

2016 Water and Recycled Water Rate Study

RATE WORKSHOP WITH DISTRICT BOARD

AUGUST 23, 2016



Agenda

Board Inputs from Aug 10 Rate Workshop

Water Rate Design Fine-Tuning

- Supplemental Water Supply Rates

Recycled Water Rates

- Phase-in Fixed Charges
- Supplemental Water Supply Rate Offsets

Drought Rates

- 2-Tier Drought Rates

Capacity Fees Fine-Tuning

Next Steps

Board Inputs

From Aug 10 Rate Workshop

Concerns / Inputs:

- Heavy RW Customer Impacts based on Proposed RTS Charges and Uniform Commodity Rates
- No Drought Rate in Tier 1 for Affordability

RFC Proposed Approaches on RW Impacts

1. Establish phase-in strategy for Fixed RTS Charges for RW customers to ease in the customer impacts over 5 years
2. Establish Supplemental Water Supply Rates as part of the Potable Water Rates to provide an offset for RW costs as Potable services benefit from RW services

Water Rate Design Fine-Tuning

SUPPLEMENTAL WATER SUPPLY RATES

Should Potable Water Customers Pay for RW Costs?

Nexus:

- RW users free up available potable water supply for potable water customers → enhance water supply availability and reliability for potable system
- Potable water customers should share a portion of the RW system costs based on the benefits received
 - Benefits received = $\text{RW Sales} / \text{Total Potable \& RW Sales}$
 - Potable contributions for RW costs range: 12.6% - 14.6%
- Revenues generated from Supplemental Water Supply Rates will be transferred to RW Fund (Fund 02) to offset RW system costs

Who Should Pay For Supplemental Water Supply Rates?

Supplemental Water Supply Rates	
Residential	
Tier 1	
Tier 2	XX
Tier 3	XX
Tier 4	XX
Non-Residential	X

5-Year Proposed Supplemental Supply Rates

\$ / kgal	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
SFR & MFR						
Tier 1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tier 2	\$0.41	\$0.39	\$0.35	\$0.37	\$0.43	\$0.41
Tier 3	\$0.41	\$0.39	\$0.35	\$0.37	\$0.43	\$0.41
Tier 4	\$0.41	\$0.39	\$0.35	\$0.37	\$0.43	\$0.41
Non-Residential						
CII	\$0.21	\$0.20	\$0.18	\$0.19	\$0.22	\$0.21
LANDSCAPE - POTABLE	\$0.21	\$0.20	\$0.18	\$0.19	\$0.22	\$0.21
OTHERS	\$0.21	\$0.20	\$0.18	\$0.19	\$0.22	\$0.21

Single Family Tier Definitions

Tiers	Tier Definitions	Bases
Tier 1	0 – 6,000 gal	Efficient indoor use: 40GPCD x 2.5 PPH
Tier 2	6,001 – 12,000 gal	Efficient outdoor use for approx. 1,800 sq. ft. landscape
Tier 3	12,001 – 16,000 gal	Groundwater availability : 1,650 AF (for average rainfall year)

Multi Unit Accounts Tier Definitions

Indoor Use Only Services which Qualify for Lower Capacity Fees

Tiers	Tier Definitions	Bases
Tier 1	0 – 6,000 gal	Efficient indoor use: 40GPCD x 2.5 PPH
Tier 2	6,001 – 6,400 gal	Efficient average outdoor use for approx. 100 sq. ft. landscape (balcony planting)
Tier 3	6,401 – 16,000 gal	Groundwater availability : 1,650 AF (for average rainfall year)

Proposed 5-year Rates

Bi-Monthly Meter Charges by Meter Size

	Current FY 2016	COS FY 2016	Dec 2016 FY 2017	Dec 2017 FY 2018	Dec 2018 FY 2019	Dec 2019 FY 2020	Dec 2020 FY 2021
Proposed Rev Adjustments			25%	15%	10%	10%	10%
5/8"	\$49.34	\$47.94	\$59.93	\$68.92	\$75.82	\$83.41	\$91.76
3/4"	\$49.34	\$75.43	\$94.29	\$108.44	\$119.29	\$131.22	\$144.35
1"	\$95.28	\$81.14	\$101.43	\$116.65	\$128.32	\$141.16	\$155.28
1 1/2"	\$182.14	\$190.71	\$238.39	\$274.15	\$301.57	\$331.73	\$364.91
2"	\$273.74	\$258.94	\$323.68	\$372.24	\$409.47	\$450.42	\$495.47
3"	\$414.98	\$461.66	\$577.08	\$663.65	\$730.02	\$803.03	\$883.34
4"	\$628.32	\$807.22	\$1,009.03	\$1,160.39	\$1,276.43	\$1,404.08	\$1,544.49

Components of Water Commodity Rates

Water Supply	Delivery Cost	Peaking Cost	Water Use Efficiency	Revenue Offsets	Suppl. Water Supply Rate
Local water variable costs	Remaining cost of delivering water to customer	Peaking cost of capital, including GW Recharge Program	Water use efficiency program related costs	Property tax (unrestricted revenues) to provide affordability for essential use	Contributions to offset RW Costs

Water Rate Justifications

	Water Supply	Delivery	Peaking	Water Use Efficiency	Revenue Offset	Suppl. Water Supply Rate
Residential						
Tier 1	Groundwater	x	x		xx	
Tier 2	Groundwater	x	xx		x	xx
Tier 3	Groundwater	x	xxx	xx	x	xx
Tier 4	Groundwater	x	xxxx	xx	x	xx
Non-Residential	Groundwater	x	xx	x		x

Water Rate Justifications

FY 2016 Rate Restructuring – No Increase in Revenue

	Water Supply	Delivery	Peaking	Water Use Efficiency	Revenue Offset	Suppl. Water Supply	Proposed FY 2016 Rates
Residential							
Tier 1	\$1.22	\$3.20	\$3.36	\$0.00	-\$4.04		\$3.74
Tier 2	\$1.22	\$3.20	\$4.06	\$0.00	-\$2.02	\$0.41	\$6.87
Tier 3	\$1.22	\$3.20	\$5.10	\$3.06	-\$2.02	\$0.41	\$10.97
Tier 4	\$1.22	\$3.20	\$7.37	\$3.06	-\$2.02	\$0.41	\$13.24
Non-Residential							
Business	\$1.22	\$3.20	\$3.74	\$0.83		\$0.21	\$9.20
Industrial	\$1.22	\$3.20	\$3.74	\$0.83		\$0.21	\$9.20
Landscape - Potable	\$1.22	\$3.20	\$6.03	\$0.83		\$0.21	\$11.49
Others	\$1.22	\$3.20	\$4.78	\$0.83		\$0.21	\$10.24

Water Rate Justifications

FY 2016 Rate Restructuring – No Increase in Revenue

	Current Tier Breaks	Revised Tier Breaks Single Family	Revised Tier Breaks Multi Family	Current Rates	Proposed FY 2016 Rates
Residential					
Tier 1	6,000 gal	6,000 gal	6,000 gal	\$3.70	\$3.74
Tier 2	14,000 gal	12,000 gal	6,400 gal	\$6.21	\$6.87
Tier 3	24,000 gal	16,000 gal	16,000 gal	\$8.01	\$10.97
Tier 4	36,000 gal	> 16,000 gal	> 16,000 gal	\$9.66	\$13.24
Tier 5	50,000 gal			\$12.36	
Tier 6	>50,000 gal			\$13.97	
Non-Residential				Average Rates	
Business	6 tiers	uniform		\$11.26	\$9.20
Industrial	6 tiers	uniform		\$9.58	\$9.20
Landscape - Potable	6 tiers	uniform		\$10.70	\$11.49
Others	6 tiers	uniform		\$10.61	\$10.24

Proposed 5-year Rates

Water Usage Rates (\$/kgal)

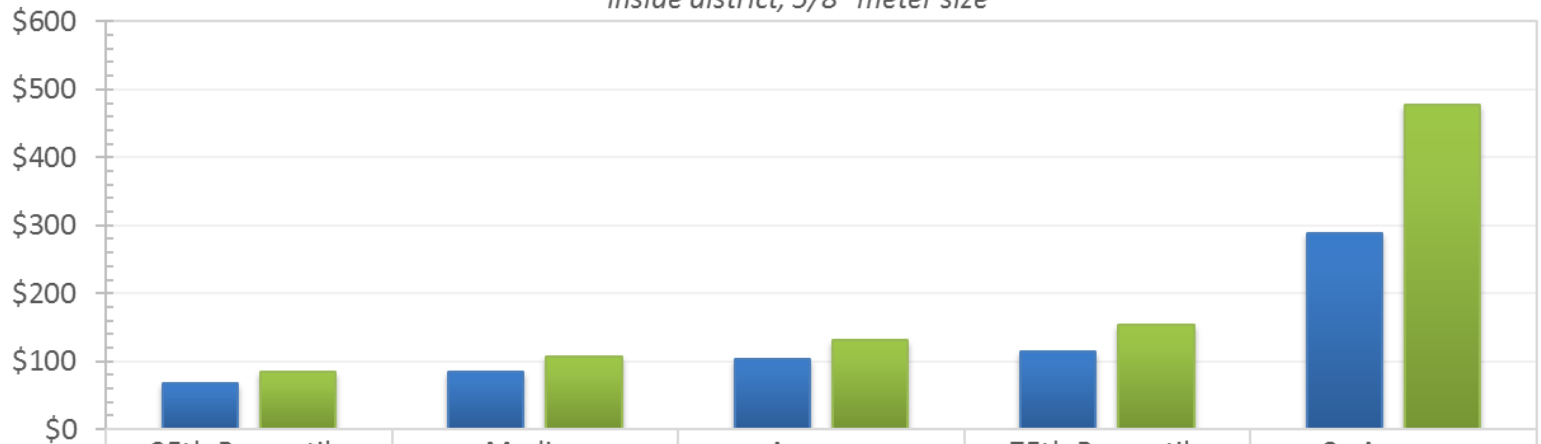
	Current FY 2016	COS FY 2016	Dec 2016 FY 2017 25%	Dec 2017 FY 2018 15%	Dec 2018 FY 2019 10%	Dec 2019 FY 2020 10%	Dec 2020 FY 2021 10%
Residential							
Tier 1	\$3.70	\$3.74	\$4.89	\$5.63	\$6.20	\$6.83	\$7.52
Tier 2	\$6.21	\$6.87	\$8.57	\$9.76	\$10.73	\$11.84	\$12.97
Tier 3	\$8.01	\$10.97	\$13.70	\$15.66	\$17.22	\$18.97	\$20.81
Tier 4	\$9.66 - \$13.97	\$13.24	\$16.54	\$18.93	\$20.82	\$22.93	\$25.17
Non-Residential							
Business	\$11.26	\$9.20	\$11.44	\$13.11	\$14.42	\$15.88	\$17.44
Industrial	\$9.58	\$9.20	\$11.44	\$13.11	\$14.42	\$15.88	\$17.44
Landscape - Potable	\$10.70	\$11.49	\$14.30	\$16.40	\$18.04	\$19.86	\$21.82
Others	\$10.61	\$10.24	\$12.74	\$14.61	\$16.07	\$17.69	\$19.43

Single Family Customer Impact Analysis

Current Rates versus FY 2017 Proposed

Sample SFR Bi-Monthly Water Bills at FY 2017 Proposed Rates

Inside district, 5/8" meter size



	25th Percentile 5,000 gal	Median 8,000 gal	Average 11,000 gal	75th Percentile 13,000 gal	3x Average 33,000 gal
■ Current Bill	\$67.84	\$83.96	\$102.59	\$115.01	\$288.26
■ Proposed Bill	\$84.38	\$106.40	\$132.11	\$154.37	\$476.59
Impact \$	\$16.54	\$22.44	\$29.52	\$39.36	\$188.33
Impact %	24%	27%	29%	34%	65%

Proposed Revenue Structure

FY 2017

	FY 2017 Revenues from Rates	% of Revenues from Rates
Fixed Charges	\$1,596,771	31.7%
Water Usage Rate Revenues		
Residential Tier 1	\$603,998	12.0%
Residential Tier 2	\$511,959	10.6%
Residential Tier 3	\$326,206	6.7%
Residential Tier 4	\$725,883	14.8%
Business	\$653,090	13.0%
Industrial	\$154,453	3.1%
Landscape - Potable	\$279,860	5.6%
Others	\$134,194	2.7%
Total	\$4,964,690	100%

RW Rate Design

Recommendations and Discussion

1. To enhance revenue stability, RW services are proposed to have the same Bi-Monthly Readiness-To-Serve charges as Potable Water services
 - ❖ Phase-in Strategy
2. RW will have uniform rate
 - ❖ Uniform rate are calculated based on residual RW costs after RTS charges are collected and Supplemental Water Supply revenues are transferred from Potable Rates (Fund 01)

Proposed 5-year Phase-In Rates

District does not bill the City of Scotts Valley meter charge

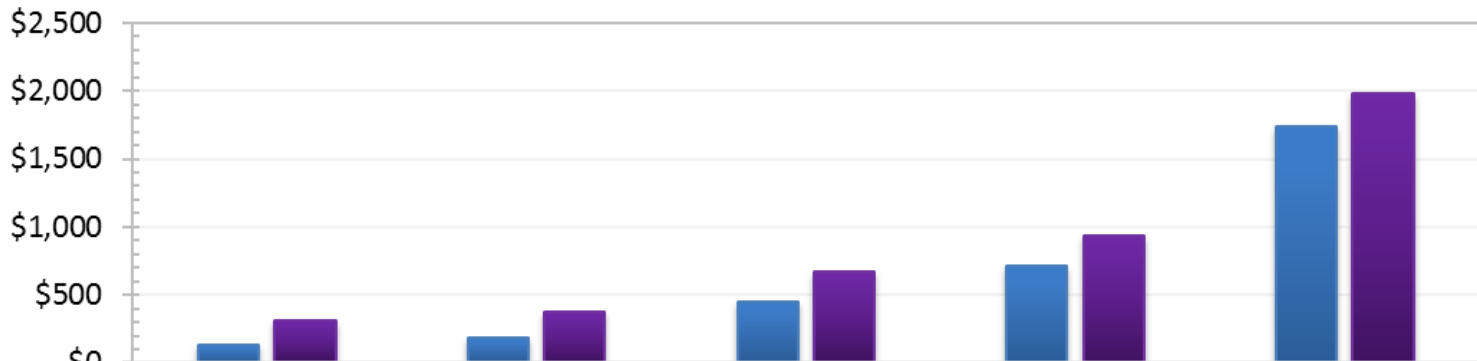
	Current FY 2016	Dec 2016 FY 2017	Dec 2017 FY 2018	Dec 2018 FY 2019	Dec 2019 FY 2020	Dec 2020 FY 2021
Rev Adjmts		25%	15%	5%	3%	3%
% of Potable RTS		20%	40%	60%	80%	100%
Meter Charges						
5/8"		\$11.99	\$27.57	\$45.49	\$66.73	\$91.76
3/4"		\$18.86	\$43.38	\$71.57	\$104.98	\$144.35
1"		\$20.29	\$46.66	\$76.99	\$112.93	\$155.28
1 1/2"		\$47.68	\$109.66	\$180.94	\$265.38	\$364.91
2"		\$64.74	\$148.90	\$245.68	\$360.34	\$495.47
3"		\$115.42	\$265.46	\$438.01	\$642.42	\$883.34
4"		\$201.81	\$464.16	\$765.86	\$1,123.26	\$1,544.49
Water Usage Rates (\$/Kgal)	\$10.21	\$11.05	\$12.95	\$13.49	\$13.54	\$13.91
Landscape Potable Rates	\$10.88	\$14.30	\$16.40	\$18.04	\$19.86	\$21.82
RW, % of Potable Rates		77%	79%	75%	68%	64%

RW Customer Impact Analysis

Current Rates versus FY 2017 Proposed

Sample RW Bi-Monthly Bills

1" meter size



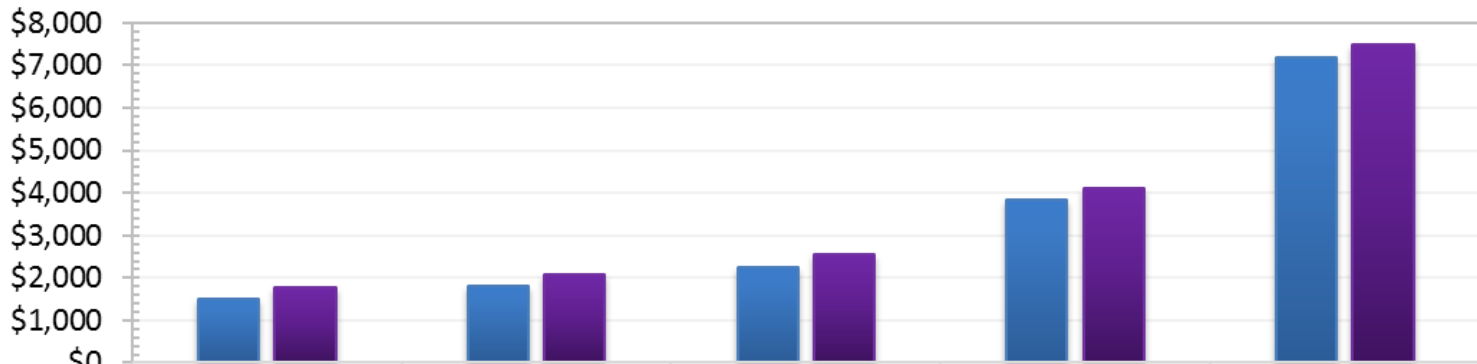
	45th Percentile 26,000 gal	Median 32,000 gal	Average 59,000 gal	75th Percentile 83,000 gal	3xAverage 177,000 gal
■ Current Bill	\$134.81	\$180.39	\$445.85	\$709.59	\$1,742.55
■ Proposed Bill	\$307.59	\$373.89	\$672.24	\$937.44	\$1,976.14
Impact \$	\$172.78	\$193.49	\$226.38	\$227.85	\$233.58
Impact %	128%	107%	51%	32%	13%

RW Customer Impact Analysis

Current Rates versus FY 2017 Proposed

Sample RW Bi-Monthly Bills

2" meter size



	45th Percentile 154,000 gal	Median 182,000 gal	Average 224,000 gal	75th Percentile 367,000 gal	3xAverage 672,000 gal
■ Current Bill	\$1,489.81	\$1,797.50	\$2,259.03	\$3,830.45	\$7,182.09
■ Proposed Bill	\$1,766.44	\$2,075.84	\$2,539.94	\$4,120.09	\$7,490.34
Impact \$	\$276.63	\$278.34	\$280.90	\$289.63	\$308.25
Impact %	19%	15%	12%	8%	4%

Drought Rates

2-TIER RESIDENTIAL DROUGHT RATES

Uniform Drought Rates

Drought Rates	Stage 2 15% Reduction	Stage 3 20% Reduction
Drought Rate Revenue Requirements	\$683,077	\$939,202
Uniform Remaining Sales	283,860 kgal	265,568 kgal
Uniform Drought Rates	\$2.41 / kgal	\$3.54 / kgal

Tiered Drought Rates

Drought Rates		Stage 2 15% Reduction	Stage 3 20% Reduction
Residential			
Tier 1		\$0.00 / kgal	\$0.00 / kgal
Tier 2	xx	\$5.72 / kgal	\$9.19 / kgal
Tier 3	xx	\$5.72 / kgal	\$9.19 / kgal
Tier 4	xx	\$5.72 / kgal	\$9.19 / kgal
Non-Residential	x	\$2.41 / kgal	\$3.54 / kgal

Capacity Fees Fine-Tuning

Capacity Fees Framework

New Connections	Potable System Equity Buy-In	Recycled Treatment System Reimbursement	Recycled Distribution Capacity Buy-In	GW Recharge / Storage Program Contribution
Potable Water	X	X	X	X
Recycled Water		X	X	

Preliminary Capacity Fees (2)

New Connections	Potable System Equity Buy-In	Recycled Treatment System Reimbursement	Recycled Distribution Capacity Buy-In	GW Recharge / Storage Program Contribution
Net Asset Values	\$54,303,725 (Net RC)	\$6,243,862 (Total Debt Service COP 2004)	\$3,295,556 (RC)	\$10,344,304 (CIP less grant)
Demand or Capacity	4,433 EMU (current EMU with AWWA ratios)	740 AFY (actual RW treatment capacity)	240 AFY (built-out RW demand)	1,400 AFY (built-out demand)
Unit Rate				
In 2015 \$	\$12,251 / EMU	\$8,438 / AFY	\$13,732 / AFY	\$7,389 / AFY
In 2016 \$ (by ENR CCI)	\$12,612 / EMU	\$8,686 / AFY	\$14,136 / AFY	\$7,607 / AFY
Unit Rate (\$ / EMU) 1 EMU = 0.252AFY AFY = acre feet per year	\$12,612 / EMU	\$2,189 / EMU	\$3,563 / EMU	\$1,917 / EMU

Preliminary Capacity Fees (3)

Potable Water Capacity Fees (Infrastructure and Impact Fees)

- Estimated Demand / EDU = 0.252 AFY for 5/8-inch regular services
 - Per UWMP 2015, Adopted: Estimated demand = 75 GPCD x 3PPH

Meter size	Estimated Demand (AFY)	Potable System Equity Buy-In	Recycled Treatment System Reimbursement	Recycled Distribution Capacity Buy-In	GW Recharge / Storage Program Contribution	Proposed Capacity Fees	Current Fees 7/1/16	% Change
5/8"	0.252 AFY	\$12,612	\$2,189	\$3,563	\$1,917	\$20,281	\$21,110	-3.9%
3/4"	0.378 AFY	\$18,918	\$3,284	\$5,345	\$2,876	\$30,423	\$31,514	-3.5%
1"	0.630 AFY	\$31,531	\$5,473	\$8,908	\$4,793	\$50,705	\$52,310	-3.1%
1 ½"	1.260 AFY	\$63,061	\$10,947	\$17,815	\$9,586	\$101,409	\$105,329	-3.7%
2"	2.016 AFY	\$100,898	\$17,515	\$28,504	\$15,338	\$162,255	\$167,761	-3.3%
3"	4.411 AFY	\$220,715	\$38,314	\$62,353	\$33,551	\$354,933	\$313,369	13.3%
4"	7.940 AFY	\$397,286	\$68,965	\$112,235	\$60,392	\$638,878	\$522,276	22.3%

Preliminary Capacity Fees (4)

Multi-Unit Developments

Potable Water Capacity Fees (Infrastructure and Impact Fees)

- Estimated Demand / EDU = 0.151 AFY for 5/8-inch indoor-only individual metered services
 - Per UWMP 2015, Adopted: Estimated demand = 45 GPCD x 3PPH, 60% of regular services

- 5/8" meter fees = $\$12,612 * 0.151 / 0.252 + 0.151 \times (\$8,686 + \$14,136 + \$7,607) = \$12,169$

Preliminary Capacity Fees - RW

Meter size	Estimated Demand (AFY)	Recycled Treatment System Reimbursement	Recycled Distribution System Equity Buy-In	Proposed	Current	% Change
5/8"	0.252 AFY	\$2,189	\$3,563	\$5,752	\$8,935	-36%
3/4"	0.378 AFY	\$3,284	\$5,345	\$8,629	\$13,108	-34%
1"	0.630 AFY	\$5,473	\$8,908	\$14,381	\$22,342	-36%
1 ½"	1.260 AFY	\$10,947	\$17,815	\$28,762	\$44,683	-36%
2"	2.016 AFY	\$17,515	\$28,504	\$46,019	\$71,494	-36%
3"	4.411 AFY	\$38,314	\$62,353	\$100,667	\$134,051	-25%
4"	7.940 AFY	\$68,965	\$112,235	\$181,200	\$223,417	-19%

Next Steps

Prepare “Water & RW Rate Study Report”

Attend Public Hearing on Nov 15, 2016

Discussion

