

Water and Wastewater Rate Study

Santa Rosa Water – BPU Meeting

February 4, 2021



Agenda

Water and Wastewater Rate Study Recommendation

Financial Strategy for the Water Shortage Contingency Plan (WSCP)

Water and Wastewater Rate Study Recommendations

Rate Study Overview

Revenue Requirements



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graph TD; A[Revenue Requirements] --> B[Cost-of-Service]; B --> C[Rate Design];
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Compare the revenues of the water, wastewater, and subregional utilities to their expenses in multi-year **financial plans** to determine the overall level of annual rate adjustments

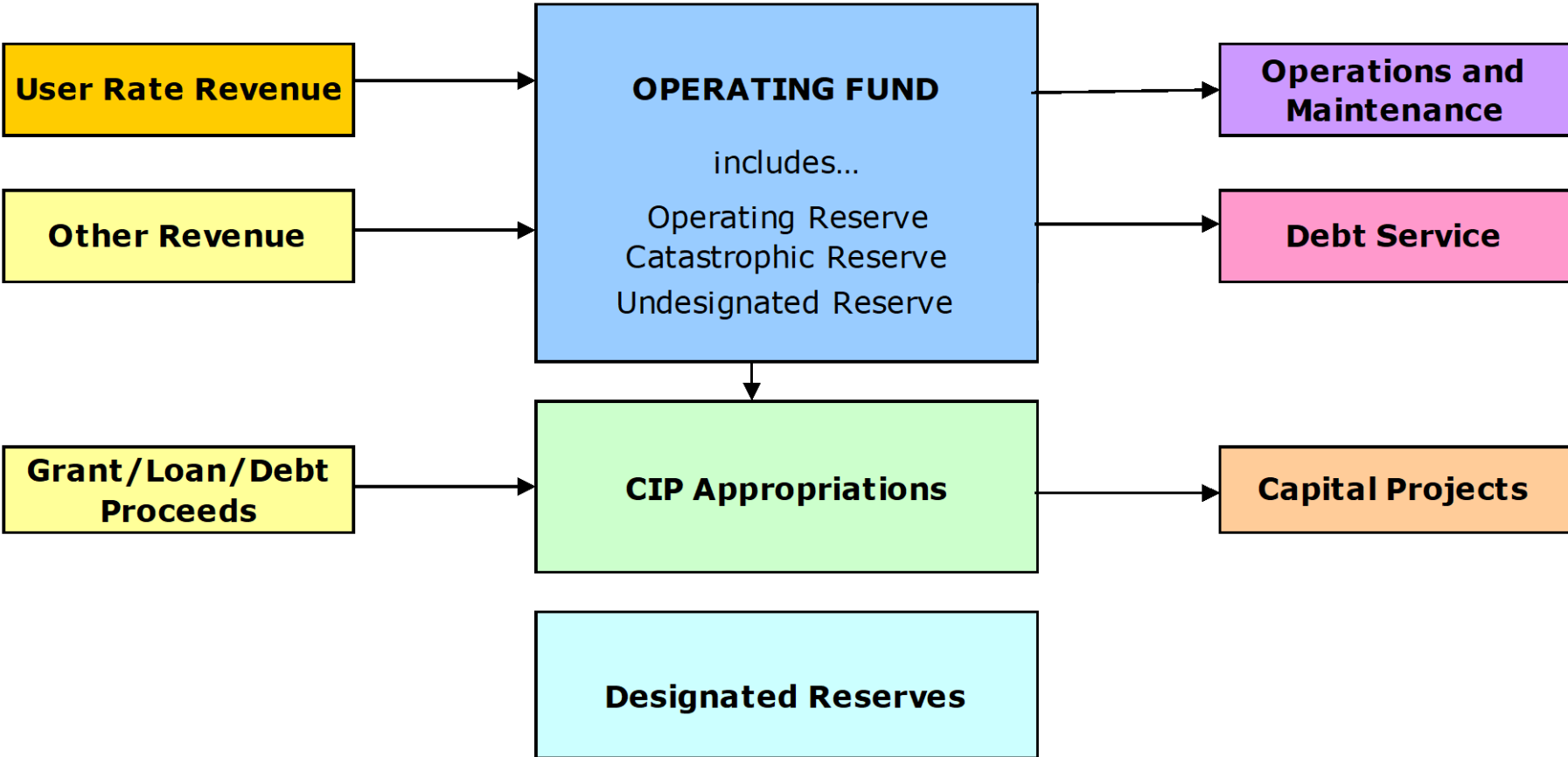
Cost-of-Service

Proportionately allocate the FY 21-22 revenue requirement between the various customer classes based on service and demand requirements

Rate Design

Design water and wastewater rates to recover the revenue requirement from each customer class and meet other rate setting objectives

Fund/Reserve Structure and Cash Flows



Project Highlights

1. 2020 Series A (new money) and 2020 Series B (refunding) bonds have been issued
 - 2020 A Series provides the Regional Wastewater System with \$70 million for the Ultraviolet (UV) wastewater treatment project
 - Closed with a par value of \$52.4 million and a premium of \$17.9 million
 - The refunding of the 2012 Wastewater Revenue Bond and will result in approximately \$16.2 million in savings over 14 years
2. New water and local wastewater catastrophic reserves targets have been identified, regional wastewater still under review
 - Based on recommendation from GHD Engineers
3. Water and wastewater cost of service analyses (COSA) have been updated
4. Current water and wastewater rate structures have been retained
5. Recommend elimination of automatic pass-through of Sonoma Water rate changes (use forecast instead).

Catastrophic Reserves

Water Utility

- ✓ Recommended to increase from \$5.75 million to \$17.5 million
- ✓ Target reserves can be achieved through available cash balances

Wastewater Utility

- ✓ Recommended to increase from \$6.8 million to \$21.5 million
- ✓ Target reserves can be achieved through available cash balances (due to favorable bond issue)

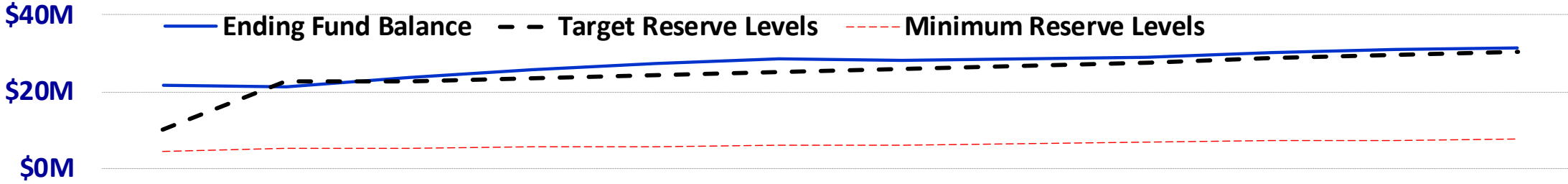
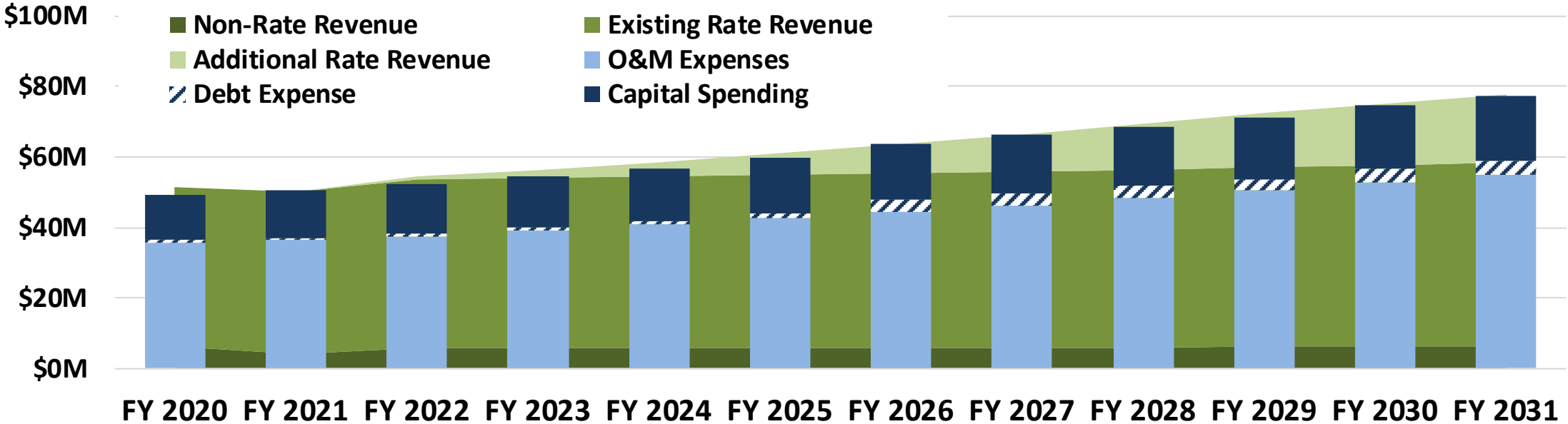
Regional Wastewater Utility

- ✓ Recommended to increase from \$1.7 million to \$10.0 million (placeholder)
- ✓ Geysers reserve recommended to increase from \$1.25 million to \$3.3 million

Policy Updates

- ✓ Allow for broader range of potential uses (e.g., fires, floods, pandemics, drought, etc.)
- ✓ Modify required policy level reserves over time
- ✓ Inflate catastrophic reserve target balances annually for inflation

Recommended Water Utility Financial Plan



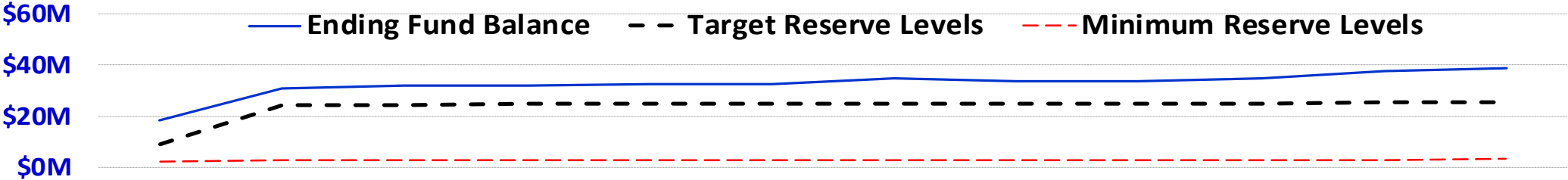
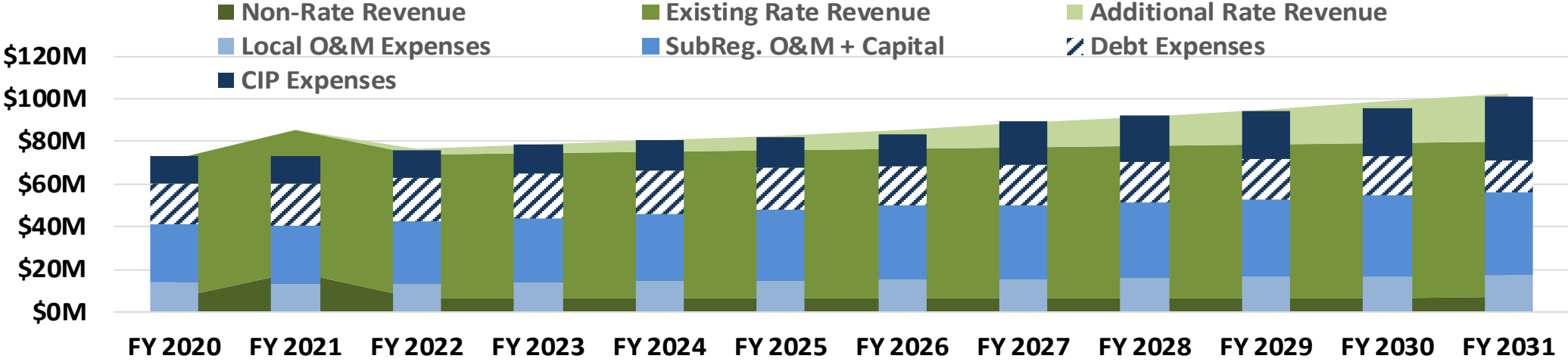
	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
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	<u>Recommended</u>				<u>Projected</u>					
Water Rate Revenue Increases:	2.0%	3.0%	3.0%	4.0%	4.0%	4.0%	4.0%	4.0%	3.0%	3.0%

Debt Coverage Ratio:	20.64	21.09	21.43	11.02	5.73	6.00	6.31	6.62	5.98	6.01
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Capital Spending:	\$13.8M	\$14.6M	\$15.1M	\$15.5M	\$16.0M	\$16.5M	\$17.0M	\$17.5M	\$18.0M	\$18.5M
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Recommended Wastewater Utility Financial Plan



	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031		
Wastewater Rate Increases:	<u>Recommended</u>				<u>Projected</u>							
	2.00%	2.00%	2.00%	2.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%		
Combined Debt Coverage Ratio:	4.58	4.86	4.46	4.48	4.70	5.08	5.74	5.93	6.49	6.64		
Local WW CIP:	\$12.9M	\$12.4M	\$12.7M	\$13.5M	\$13.9M	\$14.3M	\$14.8M	\$21.0M	\$21.6M	\$22.3M	\$22.9M	\$30.2M
Regional CIP:	\$3.4M	\$5.1M	\$5.9M	\$6.6M	\$7.3M	\$8.1M	\$8.8M	\$9.1M	\$9.3M	\$9.6M	\$9.9M	\$10.2M

Summary of Recommended Water/Wastewater Rate Adjustments

	Water Rate Adjustments	WW Rate Adjustments
July 2021	2.0%	2.0%
July 2022	3.0%	2.0%
July 2023	3.0%	2.0%
July 2024	4.0%	2.0%

Note: Applies to usage and fixed charges equally.

Rate Setting Objectives

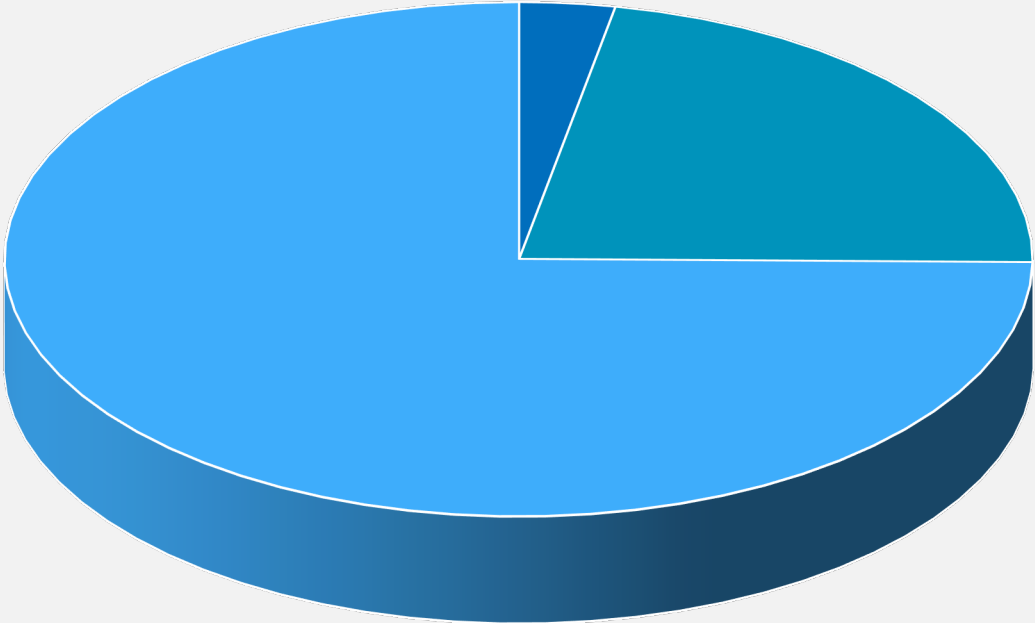
- ❖ Financial sufficiency and sustainability
- ❖ Legal compliance
- ❖ Water conservation
- ❖ Revenue stability and predictability
- ❖ Minimize rate increases
- ❖ Affordability
- ❖ Public understanding

Cost Allocation Principles

- ❖ Customer costs
 - ✓ Assigned to each customer on an equal basis
- ❖ Capacity costs
 - ✓ Assigned to each customer based on meter size
- ❖ Commodity costs
 - ✓ Assigned to each customer based on usage
- ❖ Water supply and water conservation costs
 - ✓ Assigned to tiered water usage rates
- ❖ Wastewater treatment costs
 - ✓ Assigned to sewer usage rates based on flow and strength

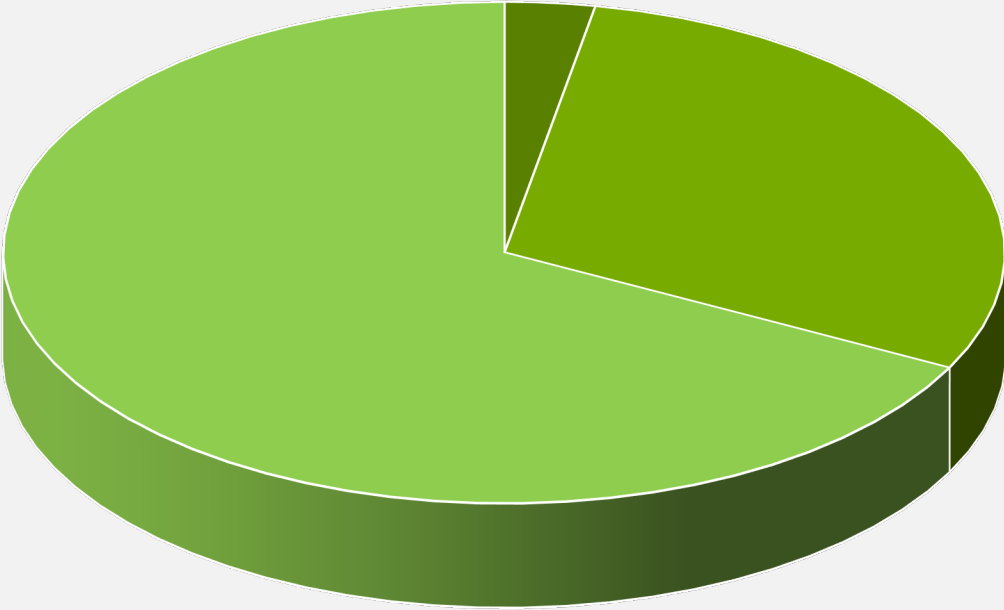
Cost Allocation Summary

Water Utility



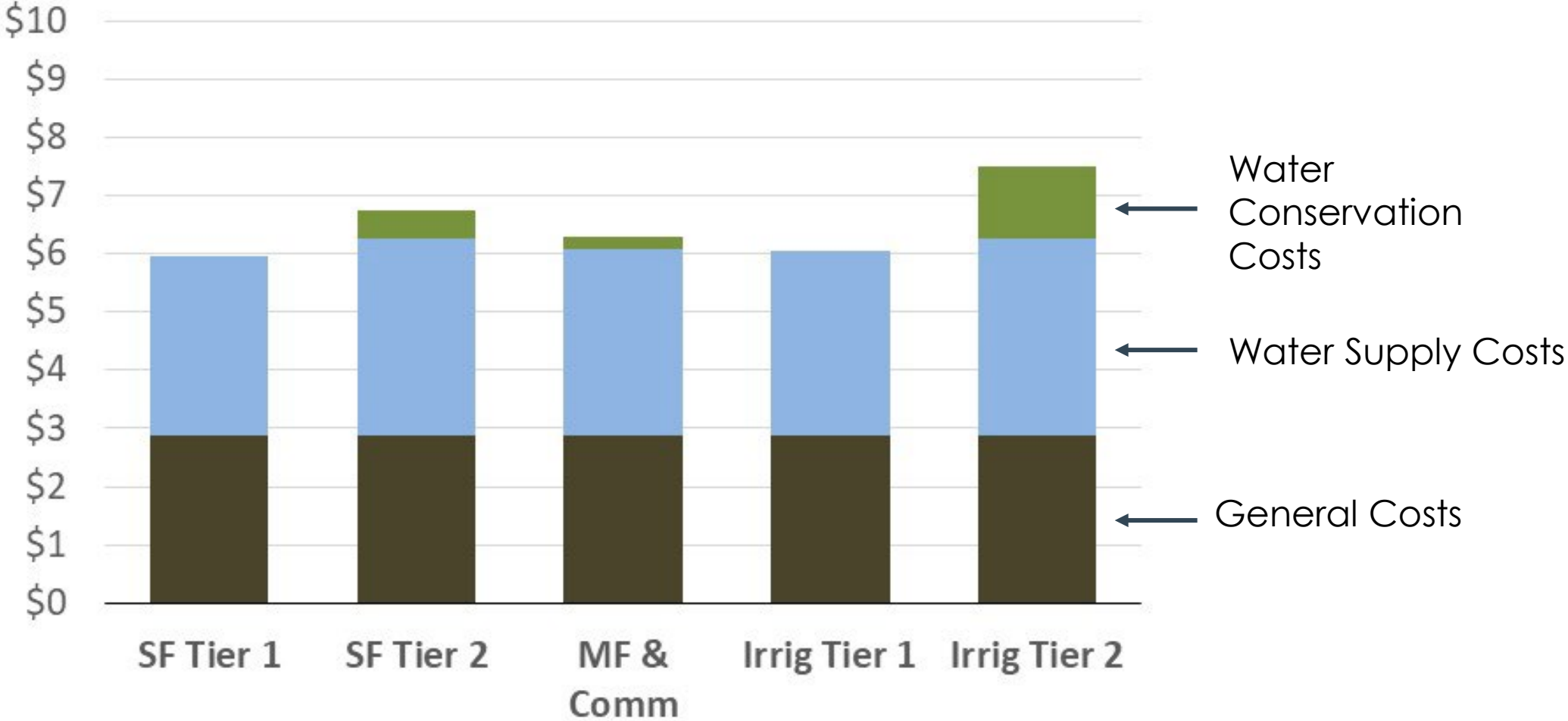
- Customer Costs
- Capacity Costs
- Commodity Costs

Wastewater Utility



- Customer Costs
- Capacity Costs
- Commodity Costs

Water Usage Rate Calculations



Recommended FY 2021-22 Water Rate Schedule

		<u>Current</u>	<u>July 2021</u>	<u>Change</u>	
				\$	%
Water Usage Rates (\$/TGAL)					
Single Family Residential & Duplex					
Tier 1	Use up to Sewer Cap (1)	\$5.84	\$5.99	\$0.15	2.6%
Tier 2	Above Sewer Cap	\$6.79	\$6.79	\$0.00	0.0%
Single Family with No Irrigation Needs (Z=Y) (2)					
	All water use	\$5.84	\$5.99	\$0.15	2.6%
Multi-Family, Commercial, Industrial, and Institutional					
	All water use	\$6.20	\$6.33	\$0.13	2.1%
Irrigation (potable water) (3)					
Tier 1	Use up to 125% of water budget	\$5.90	\$6.09	\$0.19	3.2%
Tier 2	Over 125% of water budget	\$7.34	\$7.54	\$0.20	2.7%
Irrigation (recycled water) (3)					
Tier 1	Use up to 125% of water budget	\$5.60	\$5.79	\$0.19	3.4%
Tier 2	Over 125% of water budget	\$7.34	\$7.54	\$0.20	2.7%
Monthly Service Charges (Potable Water)					
	5/8" meter	\$13.76	\$14.09	\$0.33	2.4%
	1" meter	\$30.86	\$31.63	\$0.77	2.5%
	1 1/2" meter	\$59.36	\$60.86	\$1.50	2.5%
	2" meter	\$93.57	\$95.95	\$2.38	2.5%
	3" meter	\$173.36	\$177.81	\$4.45	2.6%
	4" meter	\$287.36	\$294.76	\$7.40	2.6%
	6" meter	\$572.36	\$587.13	\$14.77	2.6%
Monthly Service Charges (Recycled Water)					
	5/8" meter	\$12.39	\$12.68	\$0.29	2.3%
	1" meter	\$27.77	\$28.47	\$0.70	2.5%
	1 1/2" meter	\$53.42	\$54.77	\$1.35	2.5%
	2" meter	\$84.21	\$86.36	\$2.15	2.6%
	3" meter	\$156.03	\$160.03	\$4.00	2.6%
	4" meter	\$258.63	\$265.28	\$6.65	2.6%
	6" meter	\$515.12	\$528.42	\$13.30	2.6%

Notes:

- (1) The Sewer Cap is calculated for each customer based on the average monthly water use during November through March.
- (2) "Z=Y" accounts are single family or duplex accounts with no outdoor usage.
- (3) The landscape water budget varies for each customer each month and is determined using the site's square footage for the types of plants and the evapotranspiration rate for the billing period.

Recommended FY 2021-22 Wastewater Rate Schedule

	<u>Current</u>	<u>July 2021</u>	<u>Change</u>	
			\$	%
Wastewater Usage Rates (\$/TGAL) (1)				
Single Family and Multi-Family (2)	\$14.86	\$15.12	\$0.26	1.7%
Commercial, Industrial, and Institutional				
Low Strength	\$12.35	\$12.42	\$0.07	0.6%
Standard Strength	\$14.86	\$15.12	\$0.26	1.7%
Medium Strength	\$16.48	\$16.85	\$0.37	2.2%
High Strength	\$20.36	\$21.01	\$0.65	3.2%
Monthly Service Charges				
Single Family	\$25.85	\$26.06	\$0.21	0.8%
Multi-Family, Commercial, Industrial, Institutional				
5/8" & 3/4" meters	\$25.85	\$26.06	\$0.21	0.8%
1" meter	\$62.26	\$60.15	-\$2.11	-3.4%
1 1/2" meter	\$122.91	\$116.96	-\$5.95	-4.8%
2" meter	\$195.72	\$185.14	-\$10.58	-5.4%
3" meter	\$365.58	\$344.22	-\$21.36	-5.8%
4" meter	\$608.24	\$571.48	-\$36.76	-6.0%
6" meter	\$1,214.89	\$1,139.63	-\$75.26	-6.2%

Notes:

(1) Wastewater usage charge applies to the estimated wastewater generated. For single-family residential accounts and multi-family accounts without a separate irrigation meter the estimated wastewater is based on the lower of current water use or the Sewer Cap. The Sewer Cap is calculated for these residential accounts based on the average water use from complete billing periods within the months of November through March. For Multi-family accounts with a dedicated irrigation meter or no irrigation from City water, as well as non-residential accounts, wastewater charges are based on actual monthly water usage from the domestic meter.

(2) Multifamily accounts include duplex, and triplex accounts.

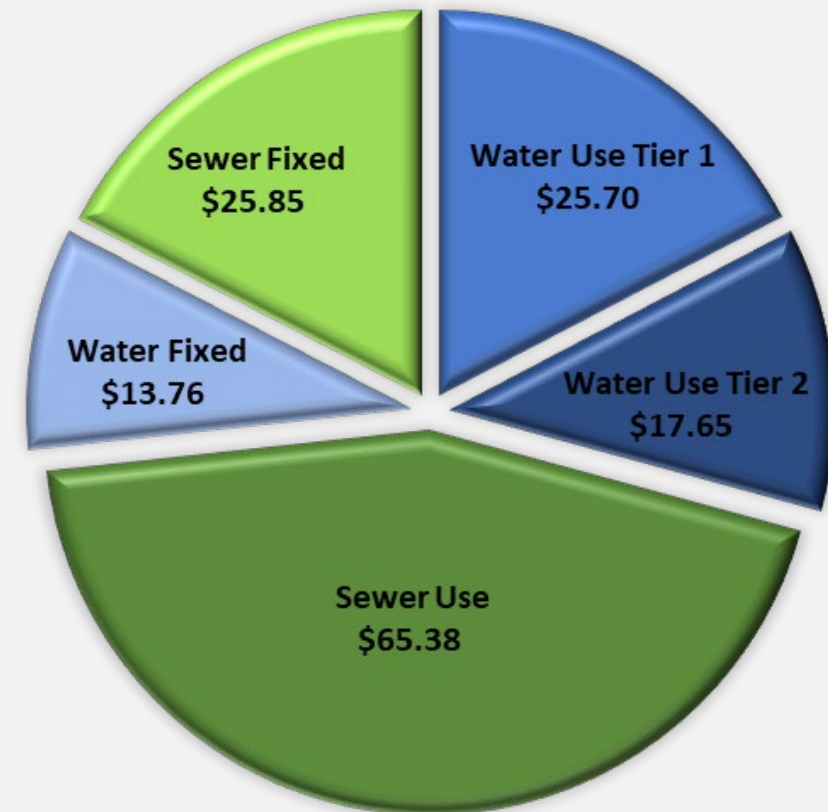
Preliminary FY 2021-22 Bill Impact Analysis

	Meter Size	Wtr. Use (TGAL)	WW Use (TGAL)	Bills With Current Water/WW Rates			Bills With Proposed Water/WW Rates			Change in Total Bill	
				Water	Wastewater	Total	Water	Wastewater	Total	\$	%
Single Family Residential											
Low Water Use	5/8"	4	4	\$37.12	\$85.29	\$122.41	\$38.05	\$86.54	\$124.59	\$2.18	1.8%
Median Water Use	5/8"	7	5	\$56.54	\$100.15	\$156.69	\$57.62	\$101.66	\$159.28	\$2.59	1.7%
High Water Use	5/8"	12	6	\$89.54	\$115.01	\$204.55	\$90.77	\$116.78	\$207.55	\$3.00	1.5%
Very High Water Use	5/8"	20	7	\$142.91	\$129.87	\$272.78	\$144.29	\$131.90	\$276.19	\$3.41	1.3%
Duplex	5/8"	8	6	\$62.38	\$115.01	\$177.39	\$63.61	\$116.78	\$180.39	\$3.00	1.7%
Small Apartment (4 DUs)	1"	15	12	\$123.86	\$240.58	\$364.44	\$126.58	\$241.59	\$368.17	\$3.73	1.0%
Large Apartment (24 DUs)	2"	80	80	\$589.57	\$1,384.52	\$1,974.09	\$602.35	\$1,394.74	\$1,997.09	\$23.00	1.2%
Very Lrg. Apart. (100 DUs)	4"	320	320	\$2,271.36	\$5,363.44	\$7,634.80	\$2,320.36	\$5,409.88	\$7,730.24	\$95.44	1.3%
Small Retail	5/8"	6	6	\$50.96	\$99.95	\$150.91	\$52.07	\$100.58	\$152.65	\$1.74	1.2%
Large Retail	2"	80	80	\$589.57	\$1,183.72	\$1,773.29	\$602.35	\$1,178.74	\$1,781.09	\$7.80	0.4%
Office Building	1 1/2"	40	40	\$307.36	\$616.91	\$924.27	\$314.06	\$613.76	\$927.82	\$3.55	0.4%
Car Wash	2"	60	60	\$465.57	\$936.72	\$1,402.29	\$475.75	\$930.34	\$1,406.09	\$3.80	0.3%
Mixed Comm. w/ Food	1"	35	35	\$247.86	\$774.86	\$1,022.72	\$253.18	\$795.50	\$1,048.68	\$25.96	2.5%
Hotel w/ Restaurant	3"	200	200	\$1,413.36	\$4,437.58	\$5,850.94	\$1,443.81	\$4,546.22	\$5,990.03	\$139.09	2.4%
Restaurant	1 1/2"	50	50	\$369.36	\$1,140.91	\$1,510.27	\$377.36	\$1,167.46	\$1,544.82	\$34.55	2.3%
Supermarket	2"	160	160	\$1,085.57	\$2,832.52	\$3,918.09	\$1,108.75	\$2,881.14	\$3,989.89	\$71.80	1.8%
Mortuary	1"	20	20	\$154.86	\$469.46	\$624.32	\$158.23	\$480.35	\$638.58	\$14.26	2.3%
Small Winery	1"	10	10	\$92.86	\$265.86	\$358.72	\$94.93	\$270.25	\$365.18	\$6.46	1.8%
Sm. Irrig. (Wtr Budg.=18 tg)	1"	20		\$151.74	(na)	\$151.74	\$156.33	(na)	\$156.33	\$4.59	3.0%
Lrg. Irrig. (Wtr. Budg.=250 tg)	4"	300		\$2,129.36	(na)	\$2,129.36	\$2,121.76	(na)	\$2,121.76	-\$7.60	-0.4%

Monthly Bill Impacts – Average Residential Bill

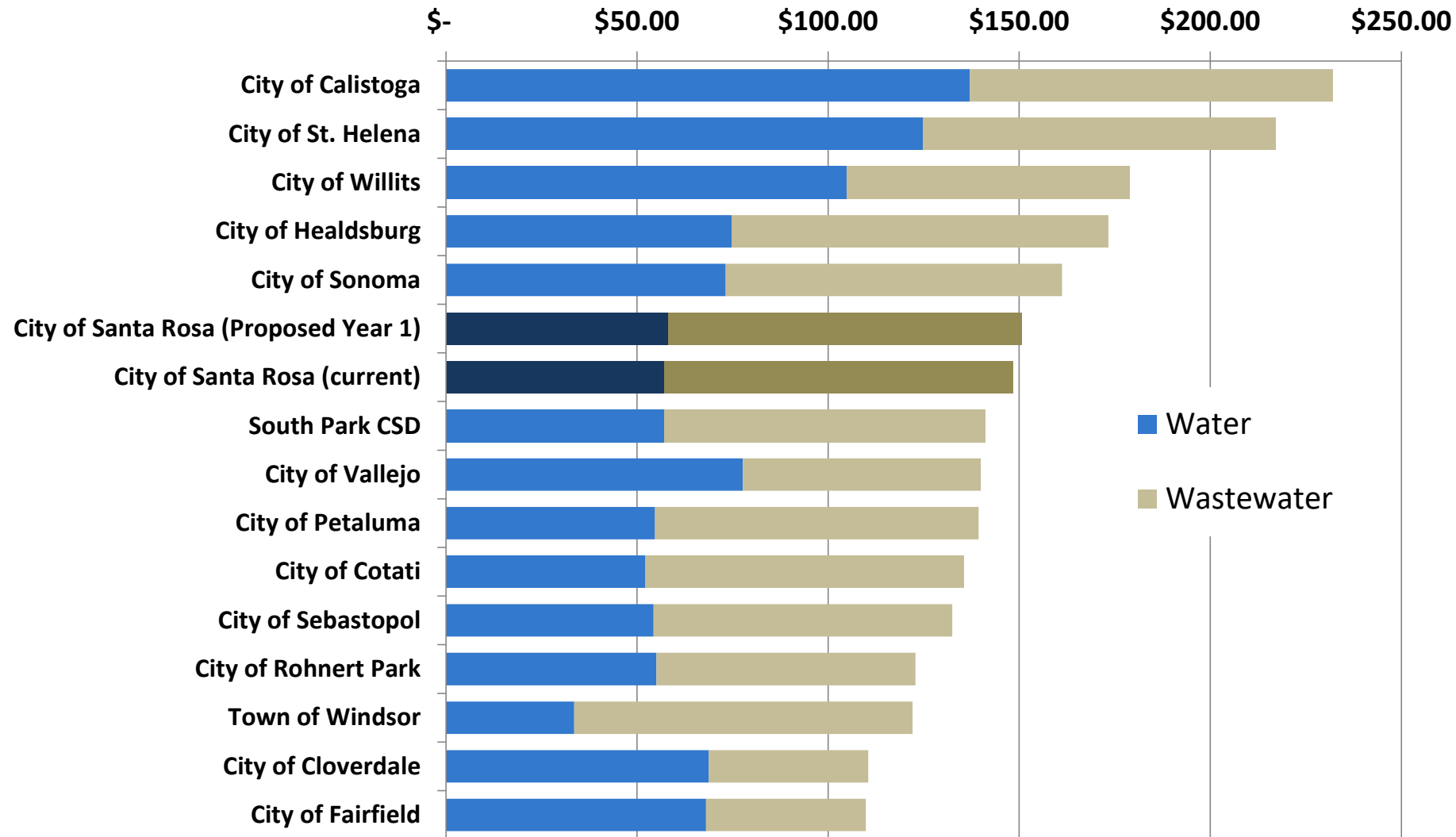
- ❖ Four residents
 - ✓ 7,000 gallons of water
 - ✓ 4.4 Sewer Cap (4,400 gallons)
- ❖ Current bill - \$148.34
- ❖ Monthly increase by Year
 - ✓ July 2021 - \$2.38
 - ✓ July 2022 - \$3.59
 - ✓ July 2023 - \$3.68
 - ✓ July 2024 - \$4.39

Current Bill Components



Regional Water & Wastewater Rate Survey*

For single family homes with 9.4 HCF of water usage



* Where available the rates are those adopted to be implemented on July 1, 2021

Value of Water Campaign

Investing in our public water system is critical

Using the power of video to boost engagement

Connecting with customers through:

- City Connections eNewsletter
- Social media
- Digital advertising
- srcity.org/water
- Bill inserts
- Radio



Questions?

Water Shortage Contingency Plan

Water Shortage Contingency Plan

- ❖ WSCP is a component of the State-mandated Urban Water Management Plan (UWMP), which is updated every five years
 - UWMP and WSCP last updated in 2016
 - New updates to be adopted in 2021
- ❖ The State has prescribed water shortage stages, each with water use reduction goals
- ❖ The City's proposed WSCP includes 8 water shortage stages
- ❖ Water shortage charges (WSC) and Excess Use Penalties (EUP) are part of the City's financial strategy for dealing with shortage conditions

Proposed WSCP Shortage Charges and Penalties

		Use Reduction	WSC	EUP
Stage 1	Voluntary	Up to 10%		
Stage 2	Mandatory	11% to 15%	✓	
Stage 3	Mandatory	16% to 20%	✓	
Stage 4	Mandatory	21% to 25%	✓	
Stage 5	Mandatory	26% to 30%	✓	✓
Stage 6	Mandatory	31% to 40%	✓	✓
Stage 7	Mandatory	41% to 50%	✓	✓
Stage 8	Mandatory	Over 50%	✓	✓

WSC = Water shortage charge

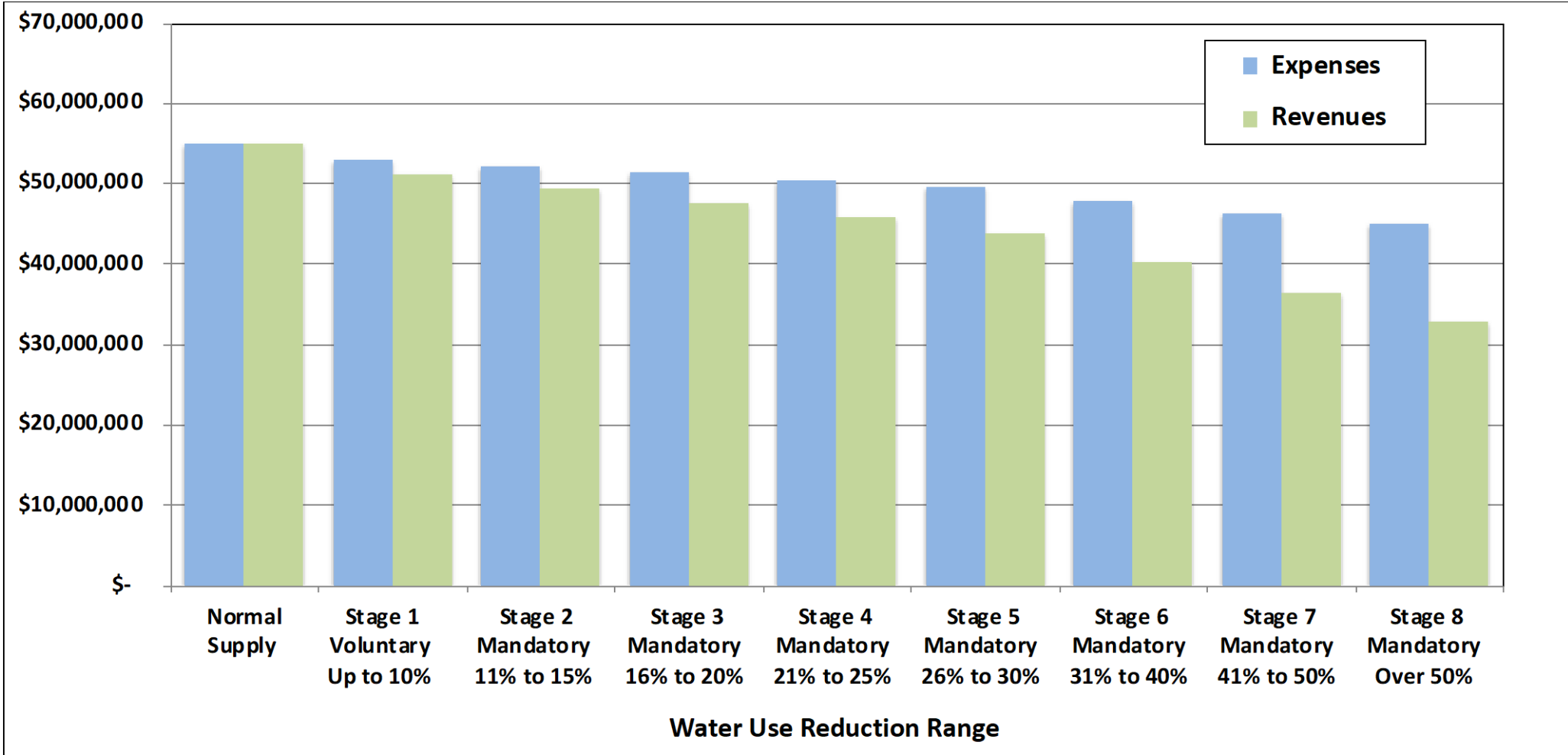
EUP = Excess use penalty

Three-Pronged Financial Strategy to Bridge the Financial Deficit Created by Shortage Conditions

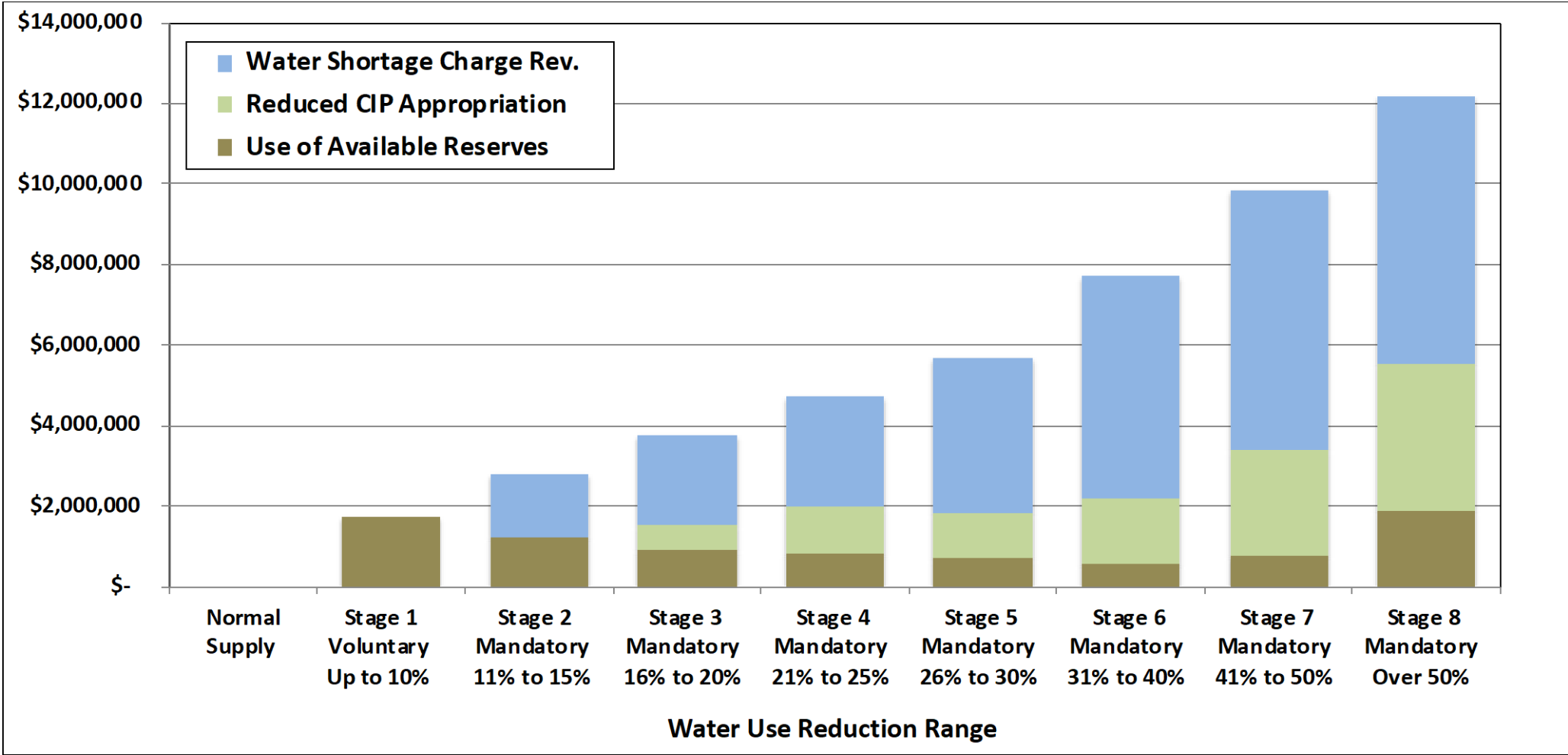
1. Utilize a portion of available financial reserves
 - Undesignated and/or catastrophic reserves
2. Implement a water shortage charge*
3. Defer a portion of the capital improvement program

* Excess use penalties would be imposed in Stages 5, 6, 7, and 8, but are not expected to generate any revenue, as the penalties can be avoided.

Impact of Reduced Water Use on Expenses and Revenues Without a Shortage Strategy



Bridging the Financial Deficit Created by Water Shortage Conditions and Reduced Water Usage



Water Shortage Rate Structures – July 2021 ⁽¹⁾

Normal Water Usage Rates	Water Use Reduction Ranges						
	Stage 2 Mandatory 11% to 15%	Stage 3 Mandatory 16% to 20%	Stage 4 Mandatory 21% to 25%	Stage 5 Mandatory 26% to 30%	Stage 6 Mandatory 31% to 40%	Stage 7 Mandatory 41% to 50%	Stage 8 Mandatory Over 50%
Water Shortage Charge (2) -->	5%	7.5%	10%	15%	25%	35%	45%
Tier 2 Excess Use Penalty (3) -->				10%	25%	40%	50%
Tier 3 Excess Use Penalty (3) -->				20%	50%	80%	100%
Water Usage Rates (\$/1,000 gallons)							
Single Family and Duplex Accounts							
Tier 1	\$5.97	\$6.27	\$6.42	\$6.57			
Tier 2	\$6.76	\$7.10	\$7.27	\$7.44			
Single Family with No Irrig Needs							
All water use	\$5.97	\$6.27	\$6.42	\$6.57			
Multi-Family/Comm./Indus./Inst.							
All water use	\$6.30	\$6.62	\$6.77	\$6.93			
Irrigation (potable water)							
Tier 1	\$6.06	\$6.36	\$6.51	\$6.67			
Tier 2	\$7.51	\$7.89	\$8.07	\$8.26			
Irrigation (recycled water)							
Tier 1	\$5.76	\$6.05	\$6.19	\$6.34			
Tier 2	\$7.51	\$7.89	\$8.07	\$8.26			
All Water Customers							
Tier 1 - Up to 100% of water alloc. (3)				\$7.25	\$7.88	\$8.51	\$9.14
Tier 2 - 101% to 150% of water alloc. (4)				\$7.98	\$9.85	\$11.91	\$13.71
Tier 3 - Over 150% of water alloc. (4)				\$8.70	\$11.82	\$15.32	\$18.28

Notes:

- (1) Water shortage charges and excess use penalties are expressed as percentages applied to normal water usage rates. Monthly service charges are unaffected by the water shortage rates and charges. The normal water usage rates shown herein are the water usage rates proposed for July, 2021, and are used for illustrative purposes.
- (2) When the water use reduction goal exceeds 10 percent the normal water usage rates are increased by the water shortage charge percentage shown. The water shortage charge increment provides supplemental revenue to help bridge the financial deficit created by shortage conditions.
- (3) When the water use reduction goal exceeds 25 percent the 2-tier rate structures for single family, duplex, and irrigation accounts and the uniform water rate for other customer classes are replaced. The normal uniform water usage rate plus the indicated water shortage charge create a new Tier 1 water rate, applicable to water usage up to the allocation. Tier water allocations are defined for each customer class in the Water Shortage Contingency Plan. Excess use penalties then apply for use above the allocation.
- (4) Water usage rates shown for Tier 2 and Tier 3, in Stages 5 through 8, include the water shortage charge and excess use penalty, as indicated.

Sample Single Family Residential Water Bills (with Shortage Charges)

Shortage Stage	Single Family Use Reduction Goal	Monthly Water Use (Gallons)	Monthly Service Charge	Water Usage Charge	Water Shortage Charge	Excess Use Penalty	Total Monthly Water Bill	Change from Normal Bill (3)
Average Single Family Customer Meeting Reduction Goals (1)								
Normal Conditions	0%	10,000	\$ 14.25	\$ 64.84	n/a	n/a	\$ 79.09	
Stage 1 Voluntary	10%	9,000	\$ 14.25	\$ 58.08	n/a	n/a	\$ 72.33	\$ (6.76)
Stage 2 Mandatory	15%	8,500	\$ 14.25	\$ 54.70	\$ 2.73	n/a	\$ 71.68	\$ (7.41)
Stage 3 Mandatory	20%	8,000	\$ 14.25	\$ 51.32	\$ 3.85	n/a	\$ 69.41	\$ (9.67)
Stage 4 Mandatory	25%	7,500	\$ 14.25	\$ 47.94	\$ 4.79	n/a	\$ 66.98	\$ (12.11)
Stage 5 Mandatory	(2)	6,500	\$ 14.25	\$ 41.18	\$ 6.18	\$ -	\$ 61.60	\$ (17.48)
Stage 6 Mandatory	(2)	4,900	\$ 14.25	\$ 30.36	\$ 7.59	\$ -	\$ 52.20	\$ (26.89)
Stage 7 Mandatory	(2)	3,200	\$ 14.25	\$ 19.10	\$ 6.69	\$ -	\$ 40.04	\$ (39.04)
Stage 8 Mandatory	(2)	2,700	\$ 14.25	\$ 16.12	\$ 7.25	\$ -	\$ 37.62	\$ (41.46)
Average Single Family Customer With No Water Use Reduction (1)								
Normal Conditions	0%	10,000	\$ 14.25	\$ 64.84	n/a	n/a	\$ 79.09	
Stage 1 Voluntary	10%	10,000	\$ 14.25	\$ 64.84	n/a	n/a	\$ 79.09	\$ -
Stage 2 Mandatory	15%	10,000	\$ 14.25	\$ 64.84	\$ 3.24	n/a	\$ 82.33	\$ 3.24
Stage 3 Mandatory	20%	10,000	\$ 14.25	\$ 64.84	\$ 4.86	n/a	\$ 83.95	\$ 4.86
Stage 4 Mandatory	25%	10,000	\$ 14.25	\$ 64.84	\$ 6.48	n/a	\$ 85.57	\$ 6.48
Stage 5 Mandatory	(2)	10,000	\$ 14.25	\$ 64.84	\$ 9.73	\$ 4.30	\$ 93.11	\$ 14.03
Stage 6 Mandatory	(2)	10,000	\$ 14.25	\$ 64.84	\$ 16.21	\$ 32.05	\$ 127.34	\$ 48.25
Stage 7 Mandatory	(2)	10,000	\$ 14.25	\$ 64.84	\$ 22.69	\$ 131.29	\$ 233.07	\$ 153.98
Stage 8 Mandatory	(2)	10,000	\$ 14.25	\$ 64.84	\$ 29.18	\$ 230.67	\$ 338.94	\$ 259.85

Notes:

- (1) Assumes single family customer with 5/8" meter, a 3-person household, summertime irrigation, and a sewer cap of 3,500 gallons.
- (2) During Stages 5, 6, 7, and 8 customers would be subject to specific water allocations in order to meet required use reduction targets.
- (3) Comparison is with water bill based on normal water usage and standard water rates.

Rate Setting Next Steps

- ❖ BPU - Request for recommendation to City Council – February 18, 2021
- ❖ City Council Study Session – March 2021
- ❖ Prop. 218 notifications mailing March 2021
- ❖ City Council Public Hearing – May 2021

Questions?