



Wastewater Enterprise Rate Adjustments

Public Works Commission

July 21, 2022

Slides prepared by HF&H Consultants



Presentation Outline

- Introduction
- 5-year financial projections
- Current wastewater rates
- Alternative rate structures
- Cost of service allocations
- Preliminary rates
- Customer bill impacts
- Comparison with other agencies

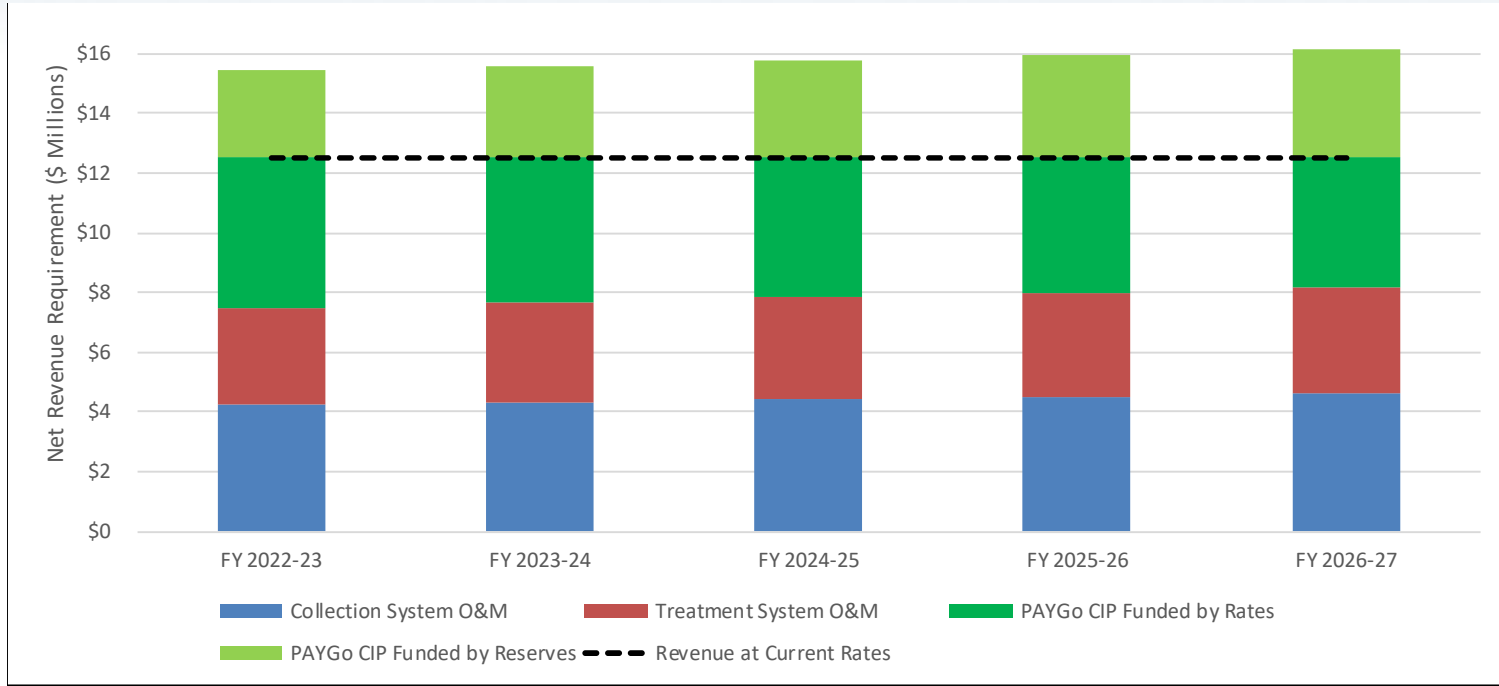


Introduction

- Wastewater rates and rate structure were last modified more than 10 years ago
- May 23, 2022 Public Works Commission Ad Hoc
 - Presented financial projections and rate structure alternatives
- June 9, 2022 Public Works Commission
 - Presented financial projections and rate structure alternatives
- July 12, 2022 Public Works Commission Ad Hoc
 - HF&H developed preliminary fixed plus variable rate structure alternative for consideration



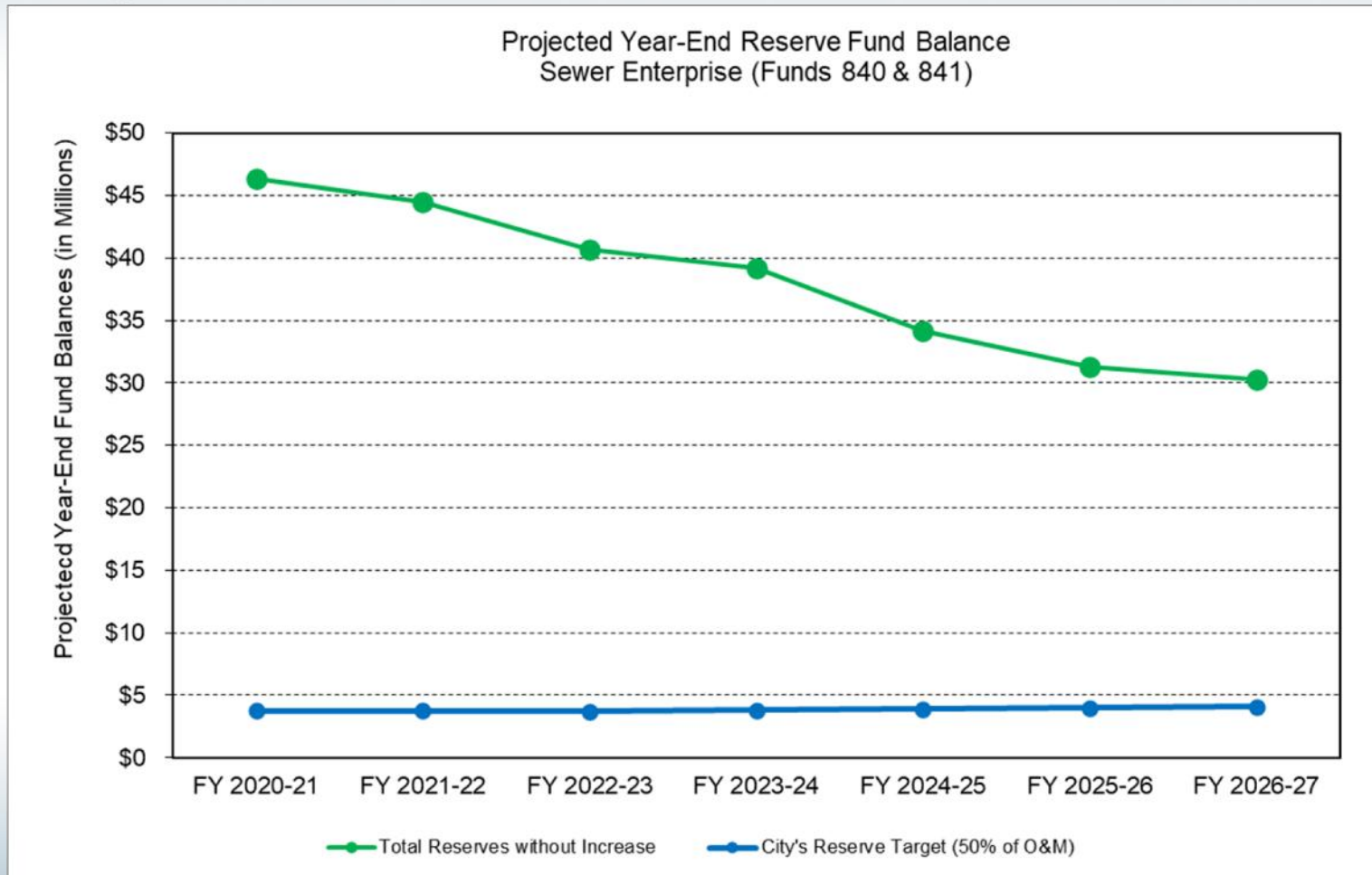
Revenue Requirements



	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
Collection System O&M	\$4,201,149	\$4,238,395	\$4,315,594	\$4,434,281	\$4,527,779	\$4,635,228
Treatment System O&M	\$3,300,713	\$3,234,500	\$3,331,535	\$3,398,166	\$3,466,129	\$3,535,452
PAYGo CIP Funded by Rates	\$3,607,958	\$5,054,682	\$4,880,449	\$4,695,131	\$4,533,669	\$4,356,898
PAYGo CIP Funded by Reserves	\$4,404,552	\$2,902,316	\$3,076,550	\$3,261,867	\$3,423,329	\$3,600,101
Total Revenue Requirement	\$15,514,372	\$15,429,894	\$15,604,127	\$15,789,445	\$15,950,907	\$16,127,678



Projected Fund Balance





Current Wastewater Rates

- Single Family & Multi Family
 - \$87.38 per dwelling unit per bi-monthly billing period
- Non-Residential (Domestic Strength)
 - \$34.20 per account per bi-monthly billing period
 - Plus: \$4.74 per hcf (748 gallons) of actual water use
- Non-Residential (Excess Strength)
 - \$34.20 per account per bi-monthly billing period
 - Plus: \$7.08 per hcf (748 gallons) of actual water use



Cost of Service Allocations

	Current	Proposed	Difference
Single Family Residential	\$3,187,622	\$6,178,285	\$2,990,663
Multi Family Residential	\$5,304,141	\$3,220,526	(\$2,083,615)
Non Residential Domestic Strength	\$2,758,277	\$1,925,963	(\$832,313)
Non Residential Excess Strength	\$1,277,538	\$1,202,803	(\$74,735)
Total	\$12,527,578	\$12,527,578	\$0

- Shift in cost from Multi Family to Single Family class occurs because the fixed charge reflects the current estimated flow per dwelling unit
 - Average Multi Family flow per dwelling unit is 25% of average Single Family flow
- Shift in cost from Non-Residential Domestic Strength to Single Family occurs because both classes pay the same quantity charge (for comparable strength flows)



Restructure Wastewater Rates

<u>Option 1</u> Existing Structure	<u>Option 2</u> Fixed and Volumetric	<u>Option 3</u> Volumetric All
Fixed Charge Per Dwelling Unit		
<u>Residential</u> Single Family and Multi Family	Single Family	
	Multi Family	
Commercial	Commercial	
Volumetric Rates For Individual Customers		
Commercial	Single Family [a] (w/o irrigation meter)	Single Family [a] (w/o irrigation meter)
	Single Family [b] (w/ irrigation meter)	Single Family [b] (w/ irrigation meter)
	Multi Family	Multi Family
	Commercial	Commercial

[a] Flow based on estimated annual sewer flow.

[b] Flow based on metered indoor water use.

Caps for maximum flow may apply.



Wastewater Rate Structure

- Option 2 modifications for consideration
 - Single family
 - Fixed charge per account
 - Introduce a flow charge rate based on estimated sewerage water use
 - Multi family
 - Fixed charge per dwelling unit
 - Introduce a flow charge rate equal to single family (comparable strength)
 - Commercial – domestic strength
 - Fixed charge per account equal to single family
 - Flow charge rate equal to single family (comparable strength)
 - Commercial – excess strength
 - Fixed charge per account equal to single family
 - Flow charge rate based on estimated higher strength concentrations



Wastewater Rate Structure

- Option 3 modifications for consideration
 - Single family
 - Eliminate fixed charge per account
 - Introduce a flow charge rate based on estimated sewerage water use
 - Multi family
 - Eliminate fixed charge per dwelling unit
 - Introduce a flow charge rate equal to single family (comparable strength)
 - Commercial – domestic strength
 - Eliminate fixed charge per account
 - Flow charge rate equal to single family (comparable strength)
 - Commercial – excess strength
 - Eliminate fixed charge per account
 - Flow charge rate based on estimated higher strength concentrations



Sewered Flow Derivation

	<u>Accounts</u>	<u>Annual Flow [1]</u>	<u>Sewered Flow [2]</u>	<u>Return to Sewer</u>	<u>Avg Flow per Unit</u>
	Units	hcf	hcf		hcf per year
Residential					
Single Family Residences	6,080	2,017,021	1,339,931	66%	220
Multiple Family Residences	10,117	572,457	551,726	96%	55
Total Residential	16,197	2,589,478	1,891,656		
Domestic Strength Non Residential					
Commercial/Industrial	795	547,737	517,779	95%	651
Municipal	57	41,207	27,252	66%	478
Total Domestic Strength Non Residential	852	588,944	545,031		
Excess Strength Non Residential					
Commercial/Industrial	102	186,436	176,239	95%	1,728
Municipal	1	1,844	1,219	66%	1,219
Total Excess Strength Non Residential	103	188,279	177,458		
	17,152	3,366,701	2,614,145		

1. Average of CY 2017 & 2018 annual metered flow
2. Average of lowest three winter months

Estimated sewered flows, for billing purposes, would be based on each customer's actual metered water use multiplied by their respective classes' Return to Sewer Factor



Preliminary Restructured Rates

	Current Rates	Option 2		Option 3	
		Rates	Difference	Rates	Difference
Bi-Monthly Service Charge					
Single Family Residential per account	\$87.38	\$60.36	(\$27.02)	\$0.00	(\$87.38)
Multi Family Residential per DU	\$87.38	\$26.08	(\$61.30)	\$0.00	(\$87.38)
Non Residential Domestic Strength per account	\$34.20	\$60.36	\$26.16	\$0.00	(\$34.20)
Non Residential Excess Strength per account	\$34.20	\$60.36	\$26.16	\$0.00	(\$34.20)
Quantity Charge per hcf					
Single Family Residential	\$0.00	\$2.97	\$2.97	\$4.65	\$4.65
Multi Family Residential	\$0.00	\$2.97	\$2.97	\$4.65	\$4.65
Non Residential Domestic Strength	\$4.74	\$2.97	(\$1.77)	\$4.65	(\$0.09)
Non Residential Excess Strength	\$7.08	\$6.57	(\$0.51)	\$6.78	(\$0.30)



Sample Bills – Option 2

Average Bi-Monthly Bill by Class				
Sample Bills at Current Rates				
	Single Family	Multi Family	Domestic Strength	Excess Strength
Bi-Monthly Service Charge	\$87.38	\$87.38	\$34.20	\$34.20
Quantity Charge per hcf				
Rate per hcf	\$0.00	\$0.00	\$4.74	\$7.08
Assumed bi-monthly hcf	37	9	107	287
Total Quantity Charge	\$0.00	\$0.00	\$507.18	\$2,031.96
Current Bi-Monthly Bill	\$87.38	\$87.38	\$541.38	\$2,066.16
Sample Bills at Proposed Rates				
	Single Family	Multi Family	Domestic Strength	Excess Strength
Bi-Monthly Service Charge	\$60.36	\$26.08	\$60.36	\$60.36
Quantity Charge per hcf				
Assumed bi-monthly hcf	37	9	107	287
Rate per hcf	\$2.97	\$2.97	\$2.97	\$6.57
Total Quantity Charge	\$109.80	\$26.71	\$317.53	\$1,884.94
Proposed Bi-Monthly Bill	\$170.16	\$52.79	\$377.89	\$1,945.31
Difference				
Dollar Difference	\$82.78	(\$34.59)	(\$163.49)	(\$120.85)



Sample Bills – Option 3

Average Bi-Monthly Bill by Class				
Sample Bills at Current Rates				
	Single Family	Multi Family	Domestic Strength	Excess Strength
Bi-Monthly Service Charge	\$87.38	\$87.38	\$34.20	\$34.20
Quantity Charge per hcf				
Rate per hcf	\$0.00	\$0.00	\$4.74	\$7.08
Assumed bi-monthly hcf	37	9	107	287
Total Quantity Charge	\$0.00	\$0.00	\$507.18	\$2,031.96
Current Bi-Monthly Bill	\$87.38	\$87.38	\$541.38	\$2,066.16
Sample Bills at Proposed Rates				
	Single Family	Multi Family	Domestic Strength	Excess Strength
Bi-Monthly Service Charge	\$0.00	\$0.00	\$0.00	\$0.00
Quantity Charge per hcf				
Assumed bi-monthly hcf	37	9	107	287
Rate per hcf	\$4.65	\$4.65	\$4.65	\$6.78
Total Quantity Charge	\$171.96	\$41.83	\$497.29	\$1,945.28
Proposed Bi-Monthly Bill	\$171.96	\$41.83	\$497.29	\$1,945.28
Difference				
Dollar Difference	\$84.58	(\$45.55)	(\$44.09)	(\$120.88)



Combined Water and Wastewater Single Family Bills

	Current Rates	Option 2		Option 3	
		Rates	Difference	Rates	Difference
Single Family					
Water	\$283.75	\$291.97	\$8.22	\$291.97	\$8.22
Wastewater	\$87.38	\$171.96	\$84.58	\$169.67	\$82.29
Total	\$371.13	\$463.93	\$92.80	\$461.64	\$90.51
Multi Family - 10 DUs					
Water	\$505.51	\$627.59	\$122.08	\$627.59	\$122.08
Wastewater	\$873.80	\$527.90	(\$345.90)	\$412.71	(\$461.09)
Total	\$1,379.31	\$1,155.49	(\$223.82)	\$1,040.30	(\$339.01)
Multi Family - Per DU					
Water	\$50.55	\$62.76	\$12.21	\$62.76	\$12.21
Wastewater	\$87.38	\$52.79	(\$34.59)	\$41.27	(\$46.11)
Total	\$137.93	\$115.55	(\$22.38)	\$104.03	(\$33.90)

Bill calculations reflect average water use



Survey of Other Single-Family Structures

metered OR BI-metered UTILITY BILLING - VOLUMETRIC SINGLE-FAMILY					
Agency	Fixed Charge	Flow Charge (\$/HCF)	Minimum	Maximum	Flow Basis
East Bay MUD (7/1/2021)	\$15.69/account metered [e]	\$1.37	N/A	9 HCF metered	Metered water use
City of Glendale (7/1/2021)	\$2.40/Electric acct metered	\$2.40	N/A	None	3-month winter average
City of Los Angeles (7/1/2020)	None	\$5.80	None	None	76% of metered water use [f]
City of Pasadena (5/1/2021)	None	\$0.32	None	43 HCF/mo [d]	Metered water use
City of San Diego (1/1/2022)	\$28.88/account monthly	\$4.786	N/A	20 HCF/mo	95% of metered water use
City of San Francisco (7/1/2021)	\$5.21/account metered	\$15.97	N/A	None	90% of metered water use
City of Santa Monica (7/1/2021)	\$17.01/DU metered	\$4.11	N/A	None	85% of lowest four consecutive months [c]
City of Santa Rosa (7/1/2021)	\$26.06/account monthly	\$11.31	None	Lesser of actual billing period or 5-mo winter average [b]	
City of Ventura (7/2021)	\$15.91/account metered	\$3.75	N/A	12 HCF/mo [a]	Metered water use

[a] Ventura: Tier 2 in water rate structure (average day demand per account).

[b] Santa Rosa: accounts with separate irrigation meters use actual billing period flow with no cap.

[c] Santa Monica: Multi-family discharge factor increases from 90% to 99% depending the number of units.

[d] Pasadena: 516 HCF annually.

[e] EBMUD: Includes \$7.59 service charge, \$7.90 strength charge, and \$0.20 pollution prevention fee.

[f] Los Angeles: Factor is recalculate annually.



Comparison With Other Agencies – Single Family

Average Bi-Monthly Bills								
Single Family								
	BH - current	BH - Option 2	BH - Option 3	Los Angeles	Santa Monica	Ventura	San Diego	Glendale
Bi-Monthly Service Charge	\$87.38	\$60.36	\$0.00	\$0.00	\$34.02	\$31.82	\$57.76	\$4.80
Quantity Charge per hcf								
Rate per hcf	\$0.00	\$2.97	\$4.65	\$5.80	\$4.11	\$3.75	\$4.79	\$2.40
Assumed bi-monthly hcf	37	37	37	37	37	37	37	37
Total Quantity Charge	\$0.00	\$109.80	\$171.96	\$214.60	\$152.07	\$138.75	\$177.08	\$88.80
Current Bi-Monthly Bill	\$87.38	\$170.16	\$171.96	\$214.60	\$186.09	\$170.57	\$234.84	\$93.60

Flow used for quantity charge:

Beverly Hills - 66% of water use

Los Angeles - 76% of water use

Santa Monica - 85% of lowest 4 consecutive months

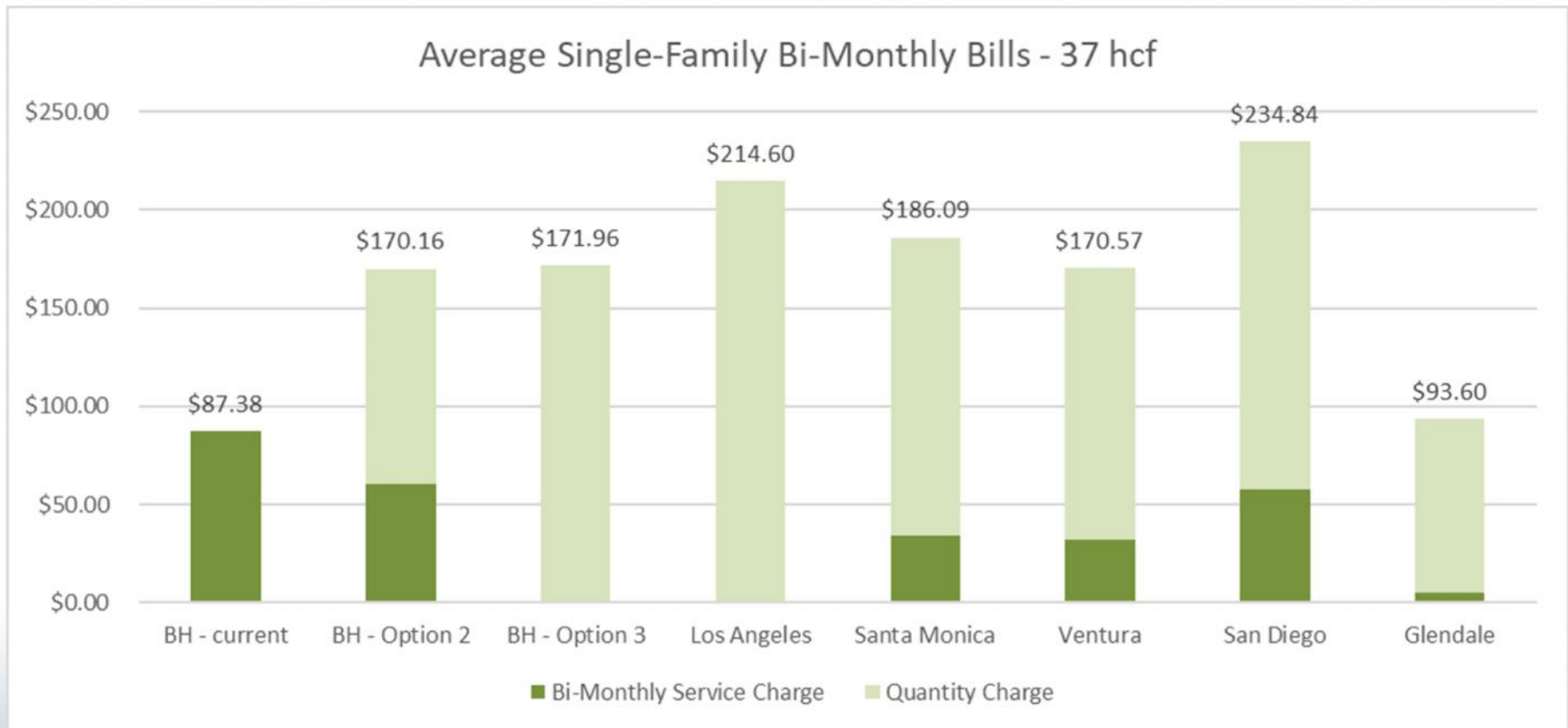
Ventura - unadjusted water use with 12 hcf monthly cap

San Diego - 95% of water use with 20 hcf monthly cap

Glendale - 3 month winter average



Comparison With Other Agencies – Single-Family





Survey of Other Multi Family Structures

metered OR BI-metered UTILITY BILLING - VOLUMETRIC MULTI-FAMILY				
Agency	Fixed Charge	Flow Charge (\$/HCF)	Minimum	Maximum
East Bay MUD (7/1/2021)	Same as Single Family (no separate class)			
City of Glendale (7/1/2021)	Same as Single Family	\$2.56	Same as Single Family	
City of Los Angeles (7/1/2020)	Same as Single Family for 5 or more units. 93% of metered water use [f]			
City of Pasadena (5/1/2021)	Same as Single Family (no separate class)			
City of San Diego (1/1/2022)	\$14.14/account monthly	Same as Single Family		
City of San Francisco (7/1/2021)	Same as Single Family (no separate class)			
City of Santa Monica (7/1/2021)	\$5.16/DU metered	Same as Single Family		
City of Santa Rosa (7/1/2021)	Graduated based on meter size	Same as Single Family		
City of Ventura (7/2021)	\$11.73/DU metered	Same as Single Family	10 HCF/mo [a]	

[a] Ventura: Tier 2 in water rate structure (average day demand per account).

[b] Santa Rosa: accounts with separate irrigation meters use actual billing period flow with no cap.

[c] Santa Monica: Multi-family discharge factor increases from 90% to 99% depending the number of units.

[d] Pasadena: 516 HCF annually.

[e] EBMUD: Includes \$7.59 service charge, \$7.90 strength charge, and \$0.20 pollution prevention fee.

[f] Los Angeles: Factor is recalculate annually.



Comparison With Other Agencies – Multi Family

Average Bi-Monthly Bills								
Multi Family								
	BH - current	BH - Option 2	BH - Option 3	Los Angeles	Santa Monica	Ventura	San Diego	Glendale
Bi-Monthly Service Charge	\$87.38	\$26.08	\$0.00	\$0.00	\$10.32	\$23.46	\$28.28	\$4.80
Quantity Charge per hcf								
Quantity Charge per hcf								
Rate per hcf	\$0.00	\$2.97	\$4.65	\$5.80	\$4.11	\$3.75	\$4.79	\$2.56
Assumed bi-monthly hcf	9	9	9	9	9	9	9	9
Total Quantity Charge	\$0.00	\$26.71	\$41.83	\$52.20	\$36.99	\$33.75	\$43.07	\$23.04
Current Bi-Monthly Bill	\$87.38	\$52.79	\$41.83	\$52.20	\$47.31	\$57.21	\$71.35	\$27.84

Flow used for quantity charge:

Beverly Hills - 96% of water use

Los Angeles - 93% of water use

Santa Monica - 85% of lowest 4 consecutive months (same as single family)

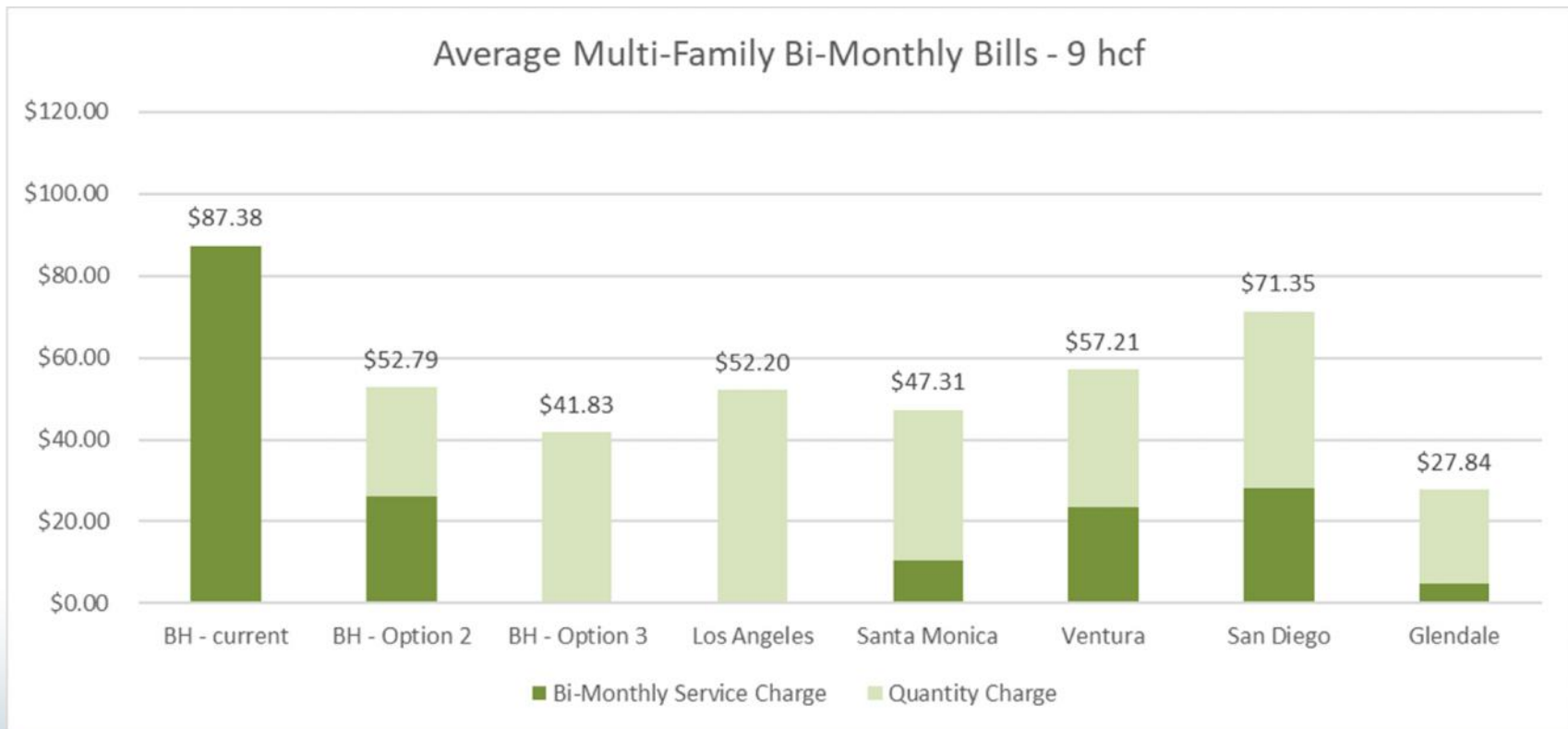
Ventura - unadjusted water use with 10 hcf monthly cap

San Diego - 95% of water use with 20 hcf monthly cap (same as single family)

Glendale - 3 month winter average (same as single family)

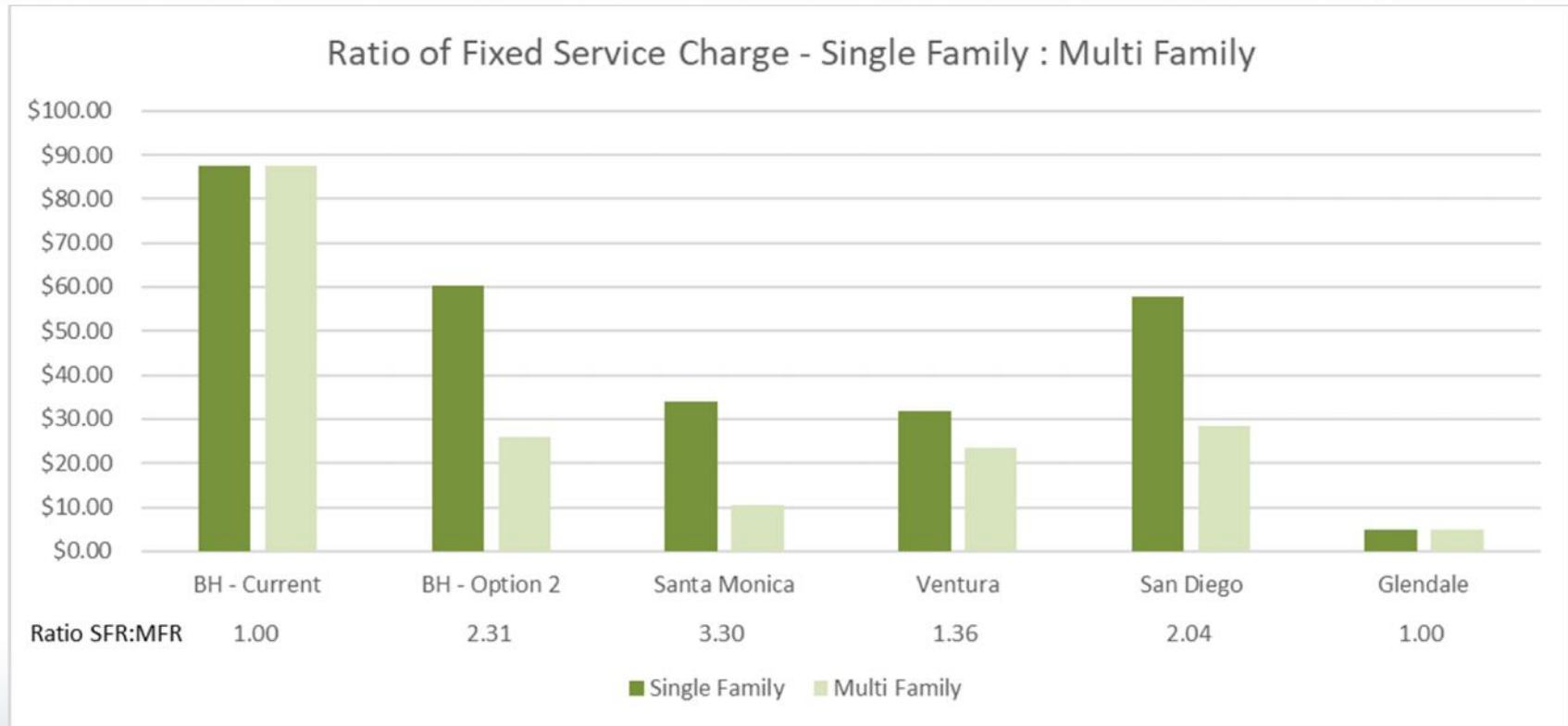


Comparison With Other Agencies – Multi Family





Fixed Service Charge Comparison – SFR : MFR Ratio





Open Issues

- Basis for flow used for billing quantity charge
 - Use of cap for single family
- Rate adjustment transition
 - Phase in rate adjustments over multiple years (e.g., five years)
 - Potential rate decrease
 - Equal decrease to both fixed and quantity charges for all classes



END OF PRESENTATION