

# 2016 Water and Recycled Water Rate Study

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PUBLIC HEARING

DECEMBER 12, 2016



# Agenda

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Rate Study Overview

Financial Plan

Water Rate Design

Recycled Water Rate Design

Drought Rates

Capacity Fees

# Rate Study Overview

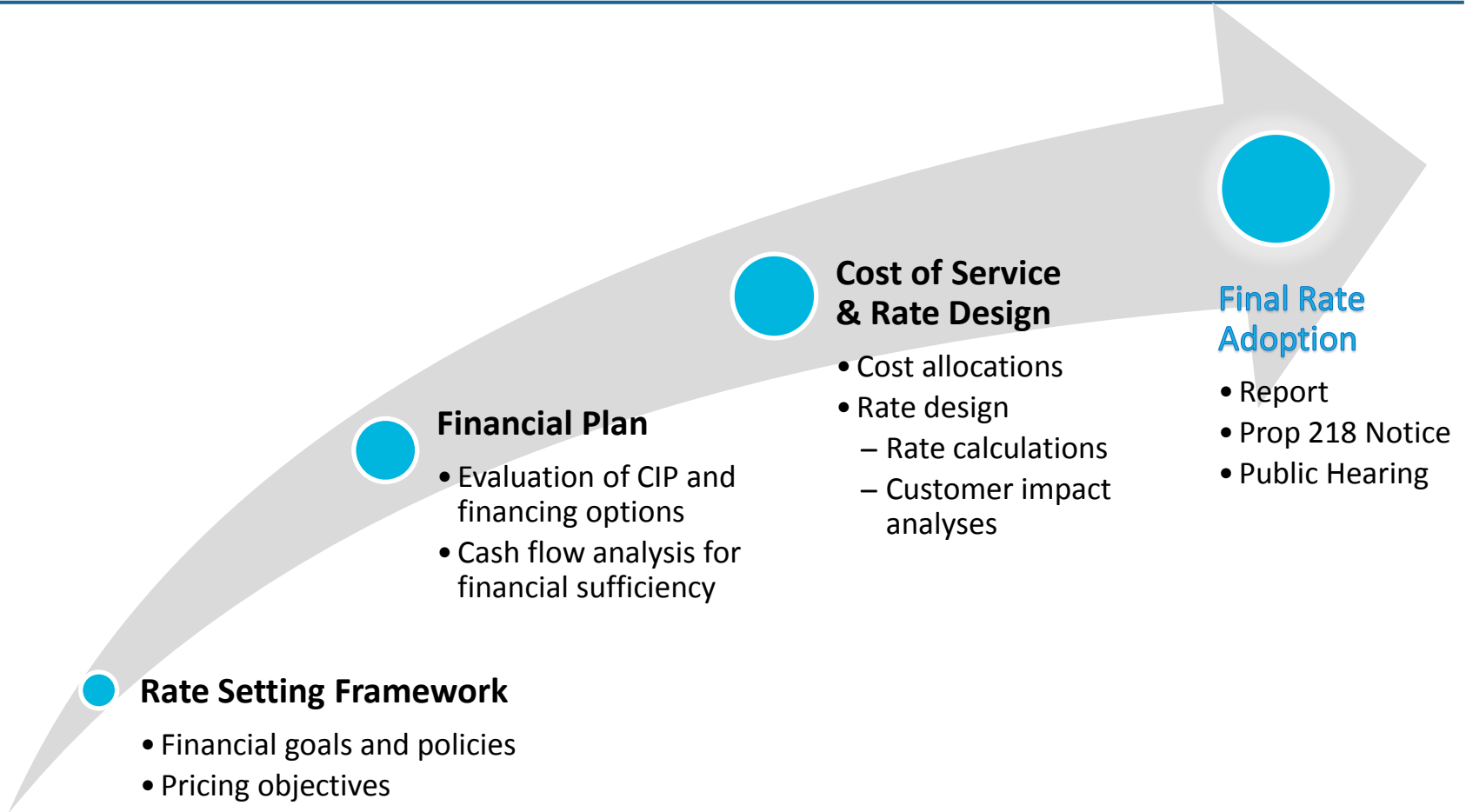
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STEPS IN CONDUCTING A RATE STUDY

LEGAL ENVIRONMENT

PROPOSITION 218 REQUIREMENTS

# Steps in Conducting a Rate Study



# Legal Environment of Rate Making

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## Cost of Service Requirements

- Proposition 218 and Proposition 26 (Article XIIC and XIID of California Constitution)
- California Government Code 54999

## Pass-through Provision

- AB 3030 – Section 53756 of the Government Code

## Water Conservation

- Article X of California Constitution
- CA Water Code Chapter 3.4 – Allocation-based Conservation Water Pricing (AB 2882)
- SB X7-7 – 20% reduction by 2020
- Executive Order B-29-15 (25% reduction State-Wide)
- Executive Order B-36-15 (restrictions extended until 10-31-16)

# CASE STUDY: City of San Juan Capistrano

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## Recent Litigation: CTA vs. City of SJC

- Rate payers (Capistrano Taxpayer Association, CTA) sued the City of San Juan Capistrano over its water budget rate structure

In August 2013, the Orange County Superior court ruled that the rates did not meet the nexus requirement

### Key factors:

- Lack of administrative record
- City used multipliers to justify the tiered rates without any administrative record of an underlying rationale

# Key Issues and Challenges

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Water sales reduction

Funding capital and maintenance projects

Financial sufficiency

- Meeting debt coverage ratio requirement

Nexus development for the proposed rates

- Administrative records for Prop 218 requirements

# Financial Plan

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# Why Do We Need Reserves?

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## Nature of public utility system

- Largely fixed cost operations
- Capital intensive
- Highly fluctuating capital costs
- Risk and liability → unknown liability costs

Healthy reserves levels → better credit ratings → lower interest rates for future debt

# Financial Health Indicators

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## 1. Reserve Balances:

- **Operation Reserve:** to meet daily working capital for operating expenses
- **Rate Stabilization Reserve:** to be used during periods of short-term revenue shortages to prevent rate-shock and phase in any necessary rate adjustments
- **Capital Replacement Reserve:** for future capital expenditures
- **Emergency Reserve:** funds available in case of asset failure or natural disaster

## 2. Debt Coverage Ratios

- To meet Official Statement requirements
- To achieve credit ratings from rating agencies

# Financial Policy Framework

Reserves	Target Levels	Bases
<b>Operation</b>	90 days (25% Operating Budget)	Bi-Monthly Billings for Water Monthly billings for RW
<b>Rate Stabilization Fund (RSF)</b>	20% of Revenues from Volumetric Rates	Revenue sensitivity analysis
<b>Capital R&amp;R</b>	100% Annual Depreciation	
<b>Emergency</b>	2.5% Asset Values	Average asset useful life ~30 – 50 years
<b>Debt Service (Restricted)</b>	100% Annual Debt Service	Required by Debt Covenants

# Reserve Policy

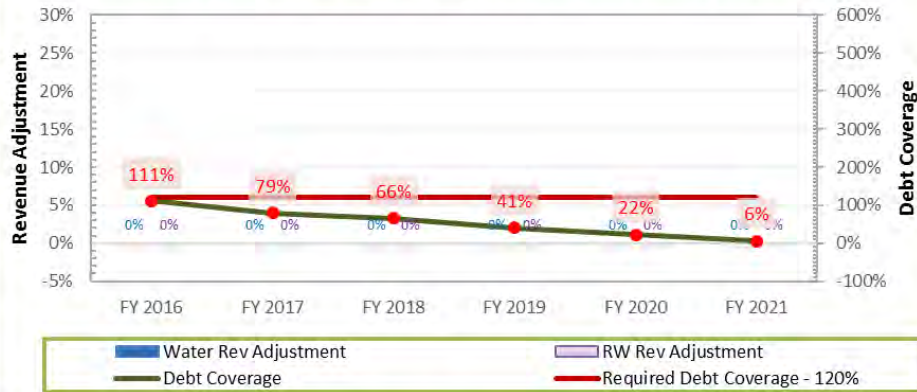
FY 2016 Budget; Asset / Depreciation as of June 30, 2015

Reserves	Minimum Target Levels	Water Fund (FY 2016 Budget)	RW Fund (FY 2016 Budget)	Impact Fee (FY 2016 Budget)
<b>Operation</b>	90 days (or 25%) O&M Budget	\$994K	\$109K	
<b>Rate Stabilization Fund (RSF)</b>	20% of Revenues from Volumetric Rates	\$487K	\$75K	
<b>Capital R&amp;R</b>	100% Annual Depreciation	\$709K	\$174K	
<b>Emergency</b>	2.5% of Asset Values	\$309K	\$151K	
<b>Debt Service</b>	100% of Annual Debt Service	\$356K	\$0	\$273K
<b>TOTAL TARGET</b>		<b>\$2,855K</b>	<b>\$509K</b>	<b>\$273K</b>
<b>Fund Balance</b> (As of July 1, 2015)		<b>\$5,130K</b>	<b>\$122K</b>	<b>\$218K</b>

# Financial Plan

## No Rate Increase

Whole District Revenue Adjustment and Debt Coverage



Whole District Operating Financial Plan



Whole District CIP and Funding Sources

Cash Flow CIP w/ GWR Project



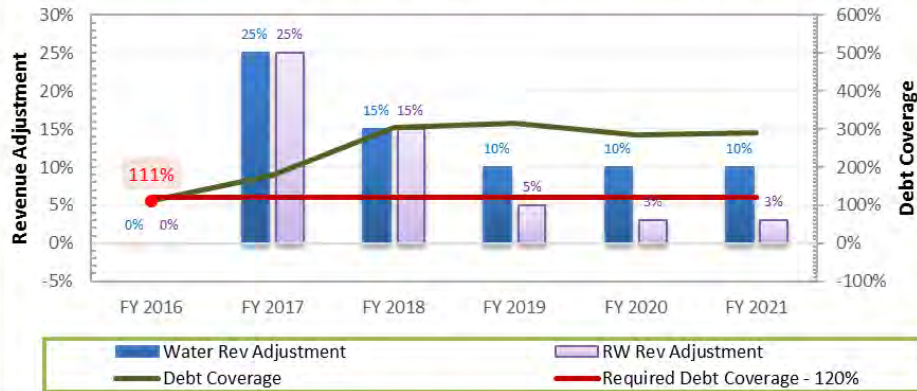
Whole District Unrestricted Fund Ending Balances



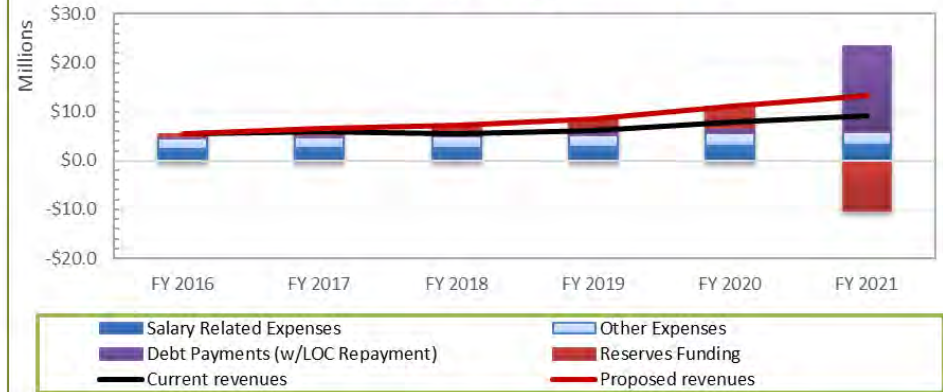
# Proposed Financial Plan

## No Growth Revenues Assumed

**Whole District Revenue Adjustment and Debt Coverage**



**Whole District Operating Financial Plan**



**Whole District CIP and Funding Sources**

*Cash Flow CIP w/ GWR Project*



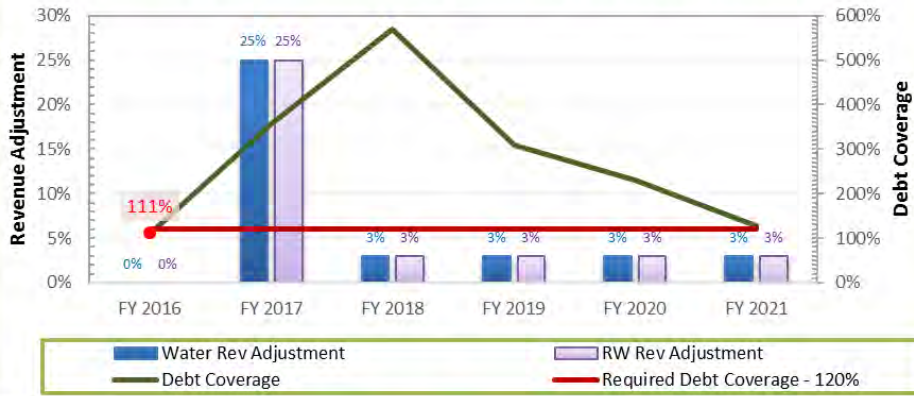
**Whole District Unrestricted Fund Ending Balances**



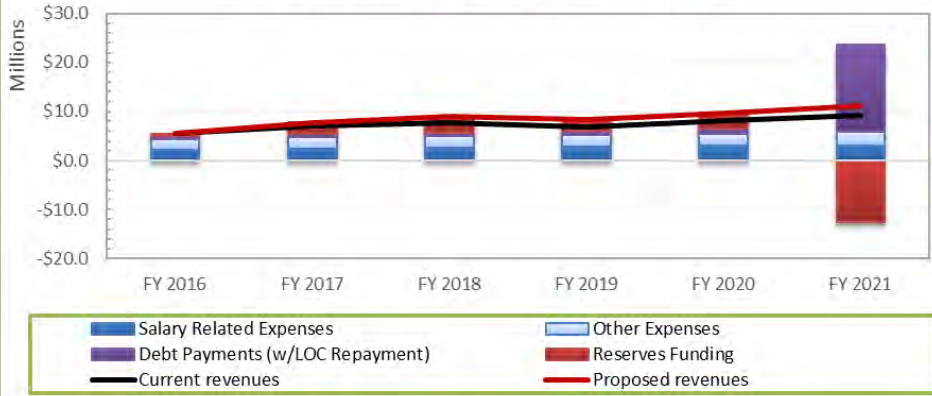
# Proposed Financial Plan

With Growth Revenues (Proposed Capacity Fees Rev) Assumed

Whole District Revenue adjustment and Debt Coverage



Whole District Operating Financial Plan



Whole District CIP and Funding Sources

Cash Flow CIP w/ GWR Project



Whole District Unrestricted Fund Ending Balances



# Water Rate Design

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TIER DEFINITIONS

COS ANALYSIS AND RATE DEVELOPMENT

CUSTOMER IMPACT ANALYSES



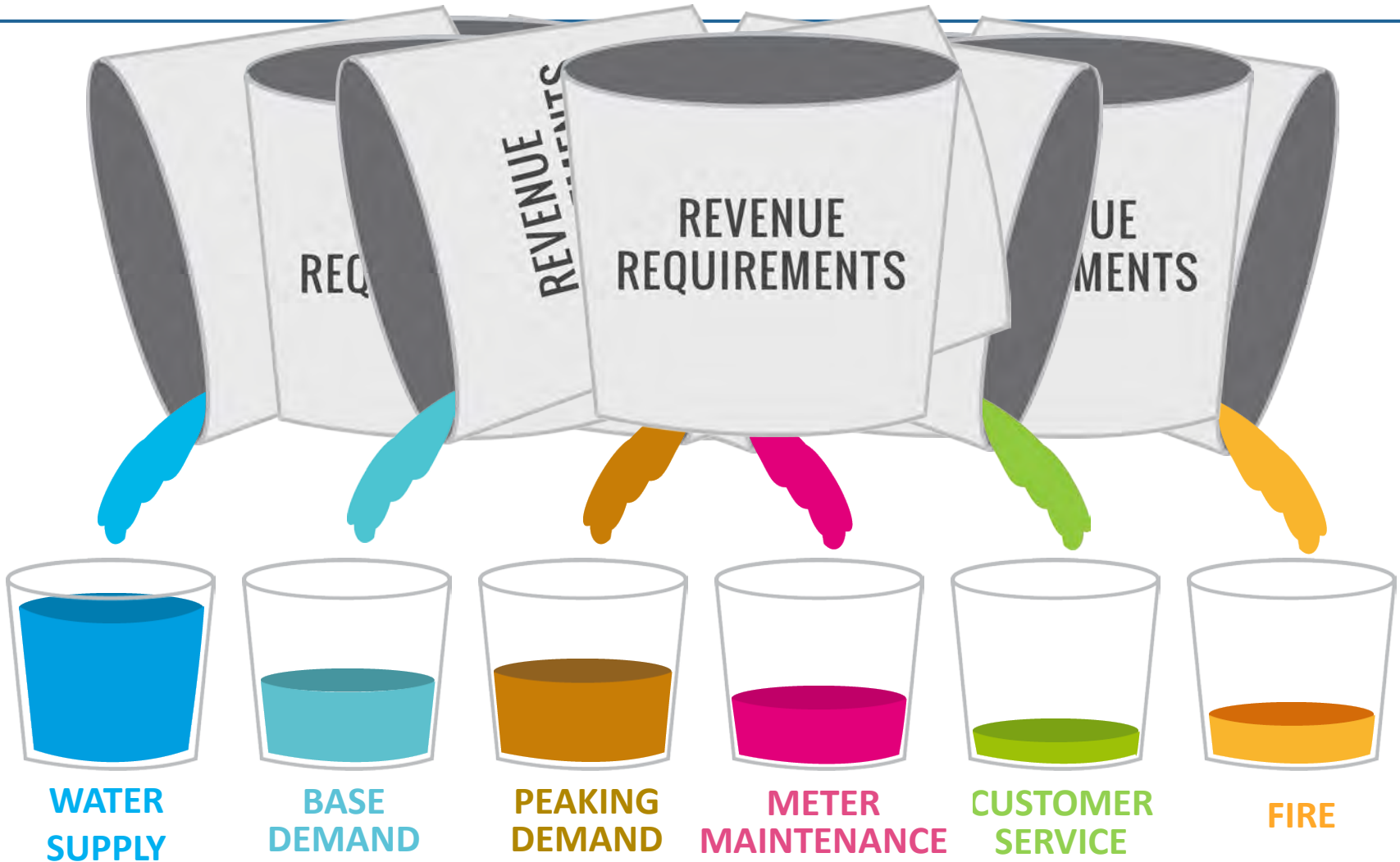
# Single Family Tier Definitions

Tiers	Tier Definitions	Bases
Tier 1	0 – 6,000 gal	Efficient indoor use: 32GPCD x 3 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 : 1,506 AF (safe yield)

# Multi Unit Accounts Tier Definitions

Tiers	Tier Definitions	Bases
Tier 1	0 – 6,000 gal	Efficient indoor use: 32GPCD x 3 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 : 1,506 AF (safe yield)

# Cost of Service Allocation Process



# Cost of Service Analysis Results and Revenue Recovery

Revenue Requirements	FY 2016	Water Usage Rates	Bi-Monthly Meter Charges
Variable Water Supply	\$397,177	100%	
Base Fixed	\$1,553,143	68%	32%
Peaking Capital Cost	\$1,423,018	100%	
Billing & Customer Service	\$230,677		100%
Meters & Services	\$529,144		100%
Water Use Efficiency (WUE)	\$268,975	100%	
Rev Offsets	-\$703,680	100%	
Private fire protection	\$12,498		100%
<b>Total Revenue Requirements</b>	<b>\$3,710,952</b>	<b>66%</b>	<b>34%</b>

*Fixed System Cost = Base + Peaking = \$2.98M*

# Bi-Monthly Meter Charges

FY 2016 Rate Restructuring – No Increase in Revenue

Meter Size	Billing & Customer Service	Meters & Services	Capacity	Proposed	Current	% Change
5/8"	\$9.25	\$19.78	\$18.91	<b>\$47.94</b>	\$49.34	-2.8%
3/4"	\$9.25	\$37.81	\$28.37	<b>\$75.43</b>	\$49.34	52.9%
1"	\$9.25	\$24.61	\$47.28	<b>\$81.14</b>	\$95.28	-14.8%
1 1/2"	\$9.25	\$86.91	\$94.55	<b>\$190.71</b>	\$182.14	4.7%
2"	\$9.25	\$98.41	\$151.28	<b>\$258.94</b>	\$273.74	-5.4%
3"	\$9.25	\$121.48	\$330.93	<b>\$461.66</b>	\$414.98	11.2%
4"	\$9.25	\$202.30	\$595.67	<b>\$807.22</b>	\$628.32	28.5%

# 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
<b>Proposed Rev Adjustments</b>			<b>25%</b>	<b>15%</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>
5/8"	\$49.34	\$47.94	<b>\$59.93</b>	\$68.92	\$75.82	\$83.41	\$91.76
3/4"	\$49.34	\$75.43	<b>\$94.29</b>	\$108.44	\$119.29	\$131.22	\$144.35
1"	\$95.28	\$81.14	<b>\$101.43</b>	\$116.65	\$128.32	\$141.16	\$155.28
1 1/2"	\$182.14	\$190.71	<b>\$238.39</b>	\$274.15	\$301.57	\$331.73	\$364.91
2"	\$273.74	\$258.94	<b>\$323.68</b>	\$372.24	\$409.47	\$450.42	\$495.47
3"	\$414.98	\$461.66	<b>\$577.08</b>	\$663.65	\$730.02	\$803.03	\$883.34
4"	\$628.32	\$807.22	<b>\$1,009.03</b>	\$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
<b>Residential</b>						
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
<b>Non-Residential</b>	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
<b>Residential</b>							
Tier 1	\$1.22	\$3.20	\$3.36	\$0.00	-\$4.04		<b>\$3.74</b>
Tier 2	\$1.22	\$3.20	\$4.06	\$0.00	-\$2.02	\$0.41	<b>\$6.87</b>
Tier 3	\$1.22	\$3.20	\$5.10	\$3.06	-\$2.02	\$0.41	<b>\$10.97</b>
Tier 4	\$1.22	\$3.20	\$7.37	\$3.06	-\$2.02	\$0.41	<b>\$13.24</b>
<b>Non-Residential</b>							
Business	\$1.22	\$3.20	\$3.74	\$0.83		\$0.21	<b>\$9.20</b>
Industrial	\$1.22	\$3.20	\$3.74	\$0.83		\$0.21	<b>\$9.20</b>
Landscape - Potable	\$1.22	\$3.20	\$6.03	\$0.83		\$0.21	<b>\$11.49</b>
Others	\$1.22	\$3.20	\$4.78	\$0.83		\$0.21	<b>\$10.24</b>

# 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
<b>Residential</b>					
Tier 1	6,000 gal	6,000 gal	6,000 gal	\$3.70	<b>\$3.74</b>
Tier 2	14,000 gal	12,000 gal	6,400 gal	\$6.21	<b>\$6.87</b>
Tier 3	24,000 gal	16,000 gal	16,000 gal	\$8.01	<b>\$10.97</b>
Tier 4	36,000 gal	> 16,000 gal	> 16,000 gal	\$9.66	<b>\$13.24</b>
Tier 5	50,000 gal			\$12.36	
Tier 6	>50,000 gal			\$13.97	
<b>Non-Residential</b>				<b>Average Rates</b>	
Business	6 tiers	uniform		\$11.26	<b>\$9.20</b>
Industrial	6 tiers	uniform		\$9.58	<b>\$9.20</b>
Landscape - Potable	6 tiers	uniform		\$10.70	<b>\$11.49</b>
Others	6 tiers	uniform		\$10.61	<b>\$10.24</b>

# Proposed 5-year Rates

## Water Usage Rates (\$/kgal)

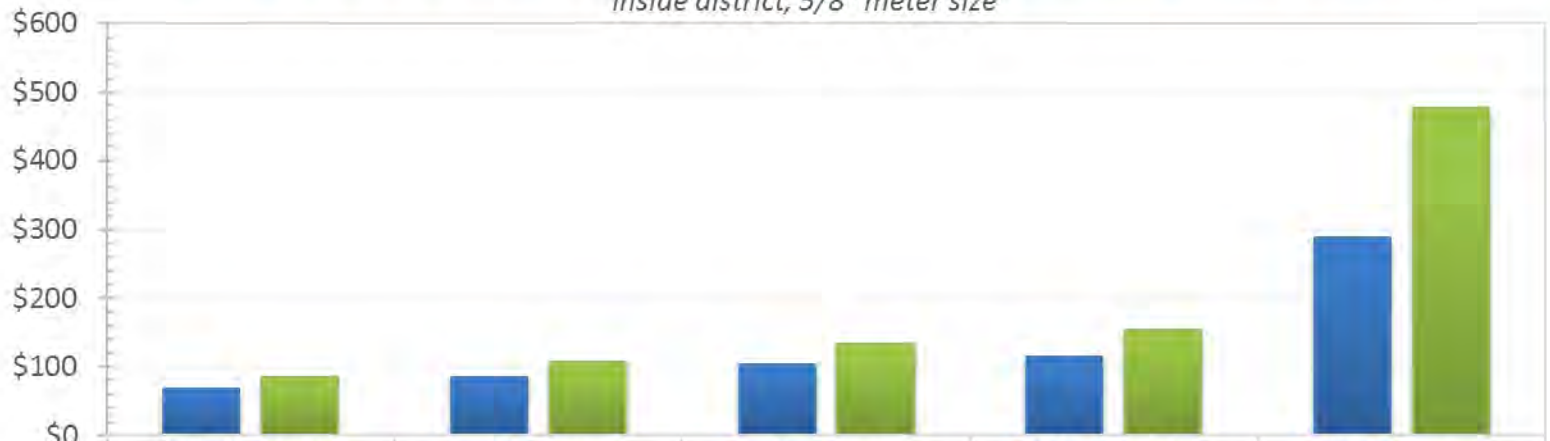
	Current FY 2016	COS FY 2016	Dec 2016 FY 2017 25%	Dec 2017 FY 2018 15%	Dec 2018 FY 2019 10%	Dec 2019 FY 2020 10%	Dec 2020 FY 2021 10%
<b>Residential</b>							
Tier 1	\$3.70	\$3.74	<b>\$4.89</b>	\$5.63	\$6.20	\$6.83	\$7.52
Tier 2	\$6.21	\$6.87	<b>\$8.59</b>	\$9.82	\$10.77	\$11.82	\$12.97
Tier 3	\$8.01	\$10.97	<b>\$13.72</b>	\$15.72	\$17.26	\$18.95	\$20.81
Tier 4	\$9.66 - \$13.97	\$13.24	<b>\$16.56</b>	\$18.99	\$20.86	\$22.91	\$25.17
<b>Non-Residential</b>							
Business	\$11.26	\$9.20	<b>\$11.45</b>	\$13.14	\$14.44	\$15.87	\$17.44
Industrial	\$9.58	\$9.20	<b>\$11.45</b>	\$13.14	\$14.44	\$15.87	\$17.44
Landscape - Potable	\$10.70	\$11.49	<b>\$14.31</b>	\$16.43	\$18.06	\$19.85	\$21.82
Others	\$10.61	\$10.24	<b>\$12.75</b>	\$14.64	\$16.09	\$17.68	\$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	\$106.45	\$132.22	\$154.53	\$477.21
Impact \$	\$16.54	\$22.49	\$29.63	\$39.52	\$188.95
Impact %	24%	27%	29%	34%	66%

# RW Rate Design

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# Recommendations and Discussion

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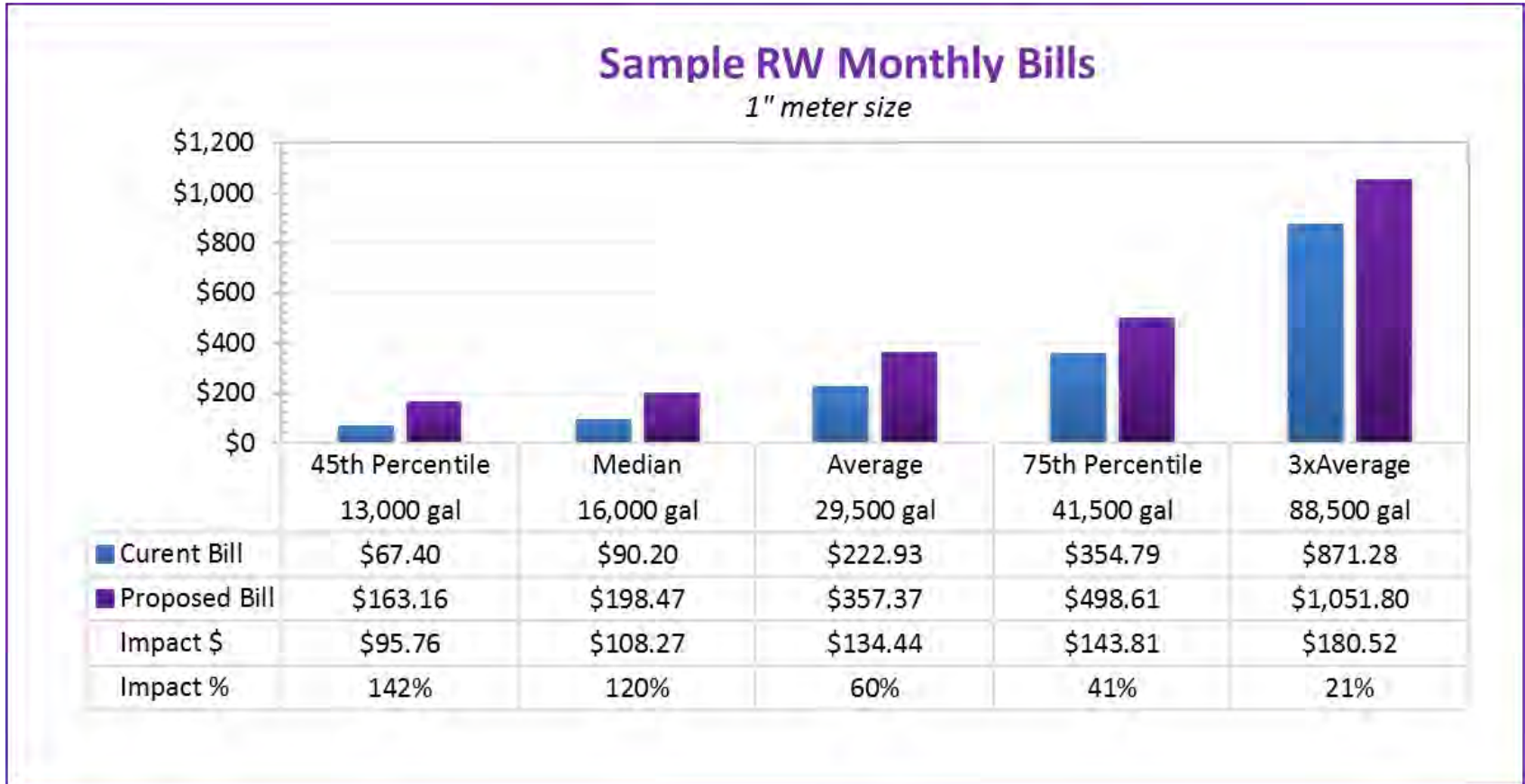
1. To enhance revenue stability, RW services are proposed to have the same Bi-Monthly Readiness-To-Serve charges as Potable Water services
  - Phase-in Strategy
2. Apply uniform rate for RW
  - Uniform rate is calculated based on residual RW costs after RTS charges are collected and Supplemental Water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

# Proposed 5-year Phase-In Rates

	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%
<b>Meter Charges</b>						
5/8"		<b>\$6.00</b>	<b>\$13.79</b>	<b>\$22.75</b>	<b>\$33.37</b>	<b>\$45.88</b>
3/4"		<b>\$9.43</b>	\$21.69	\$35.79	\$52.49	\$72.18
1"		<b>\$10.15</b>	\$23.33	\$38.50	\$56.47	\$77.64
1 1/2"		<b>\$23.84</b>	\$54.83	\$90.48	\$132.70	\$182.46
2"		<b>\$32.37</b>	\$74.45	\$122.85	\$180.17	\$247.74
3"		<b>\$57.71</b>	\$132.73	\$219.01	\$321.22	\$441.67
4"		<b>\$100.91</b>	\$232.08	\$382.93	\$561.64	\$772.25
<b>Water Usage Rates (\$/Kgal)</b>	<b>\$10.21</b>	<b>\$11.77</b>	<b>\$12.64</b>	<b>\$13.19</b>	<b>\$13.37</b>	<b>\$13.64</b>
Landscape Potable Rates	\$10.70	\$14.31	\$16.43	\$18.06	\$19.85	\$21.82
<b>RW, % of Potable Rates</b>		<b>82%</b>	<b>77%</b>	<b>73%</b>	<b>67%</b>	<b>63%</b>

# RW Customer Impact Analysis

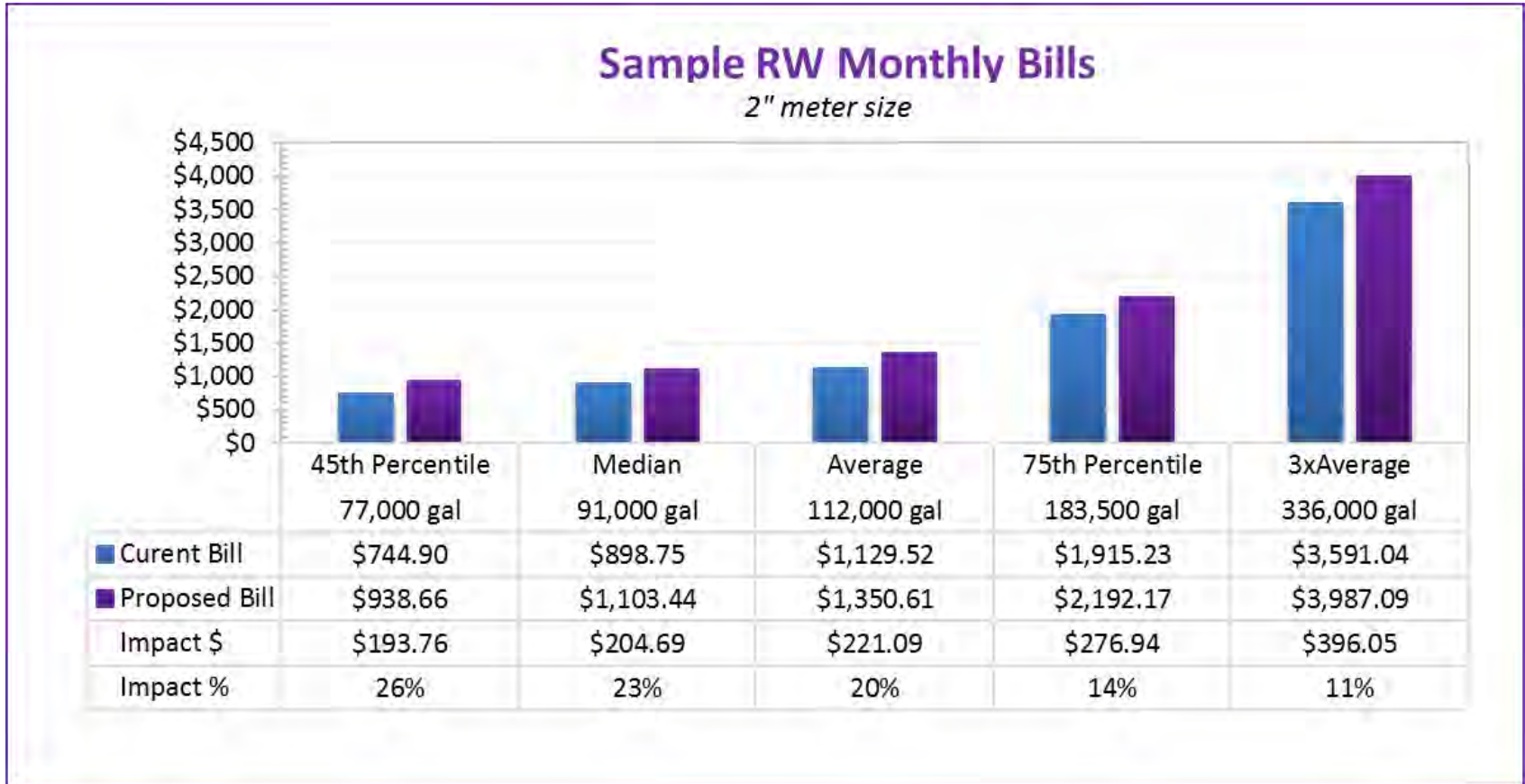
## Current Rates versus FY 2017 Proposed





# RW Customer Impact Analysis

## Current Rates versus FY 2017 Proposed



# Drought Rates

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## 2-TIER RESIDENTIAL DROUGHT RATES

# Usage Reduction and Drought Stages

% Usage Reduction from 2016 Sale	Stage 1	Stage 2 – 15% Reduction		Stage 3 – 20% Reduction	
	Normal / No Reduction	Winter	Summer	Winter	Summer
<b>Residential (SFR &amp; MFR)</b>	0%	10%	19%	15%	24%
<b>Non-Residential</b>					
Business	0%	5%	5%	10%	10%
Industrial	0%	5%	5%	10%	10%
Landscape - Potable	0%	20%	30%	25%	50%
Others	0%	5%	5%	10%	10%

# Usage Reduction and Drought Stages

Usage Reduction Goals from FY 2016 Usage	Stage 2 – 15% Reduction		Stage 3 – 20% Reduction	
	Winter	Summer	Winter	Summer
<b>Residential (SFR &amp; MFR)</b>				
Tier 3	0 kgal	0 kgal	4,296 kgal	1,121 kgal
Tier 4	10,064 kgal	25,432 kgal	10,800 kgal	30,982 kgal
<b>Non-Residential</b>				
Business	1,206 kgal	1,542 kgal	2,412 kgal	3,084 kgal
Industrial	289 kgal	361 kgal	577 kgal	723 kgal
Landscape - Potable	895 kgal	3,796 kgal	1,119 kgal	6,327 kgal
Others	168 kgal	268 kgal	336 kgal	536 kgal
<b>Total Reduction</b>	<b>12,623 kgal</b>	<b>31,399 kgal</b>	<b>19,541 kgal</b>	<b>42,773 kgal</b>
<b>Remaining Sales</b> <i>2016 Sales = 327,882 kgal</i>	<b>283,860 kgal</b>		<b>265,568 kgal</b>	

# 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
<b>Uniform Drought Rates</b>	<b>\$2.41 / kgal</b>	<b>\$3.54 / kgal</b>

# Tiered Drought Rates

Drought Rates		Stage 2 15% Reduction	Stage 3 20% Reduction
<b>Residential</b>			
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
<b>Non-Residential</b>	x	\$2.41 / kgal	\$3.54 / kgal

# Capacity Fees

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# Capacity Fees 101

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## What are Capacity Fees?

- One-time capital charges assessed against new development as a way to provide or cover a proportional share of capital facilities costs that was constructed or will be constructed to accommodate growth
- Commonly known as capacity charges, system development charges, impact fees, etc.

Objective - ***“GROWTH PAYS FOR GROWTH”***



# 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	

# Proposed Capacity Fees (1)

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)	\$3,295,566 (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)
<b>Unit Rate</b>				
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
<b>Unit Rate (\$ / EMU)</b> 1 EMU = 0.252AFY AFY = acre feet per year	\$12,612 / EMU	\$2,189 / EMU	\$3,563 / EMU	\$1,917 / EMU

# Proposed Capacity Fees (2)

## 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 (excl. Meter & Installation)	% Change
5/8"	0.252 AFY	\$12,612	\$2,189	\$3,563	\$1,917	<b>\$20,281</b>	\$20,747	-2.2%
3/4"	0.378 AFY	\$18,918	\$3,284	\$5,344	\$2,876	<b>\$30,422</b>	\$31,118	-2.2%
1"	0.630 AFY	\$31,531	\$5,473	\$8,907	\$4,793	<b>\$50,704</b>	\$51,858	-2.2%
1 ½"	1.260 AFY	\$63,061	\$10,946	\$17,814	\$9,585	<b>\$101,406</b>	\$103,734	-2.2%
2"	2.016 AFY	\$100,898	\$17,514	\$28,502	\$15,337	<b>\$162,251</b>	\$165,955	-2.2%
3"	4.411 AFY	\$220,715	\$38,311	\$62,348	\$33,549	<b>\$354,923</b>	\$311,139	14.1%
4"	7.940 AFY	\$397,286	\$68,960	\$112,226	\$60,388	<b>\$638,860</b>	\$518,562	23.2%

# Proposed Capacity Fees (3)

## Multi-Unit Developments

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### 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 =  $\$12,612 * 0.151 / 0.252 + 0.151 \times (\$8,686 + \$14,136 + \$7,607) = \$12,169$

# Proposed Capacity Fees - RW

Meter size	Estimated Demand (AFY)	Recycled Treatment System Reimbursement	Recycled Distribution System Equity Buy-In	Proposed	Current (excl. Meter & Installation)	% Change
5/8"	0.252 AFY	\$2,189	\$3,563	<b>\$5,752</b>	\$9,221	-38%
3/4"	0.378 AFY	\$3,284	\$5,344	<b>\$8,628</b>	\$13,532	-38%
1"	0.630 AFY	\$5,473	\$8,907	<b>\$14,380</b>	\$23,046	-38%
1 ½"	1.260 AFY	\$10,946	\$17,814	<b>\$28,760</b>	\$46,108	-38%
2"	2.016 AFY	\$17,514	\$28,502	<b>\$46,016</b>	\$73,756	-38%
3"	4.411 AFY	\$38,311	\$62,348	<b>\$100,659</b>	\$138,262	-27%
4"	7.940 AFY	\$68,960	\$112,226	<b>\$181,186</b>	\$230,436	-21%

# Discussion

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