.2%	\$ 678,976	\$ 339,488	\$ 2,571.88	\$ 5,143.76	800	40
6	13	19,500	16.0%	\$ 1,504,549	\$ 752,275	\$ 4,822.27	\$ 9,644.55	1500	75
4	79	6,320	5.2%	\$ 487,628	\$ 243,814	\$ 257.19	\$ 514.38	80	4.00
6	33	4,950	4.1%	\$ 381,924	\$ 190,962	\$ 482.23	\$ 964.45	150	7.50
8	14	4,900	4.0%	\$ 378,066	\$ 189,033	\$ 1,125.20	\$ 2,250.39	350	17.50
Total	2768	121,930	100.0%	\$ 9,407,677	\$ 4,703,839				

Table 3. Fixed Charges with Private Fire Connections at 10% of nominal Meter Capacity

Variable Cost or Water Use charge

Table 5. shows the variable cost proportional to the water use by customer class. Raw water and Fire have been excluded from the variable cost. The average monthly cost for each customer class is the proportional cost of each class divided by the number of connections. The bi-monthly cost is the monthly cost x 2. The required \$/HCF assuming all classes pay the same for each HCF is \$8.48. This assumes 50% of the required is obtained from water consumption billing.

Connections (%)	Customer Class	Water Consumption (HCF)	(%)	\$9,407,677 (\$)	50% (\$)	Number of Connections	Monthly (\$)	Bi-Monthly (\$)
61.3%	SFR	225,721	40.7%	\$ 3,829,740	\$ 1,914,870	2,051	\$ 77.80	\$ 155.60
27.3%	MFR	69,158	12.5%	\$ 1,173,383	\$ 586,691	915	\$ 53.43	\$ 106.87
9.4%	Commercial	142,325	25.7%	\$ 2,414,785	\$ 1,207,393	313	\$ 321.46	\$ 642.91
0.8%	Industrial	91,748	16.5%	\$ 1,556,660	\$ 778,330	27	\$ 2,402.25	\$ 4,804.51
2.5%	Fire	4,912	0.9%	\$ 83,340	\$ 41,670	84	\$ 41.34	\$ 82.68
1.2%	Landscape	25,527	4.6%	\$ 433,109	\$ 216,554	41	\$ 440.15	\$ 880.30
	Raw	5,791	1.0%	\$ 98,254	\$ 49,127	0		
	Total	554,479	100.0%		\$ 4,703,839	3,347	\$ 117.12	\$ 234.23
					\$ 8.48	\$/HCF		

Table 5. Variable Cost per HCF by Customer Class

Single Family Residential Bi-Monthly Water Bill					Single Family Residential Bi-Monthly Water Bill				
		Fixed Charge					Fixed Charge		
		(\$)					(\$)		
Meter Size	5/8	\$137.73	\$15.30 /HCF		Meter Size	5/8	\$137.73	\$7.65 /HCF	
	(HCF)	(\$/HCF)				(HCF)	(\$/HCF)		
Tier 1	6.0	\$5.00	2244 gallons/month		Tier 1	6.0	\$5.00	2244 gallons/month	
Tier 2	12.0	\$7.50	4488 gallons/month		Tier 2	12.0	\$7.50	4488 gallons/month	
Tier 3	Remaining	\$10.07	\$5.83 /HCF		Tier 3	Remaining	\$10.07	\$7.52 /HCF	
	Water Usage	Bill Amount				Water Usage	Bill Amount		
	(HCF)	(\$)				(HCF)	(\$)		
	9	\$190.23	\$21.14 /HCF			18	\$273.15	\$15.17 /HCF	
	Monthly	\$95.11				Monthly	\$136.57		

Table 6. Low SFR Bill

Table 7. Average SFR Bill

Commercial Bi-Monthly Water Bill					Commercial Bi-Monthly Water Bill				
		Fixed Charge					Fixed Charge		
		(\$)					(\$)		
Meter Size	1 1/2	\$688.63	\$18.12 /HCF		Meter Size	1 1/2	\$688.63	\$9.06 /HCF	
	(HCF)	(\$/HCF)				(HCF)	(\$/HCF)		
Tier 1	6.0	\$5.00	2244 gallons/month		Tier 1	6.0	\$5.00	2244 gallons/month	
Tier 2	12.0	\$7.50	4488 gallons/month		Tier 2	12.0	\$7.50	4488 gallons/month	
Tier 3	Remaining	\$10.07	\$8.86 /HCF		Tier 3	Remaining	\$10.07	\$9.47 /HCF	
	Water Usage	Bill Amount				Water Usage	Bill Amount		
	(HCF)	(\$)				(HCF)	(\$)		
	38	\$1,025.45	\$26.99 /HCF			76	\$1,408.11	\$18.53 /HCF	
	Monthly	\$512.73				Monthly	\$704.06		

Table 8. Low Commercial Bill

Table 9. Average Commercial Bill

Industrial Bi-Monthly Water Bill					Industrial Bi-Monthly Water Bill				
		Fixed Charge					Fixed Charge		
		(\$)					(\$)		
Meter Size	4	\$5,509.06	\$19.47	/HCF	Meter Size	4	\$5,509.06	\$9.73	/HCF
	(HCF)	(\$/HCF)				(HCF)	(\$/HCF)		
Tier 1	6.0	\$5.00	2244	gallons/month	Tier 1	6.0	\$5.00	2244	gallons/month
Tier 2	12.0	\$7.50	4488	gallons/month	Tier 2	12.0	\$7.50	4488	gallons/month
Tier 3	Remaining	\$10.07	\$9.91	/HCF	Tier 3	Remaining	\$10.07	\$9.99	/HCF
	Water Usage	Bill Amount				Water Usage	Bill Amount		
	(HCF)	(\$)				(HCF)	(\$)		
	283	\$8,313.03	\$29.37	/HCF		566	\$11,162.84	\$19.72	/HCF
	Monthly	\$4,156.51				Monthly	\$5,581.42		

Table 10. Low Industrial Bill

Table 11. Average Industrial Bill

Tables 6 through 11 assume that Private Fire Connections are 10% of nominal meter capacity for fixed rate charges.

Table 6 calculates a “low” Single Family Residential bill; 5/8” meter with consumption at 1/2 the average Single Family water consumption. Table 7 calculates an “average” Single Family Residential bill; 5/8” meter with class SFR average water consumption.

Table 8 calculates a “low” Commercial bill; 1-1/2” meter with consumption at 1/2 the average Commercial water consumption. Table 9 calculates an “average” Commercial bill; 1-1/2” meter with class Commercial average water consumption.

Table 10 calculates a “low” Industrial bill; 1-1/2” meter with consumption at 1/2 the average Industrial water consumption. Table 9 calculates an “average” Industrial bill; 1-1/2” meter with class Industrial average water consumption.

All of the above bill calculations assume the same rate structure, where the fixed portion is proportional to meter capacity and the water consumption portion is identical for all customer classes. Low tier consumption breaks (Tier 1: 6 HCF, Tier 2: 12 HCF) allow residential customers control over their bills. The effect of low tier breaks on the non-residential classes effectively provides a single rate slightly lower than the highest tier charge per HCF. This is about as simple a tiered rate structure possible. It makes billing easy and is a fair way to calculate rates.

Additional Charges or adjustments

Out of City
Single Family 1” meter adjustment
Elevation Surcharge
Separate Raw water rates

Surcharges

From the 2016 rate study staff report. “The additional costs for the Meadowood Area include staff visiting the site every day, plus electrical costs for the pump, plus replacement costs for the pumps and the tanks. These additional costs are not currently being tracked separately and systems would need to be established to track these costs on a daily basis. Separate revenue accounts would also need to be established to make sure that revenues collected in the Meadowood Area, requiring additional administrative(sic) time. The surcharge funds would need to be spent only in the surcharge area”

QUESTION: Is the above premise true? Or can an accurate calculation be made of what those annual costs are for daily trips, electricity, maintenance, and replacement costs, and then assign a surcharge to cover those costs. If the estimate of cost is accurate and the city then makes the daily trips and covers the electricity, maintenance, and replacement costs, would that be sufficient? Does this fall under the “special benefit” definition in Prop 218?

This scenario should apply to other surcharge areas.

Private Fire Service

Why are private fire service connections different from potable water connections regarding the flat rate meter charge portion of the rates? Proposition 218, section 6 Property Related Fees and Charges, paragraph (b)(4) states: “No fee or charge may be imposed for a service unless that service is actually used by, or **immediately available to**, the owner of the property in question.”. Bold emphasis added. The fire connection would not be possible if it were not for the operation of the water enterprise.

Bay Area Cities Typical Water Costs

Chart 1 below was taken from the Napa Utility Rate Study done by Black and Veatch. This is for informational purposes only.

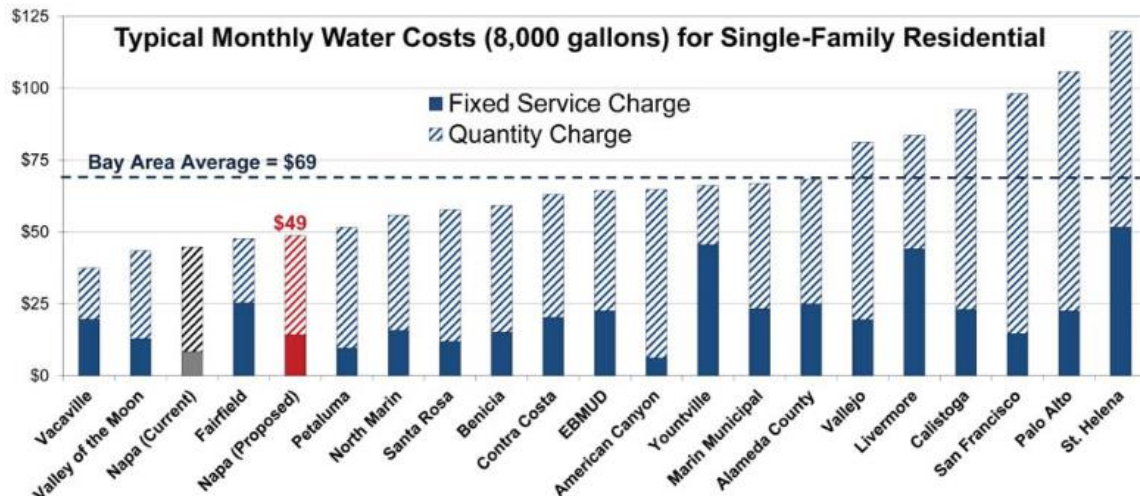


Chart 1.

Cindy Tzaopoulos

From: Mandy Kellogg
Sent: Tuesday, January 10, 2023 8:35 AM
To: 'TOM BELT'
Cc: Cindy Tzaopoulos
Subject: FW: [External] St. Helena Fire Service Rates
Attachments: 2022 Local Cities Fire Service Rate Comparison.xlsx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Tom,

This will be considered a Public Comment and will be attached to the agenda as part of the packet to be distributed to the committee members.

I have forwarded this to Raftelis as well.

Thank you,

Mandy Kellogg
 Administrative Services Director
 City of St. Helena
 1572 Railroad Avenue St. Helena, CA 94574
 (707) 968-2649 office | (707) 312-1260 mobile | (707) 963-7966 fax

From: TOM BELT <tmbelt@comcast.net>
Sent: Saturday, January 7, 2023 3:48 PM
To: Mandy Kellogg <MKellogg@cityofsthelena.org>
Cc: Paul Dohring <PDohring@cityofsthelena.org>; Eric Hall <EHall@cityofsthelena.org>; Anna Chouteau <AChouteau@cityofsthelena.org>; Billy Summers <BSummers@cityofsthelena.org>; Lester Hardy <LHardy@cityofsthelena.org>
Subject: [External] St. Helena Fire Service Rates

Dear Ms. Kellogg,

Please see the attached document assembled from six current city water rate schedules that compare the fire service rates being charged to water customers in Vallejo and five Napa County Cities. It is obvious St. Helena is significantly undercharging its fire service customers significantly less than the local cities near St. Helena. Please note Calistoga does not provide fire service to its water customers.

In consideration that St. Helena currently has 20 million or more dollars in deferred water capital improvements and that water rates are bound to increase as a result of the new rate study, it makes sense that St. Helena's fire service rates should be increased proportionately to neighboring city water rates.

If not, one could conclude the cost of providing fire service in St. Helena is being "subsidized" by the remaining St. Helena water customers which would be out of compliance with California's Proposition 218.

Please forward this attachment to Raftelis and the seven St. Helena 2023 Utility Rate Committee Members for the upcoming committee meeting scheduled for January 12th.

Respectfully,

Tom Belt

2022 LOCAL FIRE SERVICE RATE COMPARISONS

City	Commercial 4" Meter Rate	4" Meter Rate	Approx. % Diff. of Fire Service rate to Base Rate
		Fire Service ONLY	
Calistoga	\$1253.10 Monthly	No fire service ONLY meters	N/A
St. Helena	\$1175.54 Bi-Monthly	\$12.86 Bi-Monthly	1.2% of Base Rate
Yountville	\$921.00 Inside City Limits - Monthly	\$184.23 - Monthly Inside/Out	20% of Base Rate
	\$1565.00 Outside City Limits - Monthly		
Napa	\$452.19 Bi-Monthly	\$153.81 Bi-Monthly	34% of Base Rate
Am. Canyon	\$341.51 Monthly	\$170.75 Monthly	50% of Base Rate per Municipal Code
Vallejo	\$878.45 Bi-Monthly	\$174.10 Bi-Monthly	20% of Base Rate

Mark Smithers
1819 Vallejo Street
St Helena

January 11, 2023

City of St Helena
Water and Wastewater Rate Study Advisory Committee

Re: Usage tier rate consideration

I provide the following comments in writing as a follow-up to my verbal comments at the last couple meetings. Given the preciousness and limitations of our water supply, I think it is prudent and proper to differentiate the cost of service of our water consumption. Where identifiable and within the requirements of proposition 218 our rates should be structured with tiers associated with these different sourced costs to not only encourage conservation but also to charge larger water users associated with the higher supply requirements.

We have three distinct sources of water with obviously different production or supply costs; Bell Canyon, Stonebridge wells, and Napa contract water. The cost of service / production for the first two may be more difficult to differentiate; Napa contract water is easily identified.

Using a tiered cost structure in conjunction with the net safe yield water supply analysis (1658 AF total) we can develop three tiers (or two if we cannot easily separate Bell Canyon and SB well production costs) using the number of water users (not meters) of 3,347 and the three available water amounts from the net safe yield analysis: Bell Canyon 608 AF, SB Wells 450 AF, Napa Water Contract 600 AF. However, we need to adjust tier 1 total water to 247 AF such that the three tiers agree to the estimated 2024 consumption and revenue requirements (1,297 AF). It is proper to reduce tier 1 availability for the tier pricing as Napa Water is a take or pay contract and we would be foolish to not supply all this water to our customers and allow for variations in the amount of water available from Bell Canyon due to drought, fire safety, system leakage, etc.

The first consumption tier is Bell Canyon water, the second tier is SB Well water, and the third tier is Napa purchased water. The monthly water allocation at each tier to each user is simply the annual water availability divided by 12 months divided by the number of users.

Tier 1: $247 \text{ AF} \times 325,821 \text{ gallons} / 12 \text{ months} / 3,347 \text{ users}$. Monthly allocation to tier 1 is 2,004 gallons.

Tier 2: $450 \text{ AF} \times 325,821 \text{ gallons} / 12 \text{ months} / 3,347 \text{ users}$. Monthly allocation to tier 2 is 3,650 gallons.

Tier 3: $600 \text{ AF} \times 325,821 \text{ gallons} / 12 \text{ months} / 3,347 \text{ users}$. Monthly allocation to tier 3 is 4,867 gallons or any amounts over the combined tier1 and tier2 monthly allocations.

Most user consumption will be within tiers 1 and 2 thereby leaving tier 3 pricing for larger water users. The above recognizes the cost differences for each water supply and maintains a uniform rate structure such that all users live within the same rate structure as we do today.