

# Water and Wastewater Rate and Demand Fee Study

Santa Rosa Water – BPU Budget Subcommittee

January 19, 2021



# Agenda

3.1 Water and Wastewater Rate Study Recommendation

3.2 Financial Strategy for the Water Shortage Contingency Plan (WSCP)

3.3 Water and Wastewater Demand Fees

# 3.1

## Water and Wastewater Rate Study Recommendations

# Rate Study Overview

## Revenue Requirements

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

# 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 are achieved through available cash balances

## **Wastewater Utility**

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

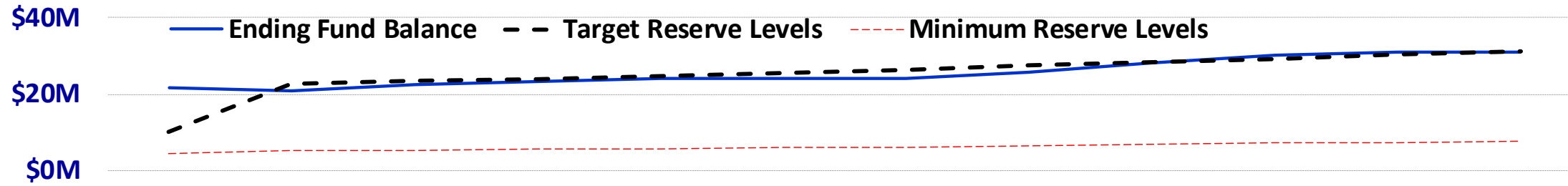
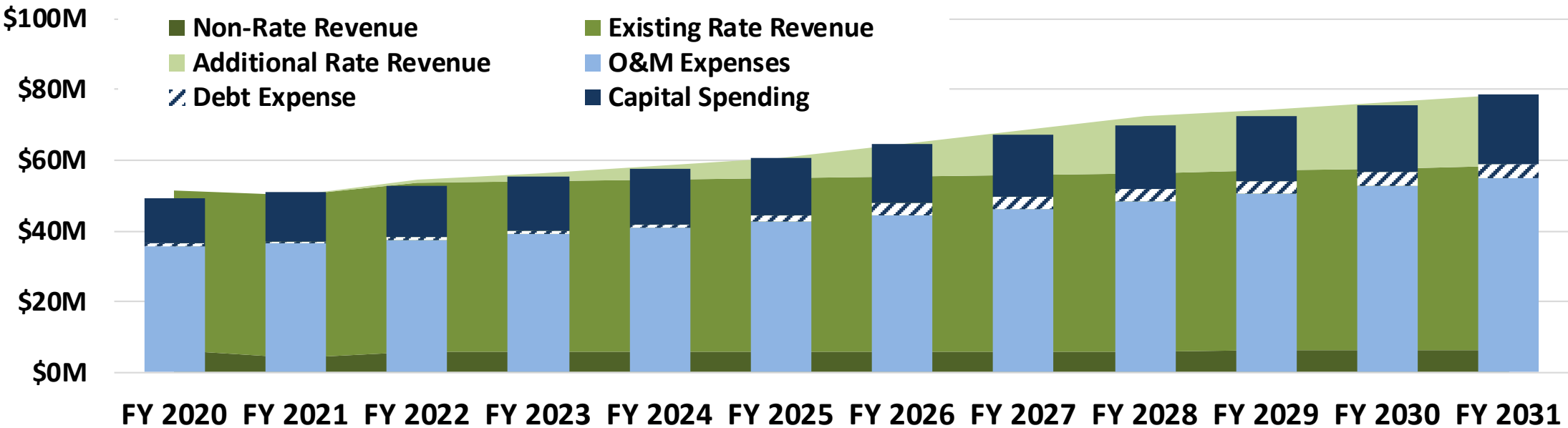
## **Regional Wastewater Utility**

- ✓ 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**

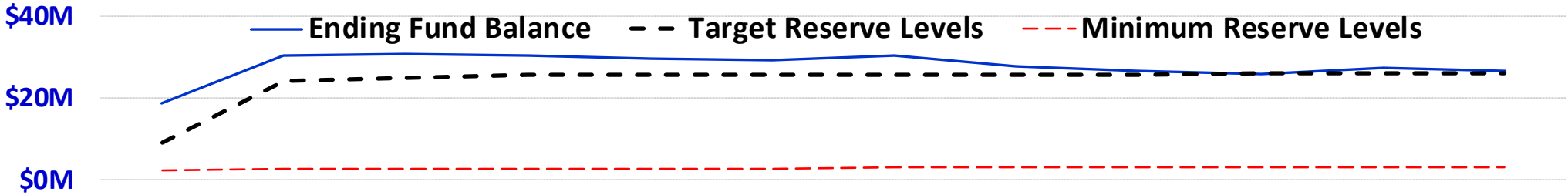
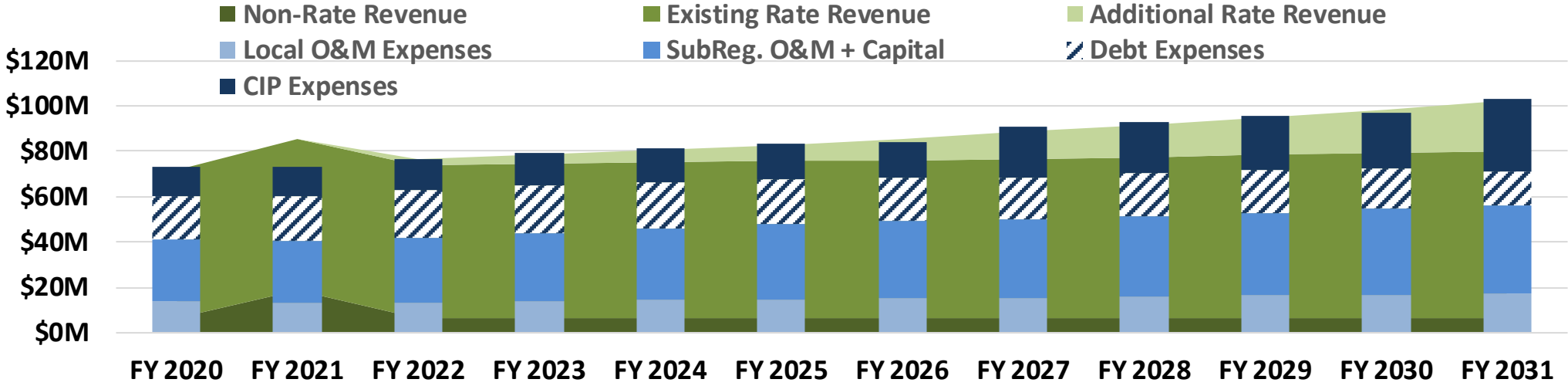
- ✓ Allow for broader range of potential uses (e.g., fires, floods, pandemics, drought, etc.)
- ✓ Modify required policy level reserves over time
- ✓ Inflate catastrophic reserve target balances annually for inflation

# Recommended Water Utility Financial Plan



	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
<b>Water Rate Revenue Increases:</b>	<u>Recommended</u>				<u>Projected</u>					
	2.0%	3.0%	3.0%	4.0%	6.0%	6.0%	5.0%	2.0%	2.0%	2.0%
<b>Debt Coverage Ratio:</b>	20.62	21.04	21.36	10.98	6.03	6.67	7.21	7.17	6.31	6.16
<b>Capital Spending:</b>	\$14.6M	\$15.5M	\$16.0M	\$16.5M	\$17.0M	\$17.5M	\$18.0M	\$18.5M	\$19.1M	\$19.7M

# 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		
	<b>Recommended</b>				<b>Projected</b>							
Wastewater Rate Increases:	2.00%	2.00%	2.00%	2.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%		
Combined Debt Coverage Ratio:	4.59	4.86	4.46	4.48	4.69	5.08	5.73	5.92	6.48	6.63		
Local WW CIP:	\$10.4M	\$10.0M	\$10.8M	\$11.5M	\$11.9M	\$12.3M	\$12.7M	\$19.3M	\$19.9M	\$20.5M	\$21.2M	\$28.8M
Subregional 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%

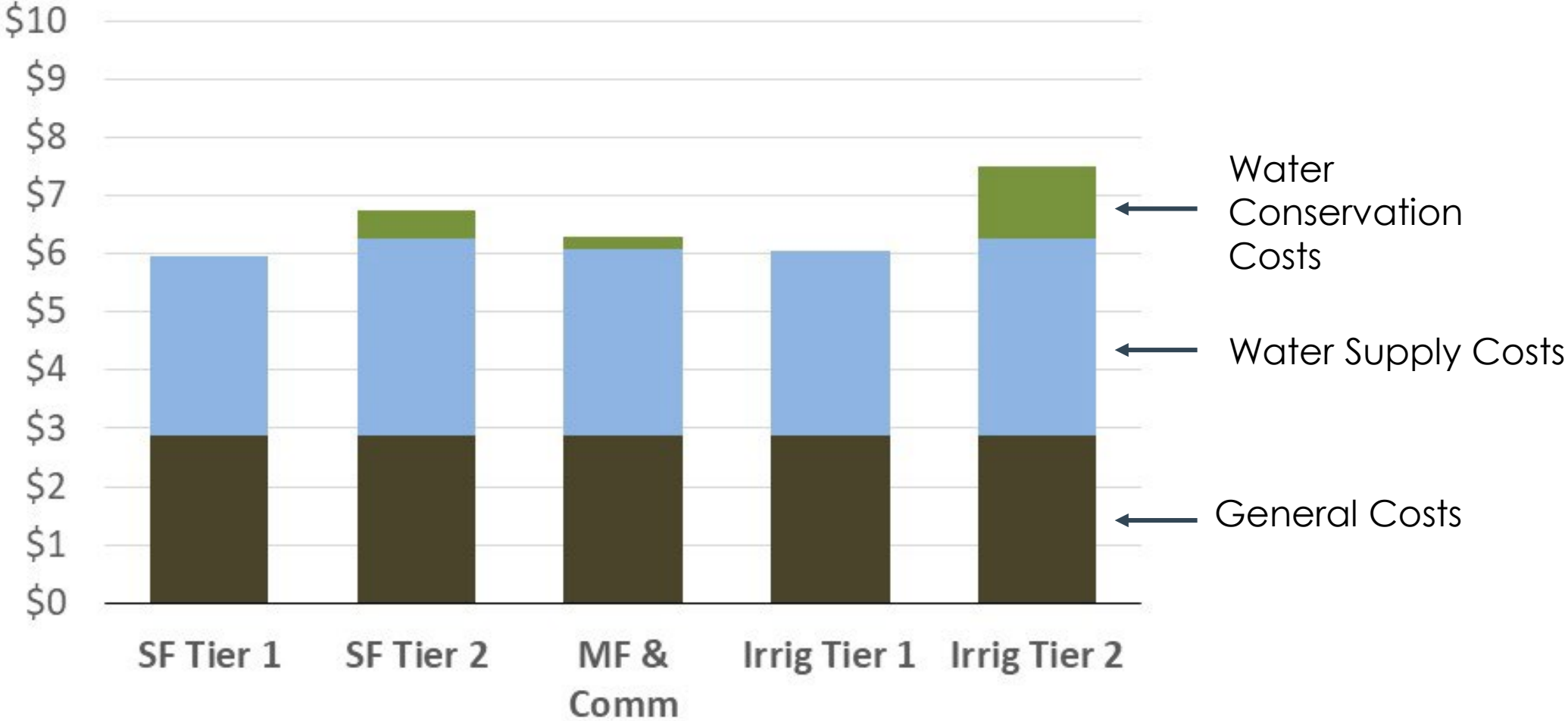
# Rate Setting Objectives

- ❖ 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

# Water Usage Rate Calculations



# Recommended FY 2021-22 Water Rate Schedule

		<u>Current</u>	<u>July 2021</u>	<u>Change</u>	
				\$	%
<b>Water Usage Rates (\$/TGAL)</b>					
Single Family Residential & Duplex					
Tier 1	Use up to Sewer Cap (1)	\$5.84	\$5.97	\$0.13	2.2%
Tier 2	Above Sewer Cap	\$6.79	\$6.76	(\$0.03)	-0.4%
Single Family with No Irrigation Needs (Z=Y) (2)					
	All water use	\$5.84	\$5.97	\$0.13	2.2%
Multi-Family, Commercial, Industrial, and Institutional					
	All water use	\$6.20	\$6.30	\$0.10	1.6%
Irrigation (potable water) (3)					
Tier 1	Use up to 125% of water budget	\$5.90	\$6.06	\$0.16	2.7%
Tier 2	Over 125% of water budget	\$7.34	\$7.51	\$0.17	2.3%
Irrigation (recycled water) (3)					
Tier 1	Use up to 125% of water budget	\$5.60	\$5.76	\$0.16	2.9%
Tier 2	Over 125% of water budget	\$7.34	\$7.51	\$0.17	2.3%
<b>Monthly Service Charges (Potable Water)</b>					
	5/8" meter	\$13.76	\$14.25	\$0.49	3.6%
	1" meter	\$30.86	\$32.14	\$1.28	4.1%
	1 1/2" meter	\$59.36	\$61.95	\$2.59	4.4%
	2" meter	\$93.57	\$97.72	\$4.15	4.4%
	3" meter	\$173.36	\$181.20	\$7.84	4.5%
	4" meter	\$287.36	\$300.45	\$13.09	4.6%
	6" meter	\$572.36	\$598.57	\$26.21	4.6%
<b>Monthly Service Charges (Recycled Water)</b>					
	5/8" meter	\$12.39	\$12.83	\$0.44	3.6%
	1" meter	\$27.77	\$28.93	\$1.16	4.2%
	1 1/2" meter	\$53.42	\$55.76	\$2.34	4.4%
	2" meter	\$84.21	\$87.95	\$3.74	4.4%
	3" meter	\$156.03	\$163.08	\$7.05	4.5%
	4" meter	\$258.63	\$270.41	\$11.78	4.6%
	6" meter	\$515.12	\$538.71	\$23.59	4.6%

**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>	
			\$	%
<b>Wastewater Usage Rates (\$/TGAL) (1)</b>				
Single Family and Multi-Family (2)	\$14.86	\$15.07	\$0.21	1.4%
Commercial, Industrial, and Institutional				
Low Strength	\$12.35	\$12.39	\$0.04	0.3%
Standard Strength	\$14.86	\$15.07	\$0.21	1.4%
Medium Strength	\$16.48	\$16.78	\$0.30	1.8%
High Strength	\$20.36	\$20.89	\$0.53	2.6%
<b>Monthly Service Charges</b>				
Single Family	\$25.85	\$26.29	\$0.44	1.7%
Multi-Family, Commercial, Industrial, Institutional				
5/8" & 3/4" meters	\$25.85	\$26.29	\$0.44	1.7%
1" meter	\$62.26	\$60.76	-\$1.50	-2.4%
1 1/2" meter	\$122.91	\$118.22	-\$4.69	-3.8%
2" meter	\$195.72	\$187.16	-\$8.56	-4.4%
3" meter	\$365.58	\$348.03	-\$17.55	-4.8%
4" meter	\$608.24	\$577.84	-\$30.40	-5.0%
6" meter	\$1,214.89	\$1,152.37	-\$62.52	-5.1%

**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.

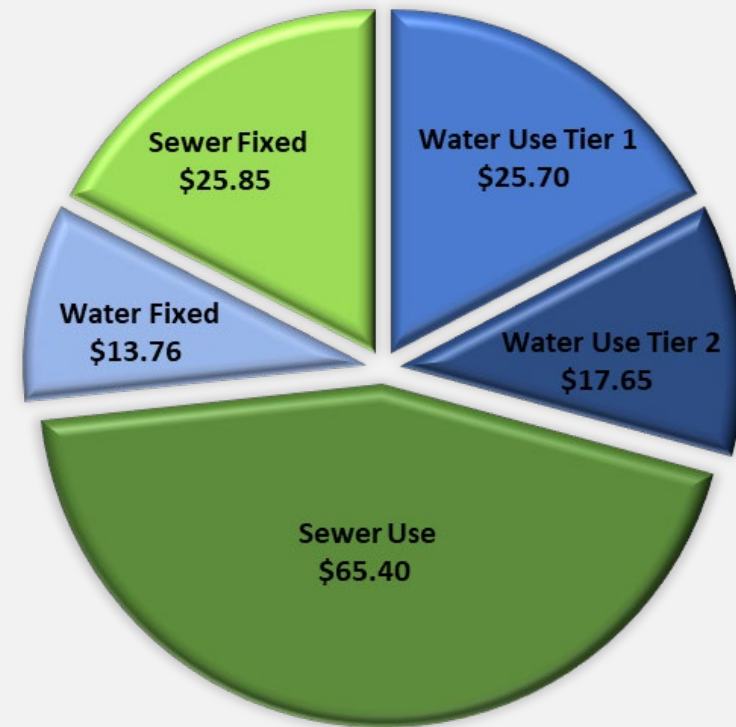
# Preliminary FY 2021-22 Bill Impact Analysis

	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	<b>\$122.41</b>	\$38.13	\$86.56	<b>\$124.69</b>	<b>\$2.28</b>	<b>1.9%</b>
Median Water Use	5/8"	7	5	\$56.54	\$100.15	<b>\$156.69</b>	\$57.62	\$101.62	<b>\$159.24</b>	<b>\$2.55</b>	<b>1.6%</b>
High Water Use	5/8"	12	6	\$89.54	\$115.01	<b>\$204.55</b>	\$90.63	\$116.68	<b>\$207.31</b>	<b>\$2.76</b>	<b>1.3%</b>
Very High Water Use	5/8"	20	7	\$142.91	\$129.87	<b>\$272.78</b>	\$143.92	\$131.74	<b>\$275.66</b>	<b>\$2.88</b>	<b>1.1%</b>
Duplex	5/8"	8	6	\$62.38	\$115.01	<b>\$177.39</b>	\$63.59	\$116.68	<b>\$180.27</b>	<b>\$2.88</b>	<b>1.6%</b>
Small Apartment (4 DUs)	1"	15	12	\$123.86	\$240.58	<b>\$364.44</b>	\$126.64	\$241.54	<b>\$368.18</b>	<b>\$3.74</b>	<b>1.0%</b>
Large Apartment (24 DUs)	2"	80	80	\$589.57	\$1,384.52	<b>\$1,974.09</b>	\$601.72	\$1,392.14	<b>\$1,993.86</b>	<b>\$19.77</b>	<b>1.0%</b>
Very Lrg. Apart. (100 DUs)	4"	320	320	\$2,271.36	\$5,363.44	<b>\$7,634.80</b>	\$2,316.45	\$5,397.58	<b>\$7,714.03</b>	<b>\$79.23</b>	<b>1.0%</b>
Small Retail	5/8"	6	6	\$50.96	\$99.95	<b>\$150.91</b>	\$52.05	\$100.66	<b>\$152.71</b>	<b>\$1.80</b>	<b>1.2%</b>
Large Retail	2"	80	80	\$589.57	\$1,183.72	<b>\$1,773.29</b>	\$601.72	\$1,178.54	<b>\$1,780.26</b>	<b>\$6.97</b>	<b>0.4%</b>
Office Building	1 1/2"	40	40	\$307.36	\$616.91	<b>\$924.27</b>	\$313.95	\$613.93	<b>\$927.88</b>	<b>\$3.61</b>	<b>0.4%</b>
Car Wash	2"	60	60	\$465.57	\$936.72	<b>\$1,402.29</b>	\$475.72	\$930.74	<b>\$1,406.46</b>	<b>\$4.17</b>	<b>0.3%</b>
Mixed Comm. w/ Food	1"	35	35	\$247.86	\$774.86	<b>\$1,022.72</b>	\$252.64	\$791.97	<b>\$1,044.61</b>	<b>\$21.89</b>	<b>2.1%</b>
Hotel w/ Restaurant	3"	200	200	\$1,413.36	\$4,437.58	<b>\$5,850.94</b>	\$1,441.20	\$4,526.36	<b>\$5,967.56</b>	<b>\$116.62</b>	<b>2.0%</b>
Restaurant	1 1/2"	50	50	\$369.36	\$1,140.91	<b>\$1,510.27</b>	\$376.95	\$1,162.83	<b>\$1,539.78</b>	<b>\$29.51</b>	<b>2.0%</b>
Supermarket	2"	160	160	\$1,085.57	\$2,832.52	<b>\$3,918.09</b>	\$1,105.72	\$2,870.54	<b>\$3,976.26</b>	<b>\$58.17</b>	<b>1.5%</b>
Mortuary	1"	20	20	\$154.86	\$469.46	<b>\$624.32</b>	\$158.14	\$478.62	<b>\$636.76</b>	<b>\$12.44</b>	<b>2.0%</b>
Small Winery	1"	10	10	\$92.86	\$265.86	<b>\$358.72</b>	\$95.14	\$269.72	<b>\$364.86</b>	<b>\$6.14</b>	<b>1.7%</b>
Sm. Irrig. (Wtr Budg.=18 tg)	1"	20		\$151.74	(na)	<b>\$151.74</b>	\$156.24	(na)	<b>\$156.24</b>	<b>\$4.50</b>	<b>3.0%</b>
Lrg. Irrig. (Wtr. Budg.=250 tg)	4"	300		\$2,129.36	(na)	<b>\$2,129.36</b>	\$2,118.45	(na)	<b>\$2,118.45</b>	<b>-\$10.91</b>	<b>-0.5%</b>

# Monthly Bill Impacts – Average Residential Bill

- ❖ Four residents
  - ✓ 7,000 gallons of water
  - ✓ 4.4 Sewer Cap (4,400 gallons)
- ❖ Current bill - \$148.36
- ❖ Monthly increase by Year
  - ✓ July 2021 - \$2.38
  - ✓ July 2022 - \$3.60
  - ✓ July 2023 - \$3.68
  - ✓ July 2024 - \$4.39

Current Bill Components





# 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](http://srcity.org/water)
- Bill inserts
- Radio



# Recommendation

Santa Rosa Water Staff recommends that the Board of Public Utilities Budget Subcommittee recommend the proposed water and wastewater rate increases, rate schedule and the Santa Rosa 2021 Water and Wastewater Rate Study Report to the Board of Public Utilities

**3.2**

# **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

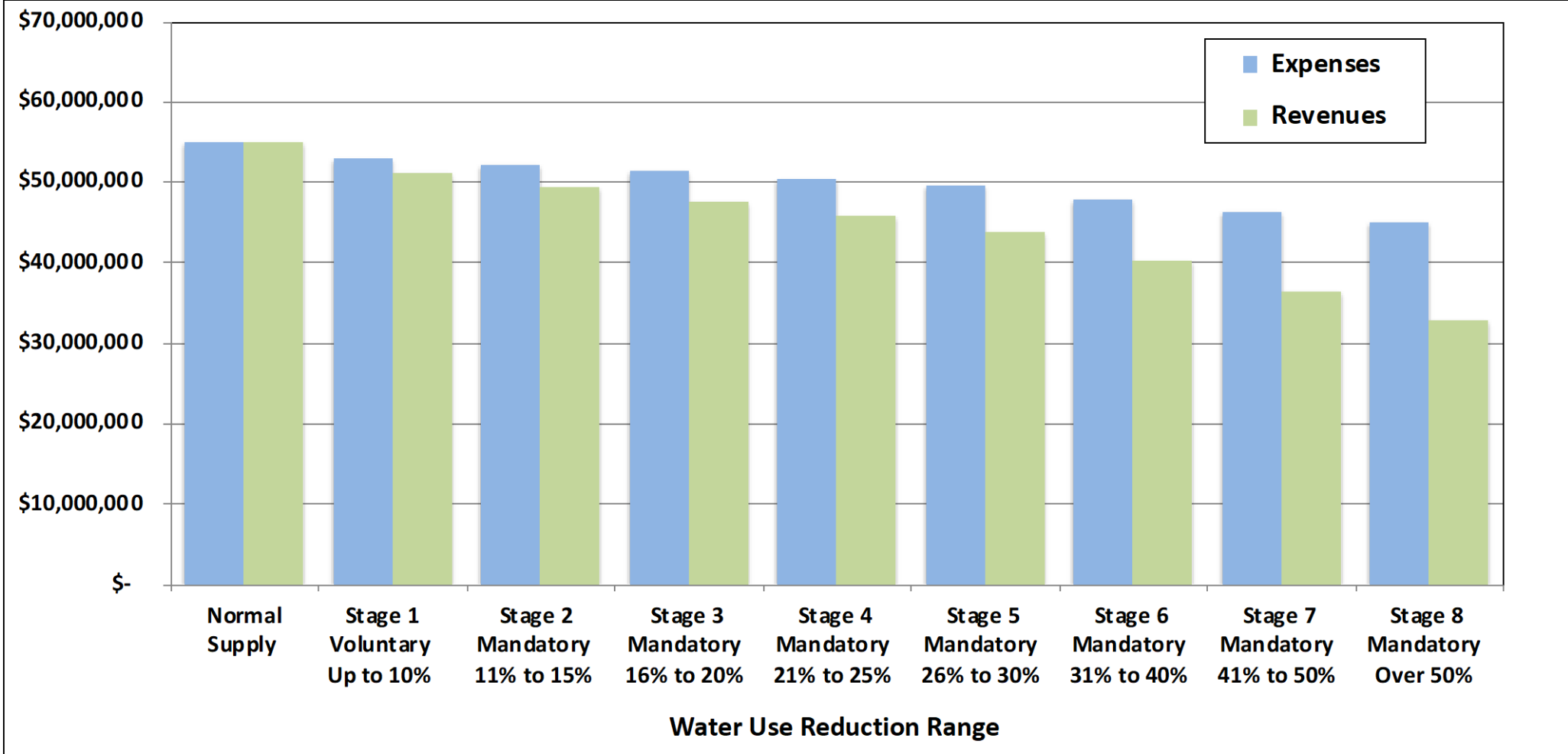
EUP = Excess use penalty

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

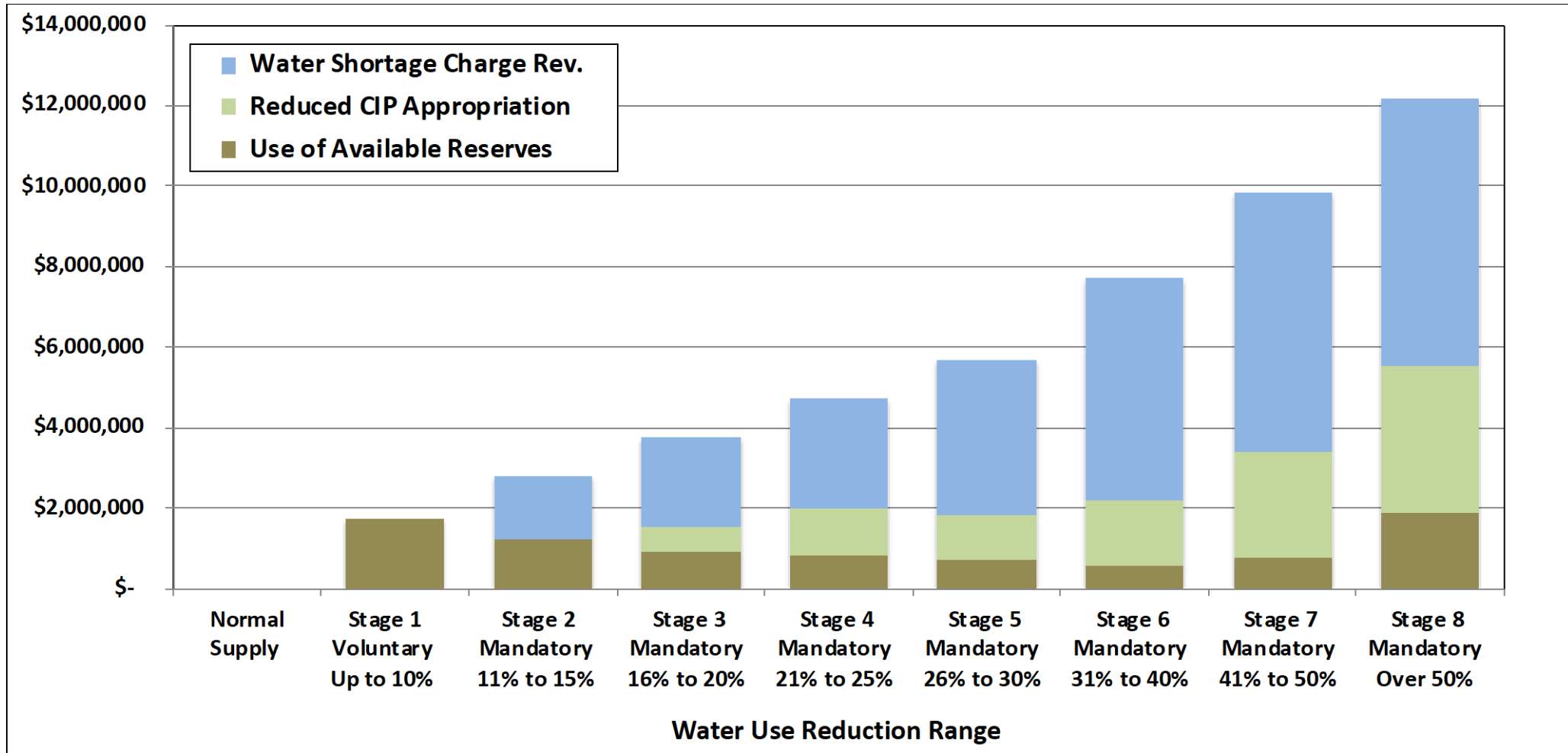
1. Utilize a portion of available financial reserves
  - Undesignated and/or catastrophic reserves
2. Implement a water shortage charge\*
3. Defer a portion of the capital improvement program

\* 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 <sup>(1)</sup>

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%
<b>Water Shortage Charge (2) --&gt;</b>	5%	7.5%	10%	15%	25%	35%	45%
<b>Tier 2 Excess Use Penalty (3) --&gt;</b>				10%	25%	40%	50%
<b>Tier 3 Excess Use Penalty (3) --&gt;</b>				20%	50%	80%	100%
<b>Water Usage Rates (\$/1,000 gallons)</b>							
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)
<b>Average Single Family Customer Meeting Reduction Goals (1)</b>								
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)
<b>Average Single Family Customer With No Water Use Reduction (1)</b>								
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) Stages 5, 6, 7, and 8 include the following water use limitations:

	Per Capita gpcd	Irrigation gal/mo.
Stage 5	45	2,400
Stage 6	40	1,300
Stage 7	35	0
Stage 8	30	0

(3) Comparison is with water bill based on normal water usage and standard water rates.

# **Recommendation**

Santa Rosa Water Staff recommends that the Board of Public Utilities Budget Subcommittee recommend to the Board of Public Utilities that the proposed water shortage rates and structure be included in the Water Shortage Contingency Plan

# Rate Setting Next Steps

- ❖ Final report and presentation to BPU – February 2021
- ❖ Presentation to City Council – March 2021
- ❖ Prop. 218 notifications mailing March 2021
- ❖ Public Hearing – May 2021

# 3.3

## Water and Wastewater Demand Fees

# Demand Fees

## *Demand Fees*

- Demand fees (capacity charges) are the one-time fees charged to new development for capacity in the water and wastewater systems.
- Fee calculation was last updated in 2014; fee amounts are adjusted annually for inflation.

## *Legal Standard*

- Section 66013 of the Government Code states that capacity charges shall not exceed the ***estimated reasonable cost*** of providing the service for which the charges are imposed.

# System Buy-In Methodology

## *Basic Formula*

$$\frac{\text{Present Value of Existing Facilities}}{\text{Total Existing Units of Development}}$$

## *Attributes of Methodology*

- Methodology is best applied in areas that are largely built out with infrastructure largely in place (i.e., capacity is available for new development)
- Common and well-accepted methodology
- Incorporates cost of existing facilities, rather than relying on plans and estimates
- Does not rely on capacity analyses or assessment of future needs
- Buy-in fee is a reimbursement for past investments in system capacity, and can be used for any capital project

# Demand Fee Calculations

	Water System	Wastewater System	
		Local	Subregional
<b>Summary of Fixed Asset Valuation (1)</b>			
Land and Land Rights	\$ 3,740,000	\$ 4,575,000	\$ 27,454,000
Buildings	\$ 19,485,000	\$ 15,770,000	\$ 151,602,000
Capital Improvements	\$ 172,652,000	\$ 195,519,000	\$ 169,790,000
Equipment	\$ 7,173,000	\$ 2,326,000	\$ 12,286,000
Construction in Progress	\$ 20,937,000	\$ 13,263,000	\$ 4,943,000
Infrastructure Assets	\$ 18,120,000	\$ 1,028,000	\$ 10,587,000
<b>Current Value of Existing Facilities</b>	<b>\$ 242,107,000</b>	<b>\$ 232,481,000</b>	<b>\$ 376,662,000</b>
<b>Adjustments of Financial Valuation</b>			
Plus Present Value of Past Debt Issuance Costs	\$ 780,000	\$ 681,000	\$ 11,779,000
Plus Present Value of Past Debt Interest Costs	\$ 30,149,000	\$ 8,893,000	\$ 121,191,000
Minus Outstanding Principal on Debt	\$ (18,813,000)	\$ (16,098,000)	\$ (149,563,000)
Plus Capital Funds Available	\$ 40,463,000	\$ 62,372,000	\$ 22,465,000
<b>Total System Buy-In Valuation</b>	<b>\$ 294,686,000</b>	<b>\$ 288,329,000</b>	<b>\$ 382,534,000</b>
Current System Demands (MGD) (2)	21.26	10.43	14.03
Base Demand Fee (\$/TGD)	\$ 13,860	\$ 27,644	\$ 27,265
Base Demand Fee (\$/TGM)	\$ 456	\$ 909	\$ 896
<b>Proposed Base Demand Fee (\$/TGM)</b>	<b>\$456</b>	<b>\$1,805</b>	
Change from Current Demand Fees (3)	55%	15%	

**Notes:**

(1) From fixed asset records as of June 30, 2019.

(2) Based on the average of annual values from 2016 through 2019. Peak month water production was reduced by 8.0% for system losses to reflect water demand. Average dry weather flows (ADWF) based on data from City's wastewater collection system and Laguna treatment plant values.

(3) Fee increases are offset by reductions in the usage factors.



# Demand Fee – Water Use Factors (1)

Type of Development	Avg. Day Demand During Peak Month	
	(GPD)	(TGM)
Single Family Residential		
Lot over 1 acre	598	18.2
Lot over 6,000 sq ft up to 1 acre	381	11.6
Lot up to 6,000 sq ft	260	7.9
Duplex and Triplex Units	204	6.2
Condominium, Apartment, and Mobile Home Units		
with Separate Irrigation	122	3.7
without Separate Irrigation	158	4.8
Large ADUs, SROs, Senior Housing, and Small, High-Density Apartment Units	99	3.0
Commercial, Industrial, and Irrigation (per TGM) (2)	33	1.0

**Notes:**

(1) Based on analysis of peak month water usage from 2016 through 2019.

(2) Peak usage for each commercial, industrial, and irrigation account is estimated on a case-by-case basis.

# Current and Proposed Water Demand Fees

Type of Development	Current Water Demand Fee	Proposed Water Demand Fee
Single Family Residential		
Lot over 1 acre	\$ 8,114	\$ 8,299
Lot over 6,000 sq ft up to 1 acre	\$ 5,645	\$ 5,290
Lot up to 6,000 sq ft	\$ 2,881	\$ 3,602
Duplex and Triplex Units	\$ 2,646	\$ 2,827
Condominium, Apartment, and Mobile Home Units		
with Separate Irrigation	\$ 1,411	\$ 1,687
without Separate Irrigation	\$ 2,646	\$ 2,189
Large ADUs, SROs, Senior Housing, and Small, High-Density Apartment Units	\$ 1,323	\$ 1,368
Commercial, Industrial, and Irrigation (per TGM) (2)	\$ 294	\$ 456

**Notes:**

(1) Applied to estimated average day demand during peak month in TGM for each non-residential water connection.

# Demand Fee – Wastewater Use Factors

Type of Development	Average Dry Weather Flow	
	(GPD)	(TGM)
Single Family Residential		
Lot over 1 acre	128	3.9
Lot over 6,000 sq ft up to 1 acre	108	3.3
Lot up to 6,000 sq ft	105	3.2
Duplex and Triplex Units	92	2.8
Condominium, Apartment, and Mobile Home Units	92	2.8
Large ADUs, SROs, Senior Housing, and Small, High-Density Apartment Units	72	2.2
Commercial, Industrial, and Irrigation (per TGM) (2)	33	1.0

**Notes:**

- (1) Based on analysis of winter water usage (sewer cap) from 2016 through 2019.
- (2) Wastewater flow for each commercial and industrial account is estimated on a case-by-case basis.

# Current and Proposed Wastewater Demand Fees

Type of Development	Current Wastewater Demand Fee	Proposed Wastewater Demand Fee
Single Family Residential		
Lot over 1 acre	\$ 8,915	\$ 7,040
Lot over 6,000 sq ft up to 1 acre	\$ 7,664	\$ 5,957
Lot up to 6,000 sq ft	\$ 6,725	\$ 5,776
Duplex and Triplex Units	\$ 7,507	\$ 5,054
Condominium, Apartment, and Mobile Home Units	\$ 7,507	\$ 5,054
Large ADUs, SROs, Senior Housing, and Small, High-Density Apartment Units	\$ 5,630	\$ 3,971
Commercial, Industrial, and Irrigation (per TGM) (2)	\$ 1,564	\$ 1,805

**Notes:**

(1) Applied to estimated average dry weather flow (ADWF) in TGM for each proposed non-residential wastewater connection.

# Comparison of Current and Proposed Demand Fees

Type of Development	Combined Water and Wastewater Demand Fees			
	Current	Proposed	\$ Change	% Change
Single Family Residential				
Lot over 1 acre	\$ 17,029	\$ 15,339	\$ (1,690)	-9.9%
Lot over 6,000 sq ft up to 1 acre	\$ 13,309	\$ 11,246	\$ (2,063)	-15.5%
Lot up to 6,000 sq ft	\$ 9,606	\$ 9,378	\$ (228)	-2.4%
Duplex and Triplex Units	\$ 10,153	\$ 7,881	\$ (2,272)	-22.4%
Condominium, Apartment, and Mobile Home Units with Separate Irrigation	\$ 7,507	\$ 5,054	\$ (2,453)	-32.7%
Large ADUs, SROs, Senior Housing, and Small, High-Density Apartment Units	\$ 6,953	\$ 5,339	\$ (1,614)	-23.2%
Commercial, Industrial, and Irrigation (per TGM) (1)	\$ 1,858	\$ 2,261	n/a (2)	n/a (2)

**Notes:**

- (1) Current non-residential water demand fee is \$288/TGM of average demand in the peak month.  
 Current non-residential wastewater demand fee is \$1,532/TGM of ADWF.  
 Proposed non-residential water demand fee is \$456/TGM, an increase of about 55 percent.  
 Proposed non-residential wastewater demand fee is \$1,805/TGM, an increase of about 15.4 percent.
- (2) Change will depend on the demand characteristics of each proposed development.

# Rate Setting Next Steps

- ❖ Final report review by staff
- ❖ Schedule presentations for the Subcommittee, BPU and City Council

**Questions?**