

City of Stockton – Municipal Utilities Department

Water Rate Study Summary and Recommendations



March 26, 2016

Presented by:

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Associate Vice President

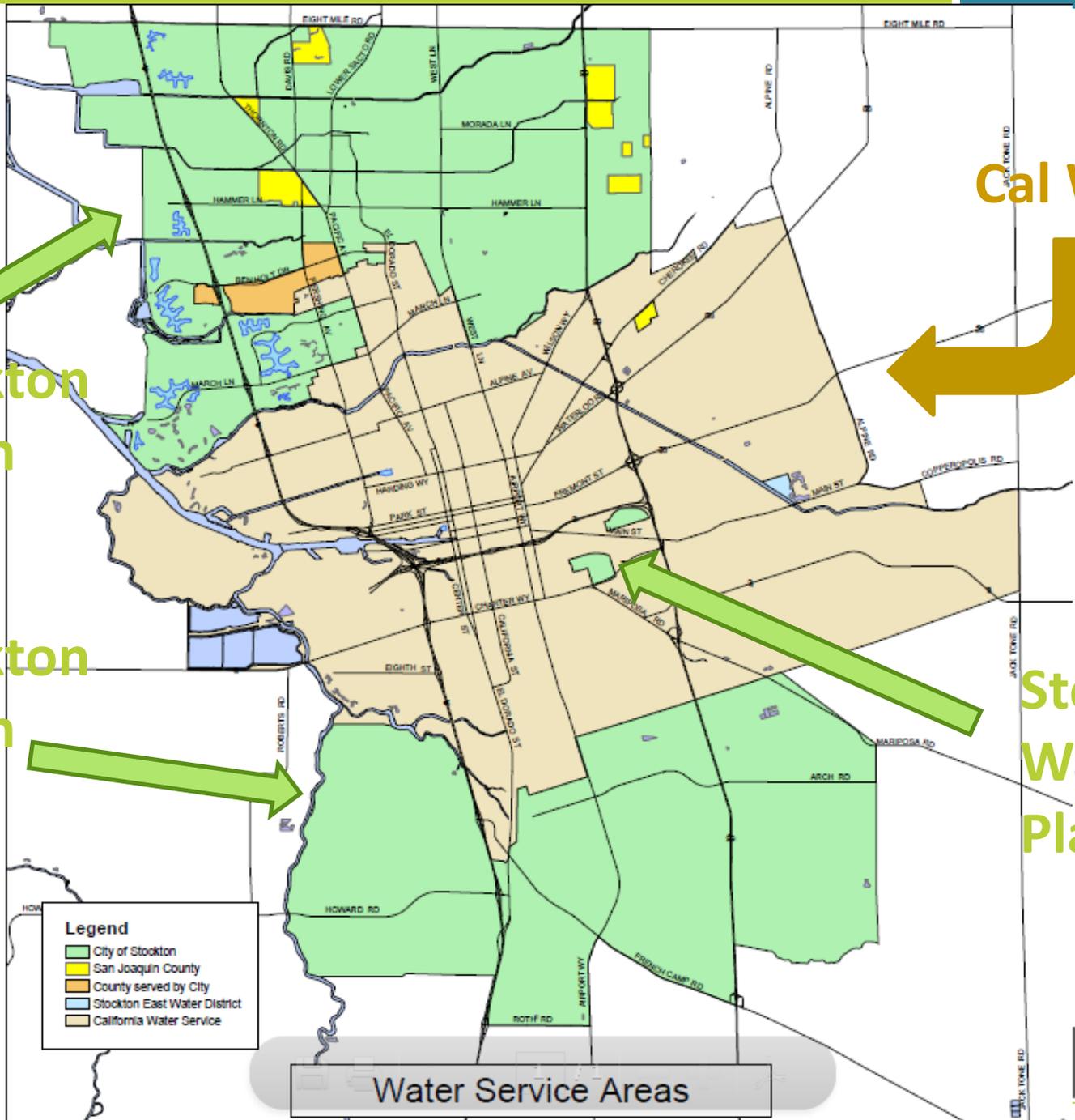
HDR Engineering, Inc.



Overview of the Water Utility

- Approximately 49,000 total customers
 - Primarily residential (~41,000 customers)
- Separate enterprise fund of the Municipal Utilities Department (MUD)
 - Separate from the City General Fund
- Service area is North and South of the downtown core





Stockton North

Stockton South

Cal Water

Stockton Walnut Plant

Legend

- City of Stockton
- San Joaquin County
- County served by City
- Stockton East Water District
- California Water Service

Water Service Areas



Overview of the Water Utility

- Over 9 billion gallons of water consumed in 2015
- Water supply from:
 - Stockton East Water District
 - Delta and Mokelumne R.
 - Wells
- Annual budget of over \$40 million
 - Operating and maintenance (O&M) expenses
 - Annual debt service payments
 - Rate funded capital



Financial/Rate Issues

- Mandated conservation and reduced consumption
 - Impacting utilities throughout California
- Resulting in reduced rate revenues
 - Inability meet to meet legally required debt service coverage ratios
- Utility staff are minimizing expenses
 - Reduced FY 16/17 budget from FY 15/16 budget
 - Open positions have gone unfilled
 - Reduced the capital expenditures for the next 5 years by \$27 million
- Rate revenues are approximately 95% of the total source of funds for the water utility
- Sufficient funds are needed to:
 - Maintain and repair the water system
 - Fund annual debt service requirements

Proposition 218 Requirements

- Provides the requirement for setting and implementing property related rates and fees
 - California constitution article XIII D
- Requires a cost basis for establishing the level of the rates
- Requires a customer notification process and protest hearing
- If approved:
 - City council may implement the proposed rates
 - The proposed rates are the maximum rates that can be charged for the time period specified
 - Rate levels will be reviewed during budgeting process
 - Council action necessary to reduce rates lower than noticed levels

Approach to Setting Cost-Based Rates

Revenue Requirement

Compares the revenues of the utility to its expenses to determine the overall level of rate adjustment



Cost of Service

Equitably allocates the revenue requirements between the various customer classes of service



Rate Design

Design rates for each class of service to meet the revenue needs of the utility, along with any other rate design goals and objectives

Revenue Requirement Analysis

Overview of the Revenue Requirement

Compares utility revenues to expenses

- Determines the level of revenues to prudently support operating and capital needs

Uses prudent financial planning criteria

- Legally required debt service coverage ratios
- Prudent renewal and replacement funding
- Adequate reserve levels

Reviews a specific time period

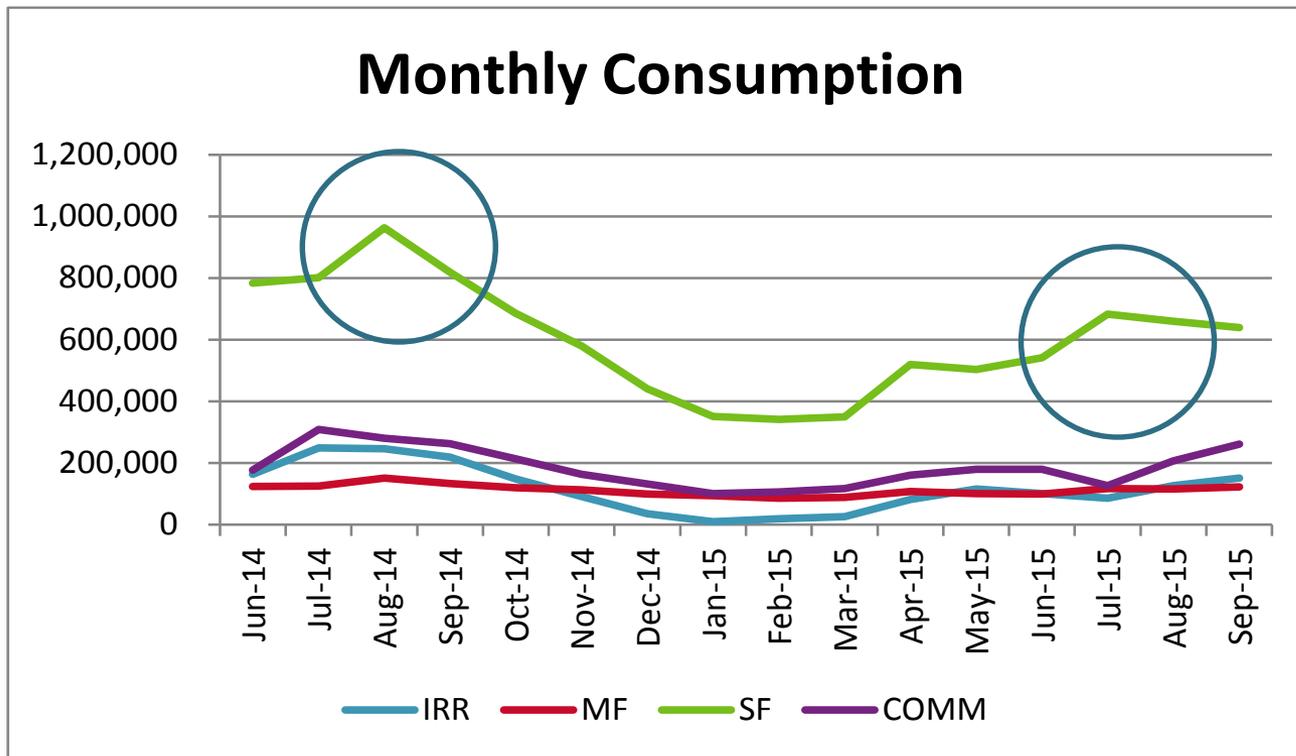
- Ten year projected time period
- Establish rates for a 5 year time period

Utility is analyzed on a “stand-alone basis”

- No transfer of funds from other City funds
- No in lieu of payments to other City funds
- Rates need to support operations

Revenue Requirement – Key Assumptions

- Starting point is the adopted FY 2015/16 Budget
- Declining consumption due to drought and State Mandated conservation

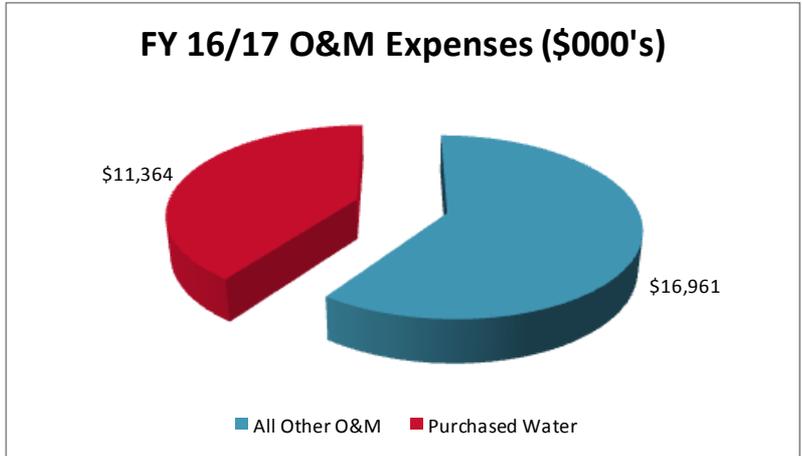
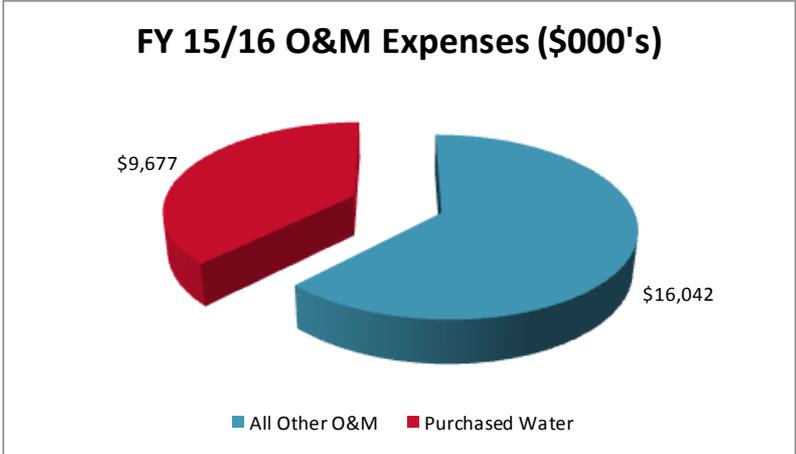


Impacts of Declining Consumption

- Fixed vs. variable costs
- The majority of O&M costs do not decline due to the “fixed” nature of costs
- Revenue reduction has resulted in the inability to meet required debt service coverage ratios
- Reduces the funds available for capital improvements and maintenance
- Future impacts
 - Further reduction in consumption?
 - State’s future conservation requests/mandates?
 - “Demand hardening”

Revenue Requirement – Key Assumptions (Cont'd)

- Purchased water from Stockton East Water District (SEWD)
 - Fixed contract amount
 - City is taking minimum amount
- Charges from SEWD increased by approximately 18.5% in 15/16 and 16/17

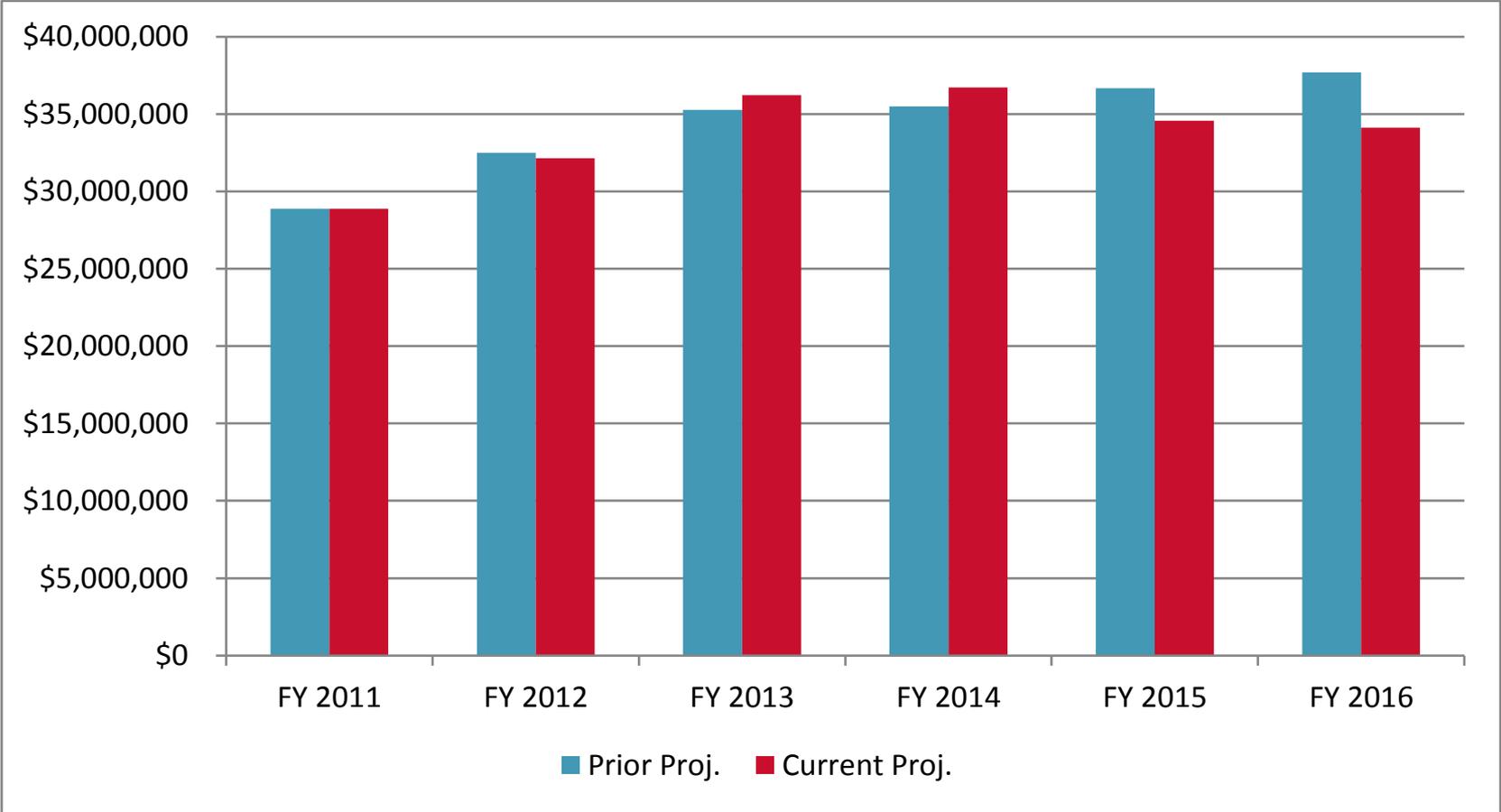


Revenue Requirement – Key Assumptions (Cont'd)

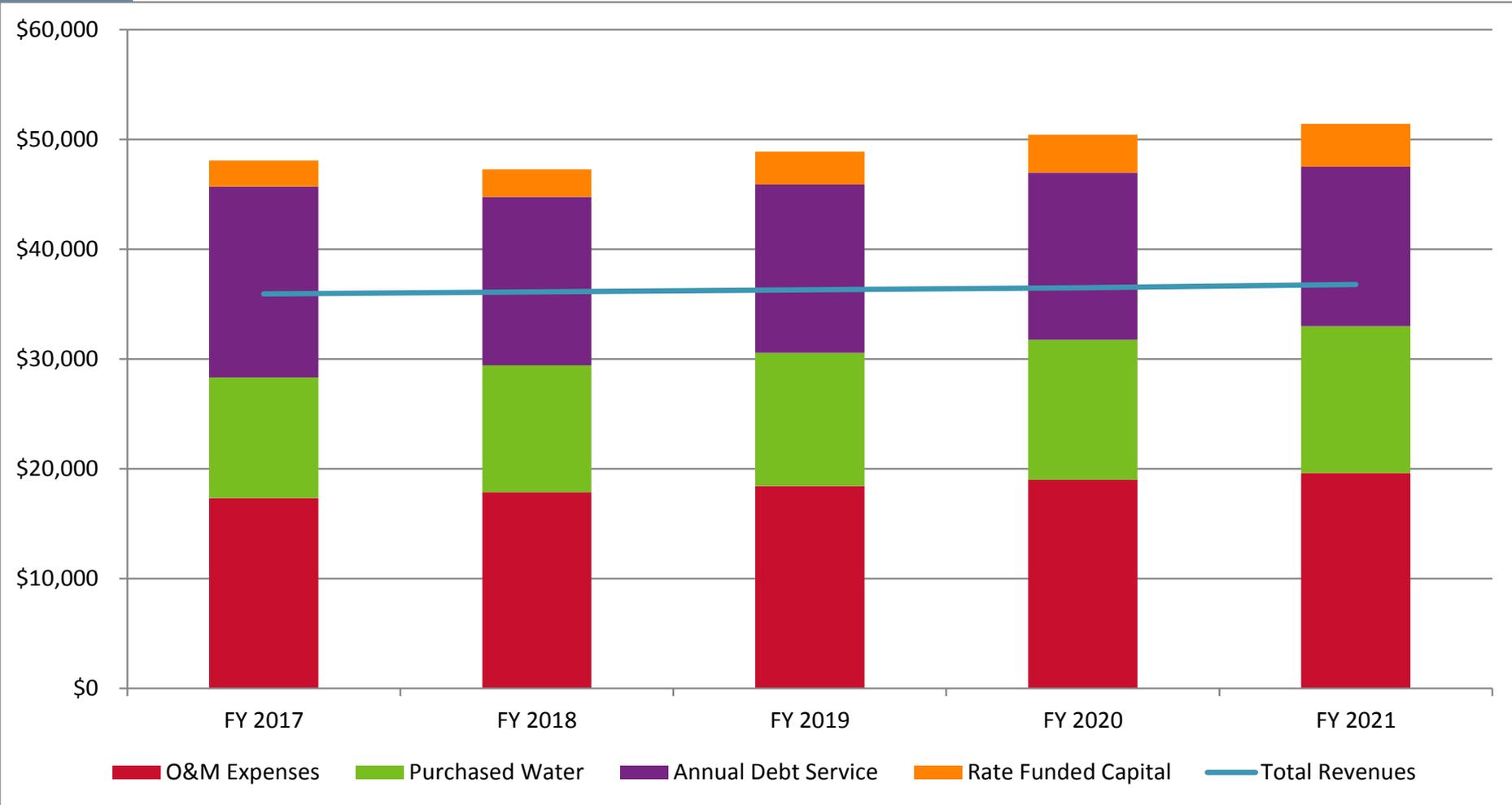
- Developed a capital improvement funding plan
 - Does not include costs related to Granular Activated Carbon filtration at Water Treatment Plant
 - Includes a reduction from the original capital plan of \$27 million over the FY 15/16 – FY 20/21 time period
 - No additional long-term debt in FY 16/17 – FY 20/21
- Legal requirement to meet debt service coverage ratios
 - Bond covenants state contractual minimum levels
- Maintain other financial metrics
 - Prudent renewal and replacement levels
 - Adequate reserve levels

Impacts of Declining Consumption on Revenues

- Result is rate revenues are approximately \$3 million less than prior projections

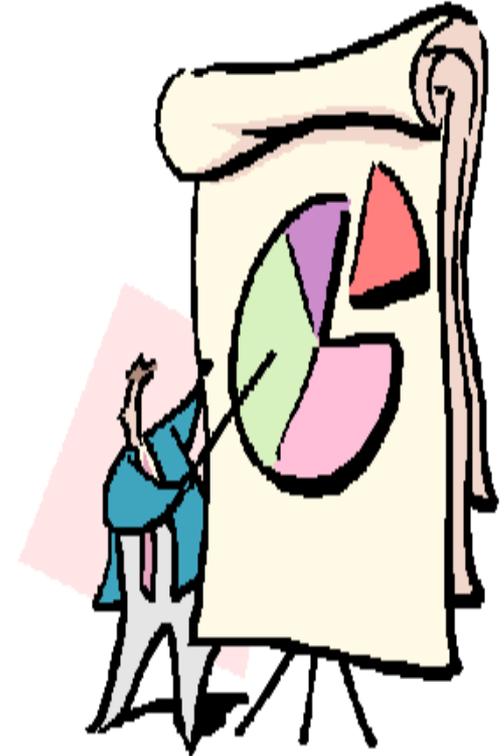


Summary of the Revenue Requirement Analysis



Summary of the Revenue Requirement

- Revenue adjustments are necessary to meet FY 16/17 legally required debt service coverage ratios
 - Absent revenue adjustments the utility will be in technical default on the bonds
 - Continued default could result in the bonds being callable
- Developed a proposed rate transition plan



FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21
26.0%	5.5%	3.0%	3.0%	3.0%

Average Customer Bill Impacts

- Based on average customer data for the winter and summer periods
 - Winter 10 units (October – April)
 - Summer 15 units (May – September)

	Present					
	Rate	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21
Avg. Winter - 10 Units	\$45.94	\$50.60	\$53.42	\$55.05	\$56.75	\$58.45
\$ Difference	-	\$4.66	\$2.82	\$1.63	\$1.70	\$1.70
Cumulative \$ Difference	-	\$4.66	\$7.48	\$9.11	\$10.81	\$12.51
Avg. Summer - 15 Units	\$54.29	\$61.35	\$64.77	\$66.75	\$68.80	\$70.85
\$ Difference	-	\$7.06	\$3.42	\$1.98	\$2.05	\$2.05
Cumulative \$ Difference	-	\$7.06	\$10.48	\$12.46	\$14.51	\$16.56

* Based on a 1" meter for average bill calculation

** Actual customer bill impacts will vary based on actual consumption



Cost of Service Analysis

Need for Cost of Service

- Required by Proposition 218
- Recent legal decisions
 - Need to develop the cost basis (justification) for the pricing
- Equitably allocates costs to the various customer classes of service (e.g., rate schedules)
- Provides the basis for developing the rate structure components
 - Fixed charge
 - Consumption charge

Overview of the Cost of Service

What is cost of service?

- Analysis to equitably allocate the revenue requirement to the various customer classes of service

Why cost of service

- Generally accepted as “fair and equitable”
- Avoids subsidies
- Revenues track costs
- Provide the cost basis for rate setting
- Meets the intent of Proposition 218

Objectives of Cost of Service

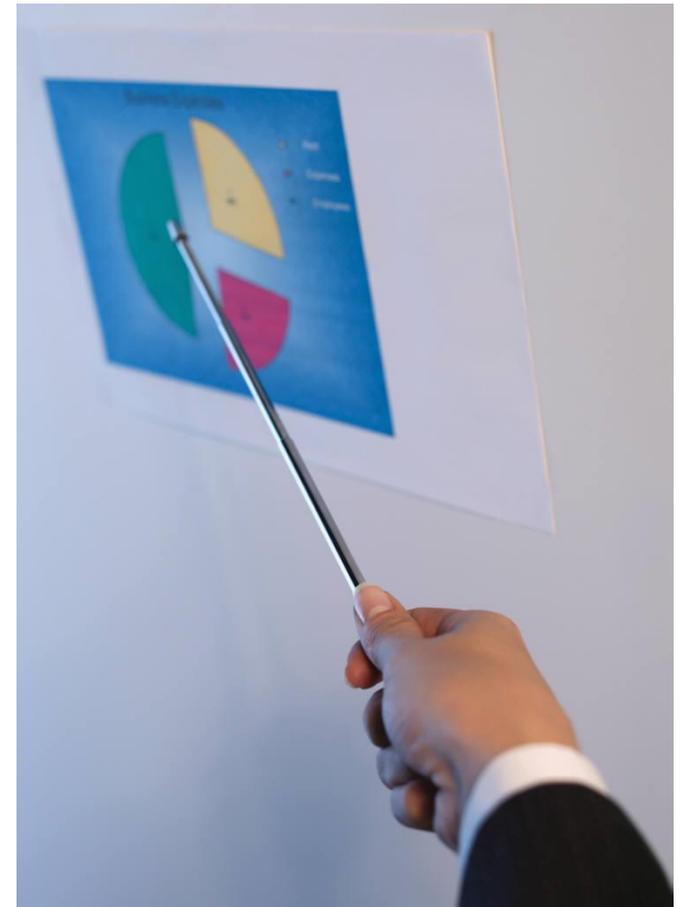
- Equitable allocation of the revenue requirement
- Develop average unit costs for rate design (pricing)

Summary of Cost to Provide Service (\$millions)

	Revenues at Present Rates	Cost of Service Results	\$ Difference	% Difference
Single Family	\$23,649	\$29,205	(\$5,557)	23.5%
Multi-Family	3,751	4,713	(961)	25.6%
Non Residential	4,411	5,870	(1,459)	33.1%
Irrigation	2,472	3,408	(936)	37.9%
<i>Total</i>	\$34,283	\$43,196	(\$8,914)	26.0%

Cost of Service – Summary

- Results are used to develop rate designs for each class of service
- Provides the cost basis for the fixed and consumption charge for each customer class of service



Rate Design Analysis

Overview of the Current Water Rates

- Current rate structure
 - Fixed meter charge by meter size
 - Consumption charge on a per unit basis
 - 1 unit = 748 gallons
- All customers are charged the same rate

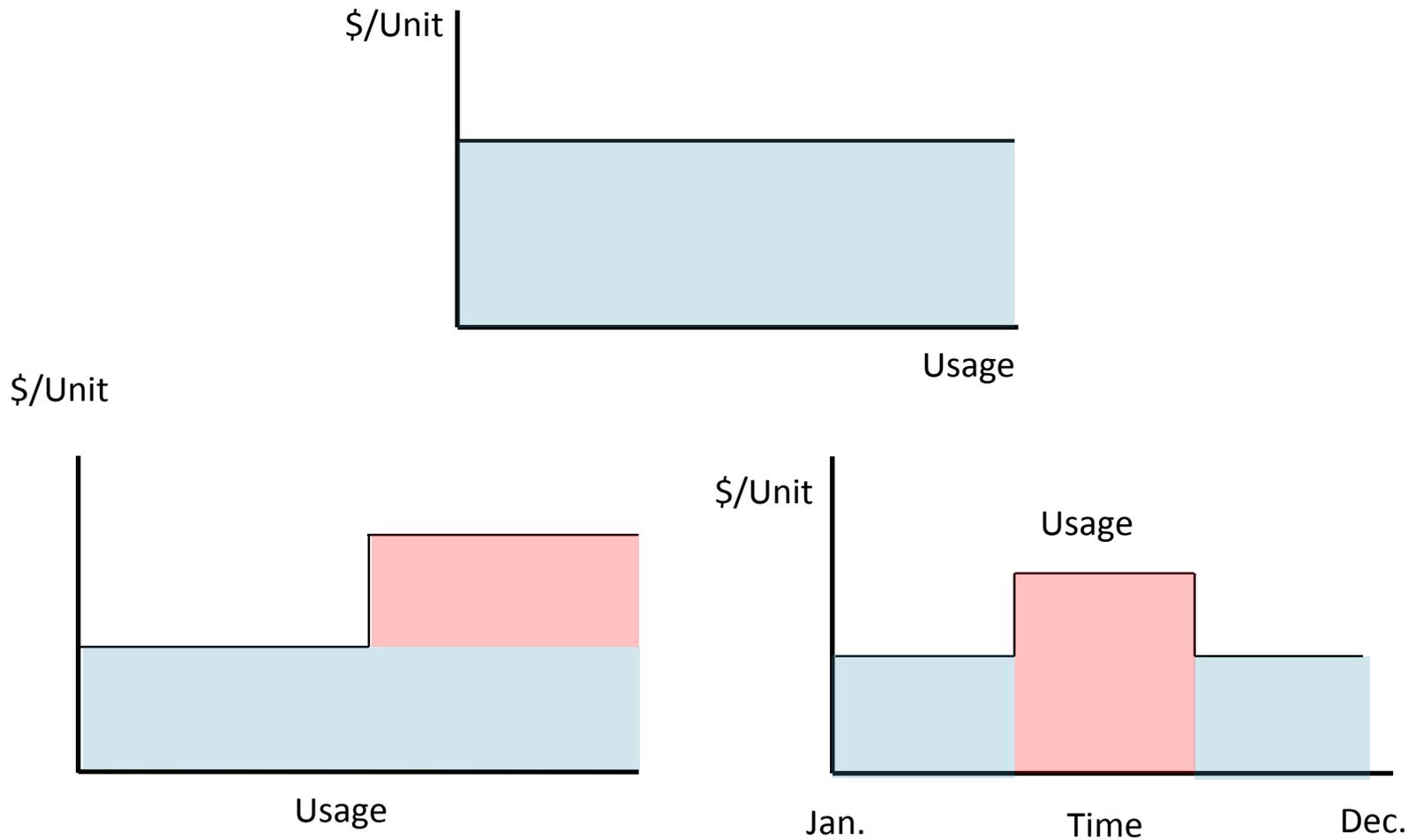
<u>Fixed Charge</u>	<u>\$/Month</u>
5/8"	\$18.94
3/4"	22.25
1"	29.24
1 1/2"	42.17
2"	54.49
3"	96.36
4"	138.53
6"	228.20
8"	330.87
10"	412.91
12"	581.32
<u>Consumption Charge</u>	<u>\$/Unit*</u>
All Usage	\$1.67
*1 Unit = 748 gallons	

Rate Design Key Objectives

- Design rates to collect the appropriate level of revenues
- Move towards a more conservation oriented rate structure
- Balance changes to minimize customer bill impacts



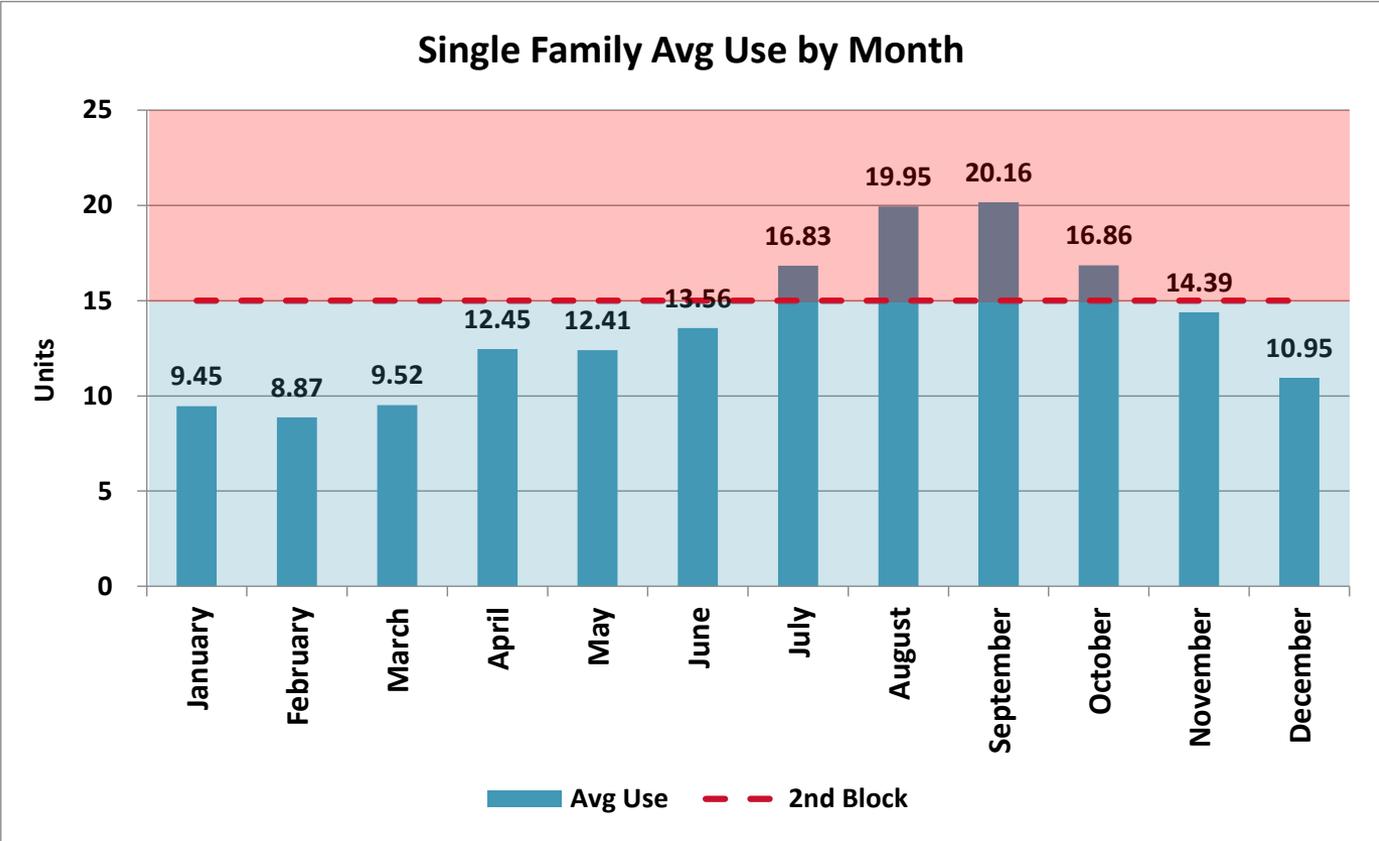
Conservation Oriented Consumption Charges



Rate Design Assumptions

- Cost basis for the rates is the cost of service analysis
- Meter (fixed) charge is the same regardless of customer type
- Consolidating all 1-inch and less customers into a single monthly fixed charge
- Consumption projection based on the “new normal”
- Residential customer:
 - Recommend a 2-tier rate structure for single family
- All other customers:
 - Seasonal rate structure that varies by customer class
- Developed proposed rates for a 5-year period
 - Based on the rate transition plan

Review of Residential Consumption Patterns

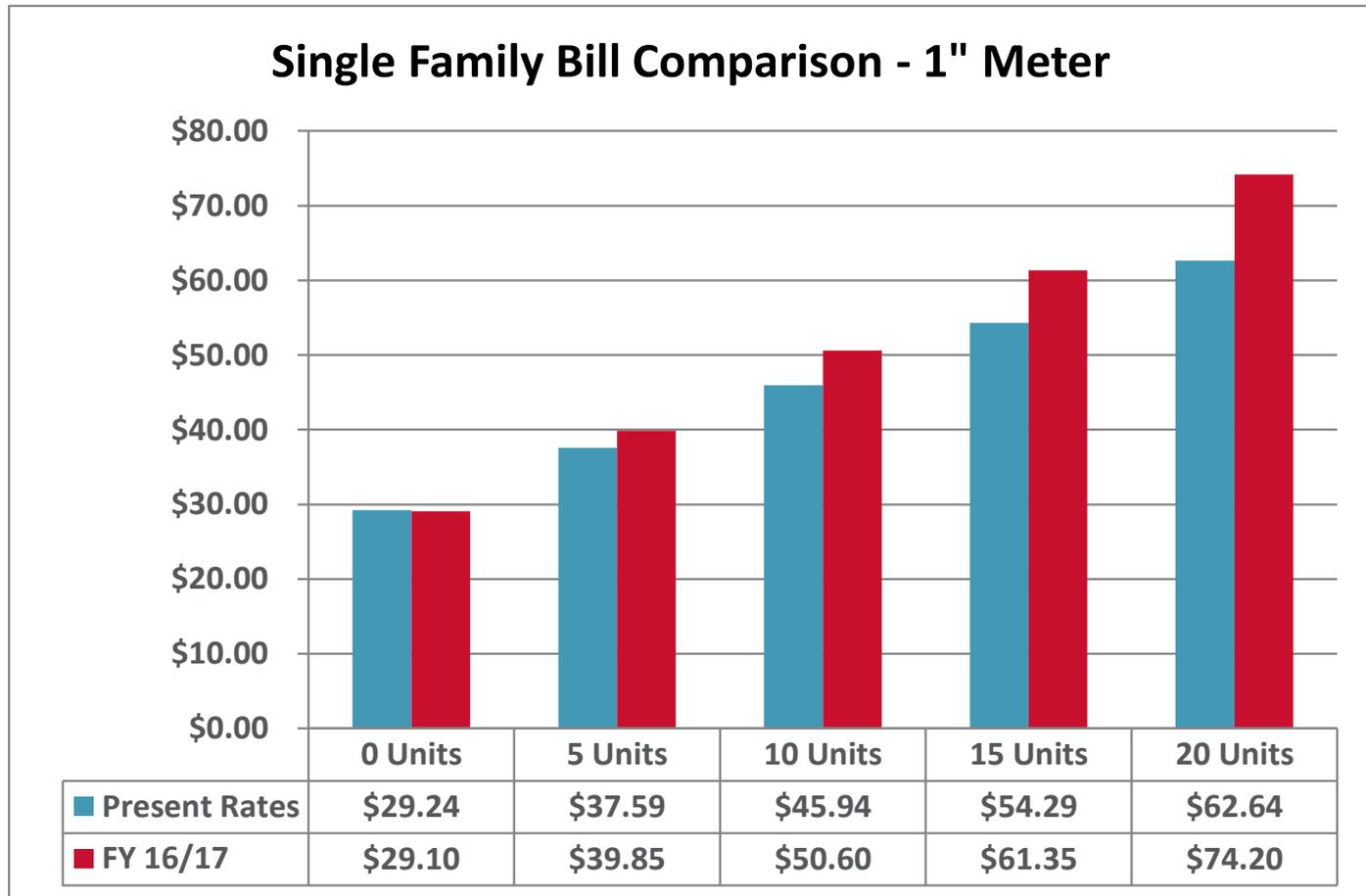


Proposed Residential Rate Schedule

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>
<u>Fixed Charge - \$/Month</u>					
1" & less	\$29.10	\$30.72	\$31.65	\$32.65	\$33.65
1 1/2"	58.20	61.44	63.30	65.30	67.30
2"	93.12	98.30	101.28	104.48	107.68
3"	174.60	184.32	189.90	195.90	201.90
4"	291.00	307.20	316.50	326.50	336.50
6"	582.00	614.40	633.00	653.00	673.00
8"	931.20	983.04	1,012.80	1,044.80	1,076.80
10"	1,338.60	1,413.12	1,455.90	1,501.90	1,547.90
12"	1,964.25	2,073.60	2,136.38	2,203.88	2,271.38
<u>Consumption Charge - \$/Unit</u>					
0 - 15 Units	\$2.15	\$2.27	\$2.34	\$2.41	\$2.48
15 + Units	2.57	2.71	2.80	2.88	2.96
Note: 1 Unit = 748 gallons					

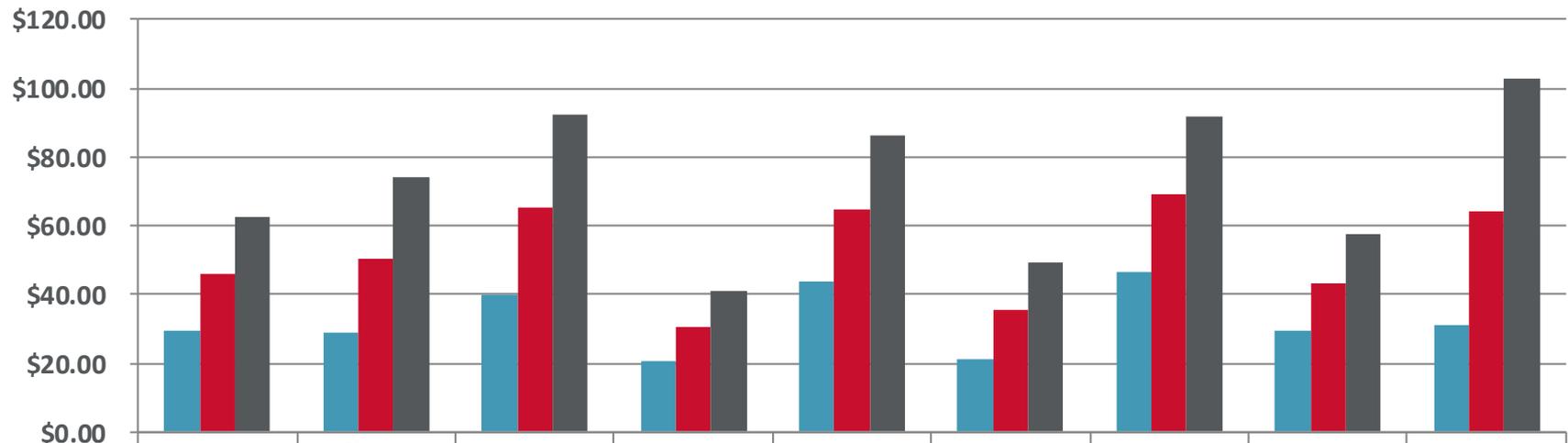
Bill Comparison – FY 16/17

Single Family - 1" Meter



FY 16/17 Local Bill Comparison – Single Family

Single Family Monthly Bill Impacts - Local Comparison



	City of Stockton - Present (1'')	City of Stockton - Proposed (1'' & less)	Cal Water - Stockton (1'')*	City of Tracy (1'')	City of Pleasanton* (1'')	City of Modesto (1'')	City of Lathrop (1'')	City of Manteca (1'')	City of Brentwood (1'')
@ 0 Units	\$29.24	\$29.10	\$40.24	\$20.40	\$44.04	\$21.33	\$46.75	\$29.25	\$31.27
@ 10 Units	\$45.94	\$50.60	\$65.27	\$30.40	\$65.04	\$35.33	\$69.15	\$43.55	\$63.97
@ 20 Units	\$62.64	\$74.20	\$92.16	\$41.30	\$86.04	\$49.33	\$91.55	\$57.85	\$102.87

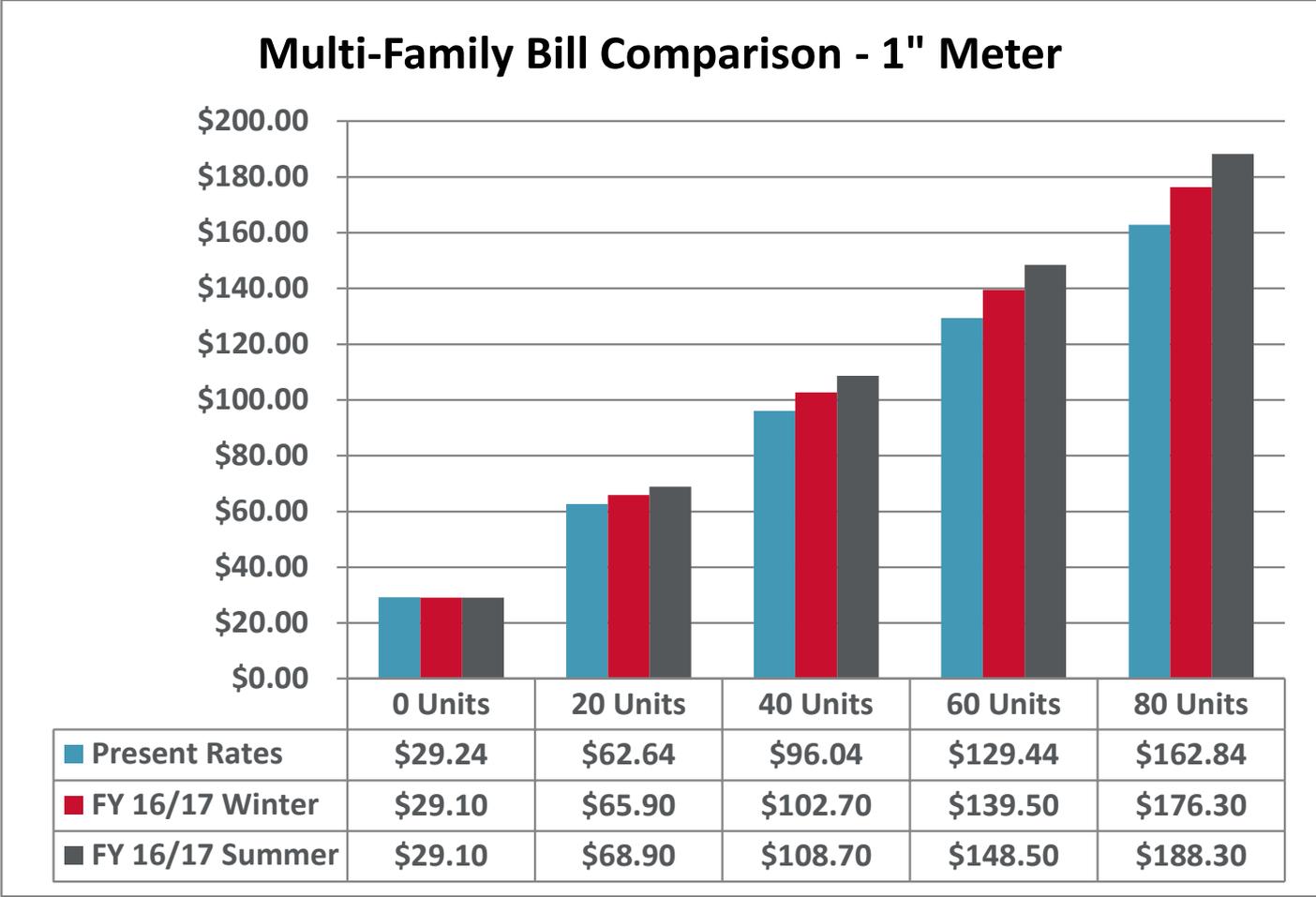
* - Rate increase planned for 2016 - 2020 time frame
All Consumption rates are for the summer if a seasonal rate exists

Proposed Multi-Family Rate Schedule

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>
<u>Fixed Charge - \$/Month</u>					
1" & less	29.10	30.72	31.65	32.65	33.65
1 1/2"	58.20	61.44	63.30	65.30	67.30
2"	93.12	98.30	101.28	104.48	107.68
3"	174.60	184.32	189.90	195.90	201.90
4"	291.00	307.20	316.50	326.50	336.50
6"	582.00	614.40	633.00	653.00	673.00
8"	931.20	983.04	1,012.80	1,044.80	1,076.80
10"	1,338.60	1,413.12	1,455.90	1,501.90	1,547.90
12"	1,964.25	2,073.60	2,136.38	2,203.88	2,271.38
<u>Consumption Charge - \$/Unit</u>					
Winter (Oct - Apr)	\$1.84	\$1.94	\$2.00	\$2.06	\$2.12
Summer (May - Sept)	1.99	2.10	2.16	2.23	2.29
Note: 1 Unit = 748 gallons					

Bill Comparison – FY 16/17

Multi-Family – 1" Meter

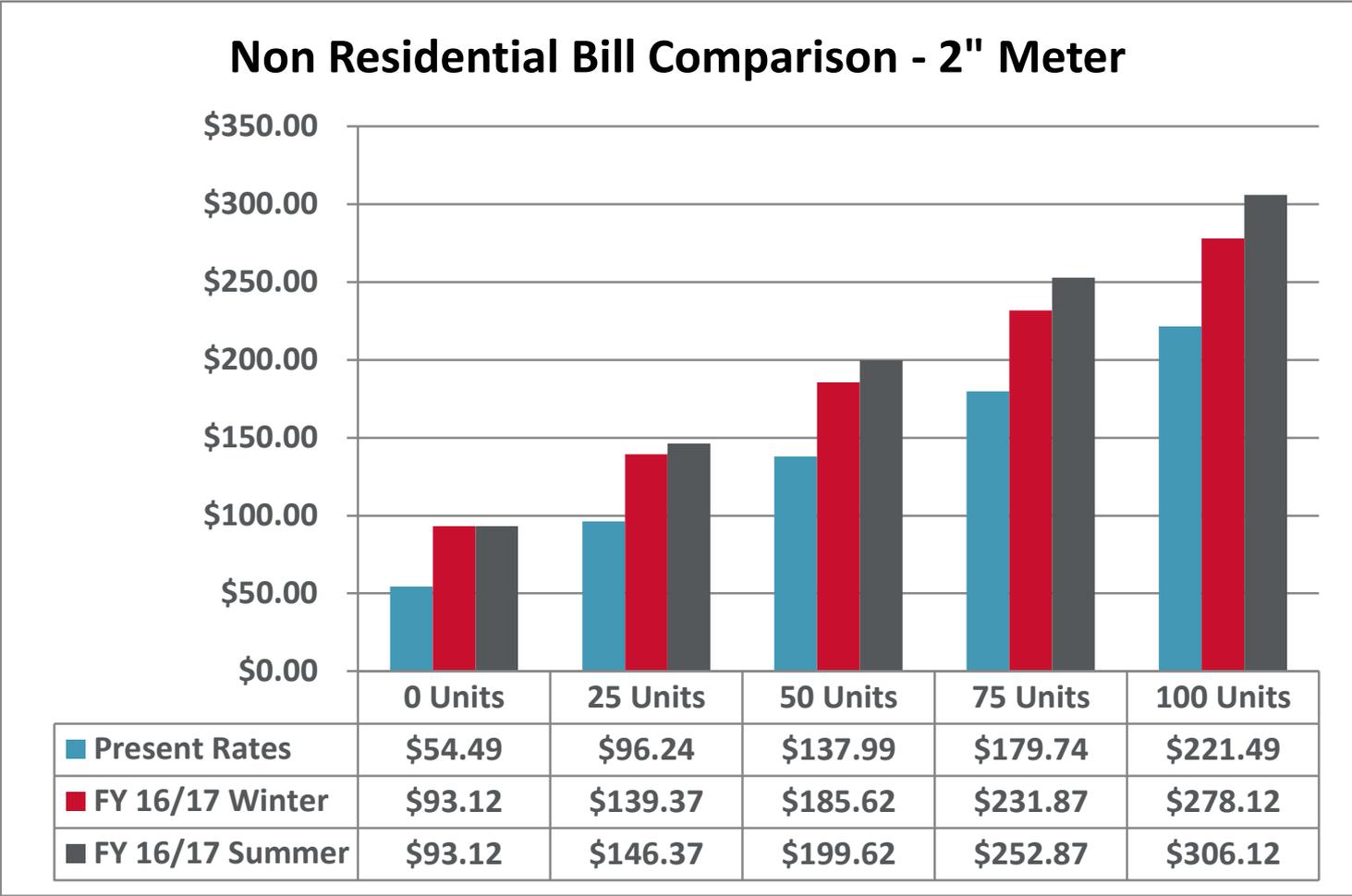


Proposed Non-Residential Rate Schedule

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>
<u>Fixed Charge - \$/Month</u>					
1" & less	\$29.10	\$30.72	\$31.65	\$32.65	\$33.65
1 1/2"	58.20	61.44	63.30	65.30	67.30
2"	93.12	98.30	101.28	104.48	107.68
3"	174.60	184.32	189.90	195.90	201.90
4"	291.00	307.20	316.50	326.50	336.50
6"	582.00	614.40	633.00	653.00	673.00
8"	931.20	983.04	1,012.80	1,044.80	1,076.80
10"	1,338.60	1,413.12	1,455.90	1,501.90	1,547.90
12"	1,964.25	2,073.60	2,136.38	2,203.88	2,271.38
<u>Consumption Charge - \$/Unit</u>					
Winter (Oct - Apr)	\$1.85	\$1.95	\$2.01	\$2.07	\$2.13
Summer (May - Sept)	2.13	2.25	2.31	2.38	2.45
Note: 1 Unit = 748 gallons					

Bill Comparison – FY 16/17

Non Residential - 2" Meter

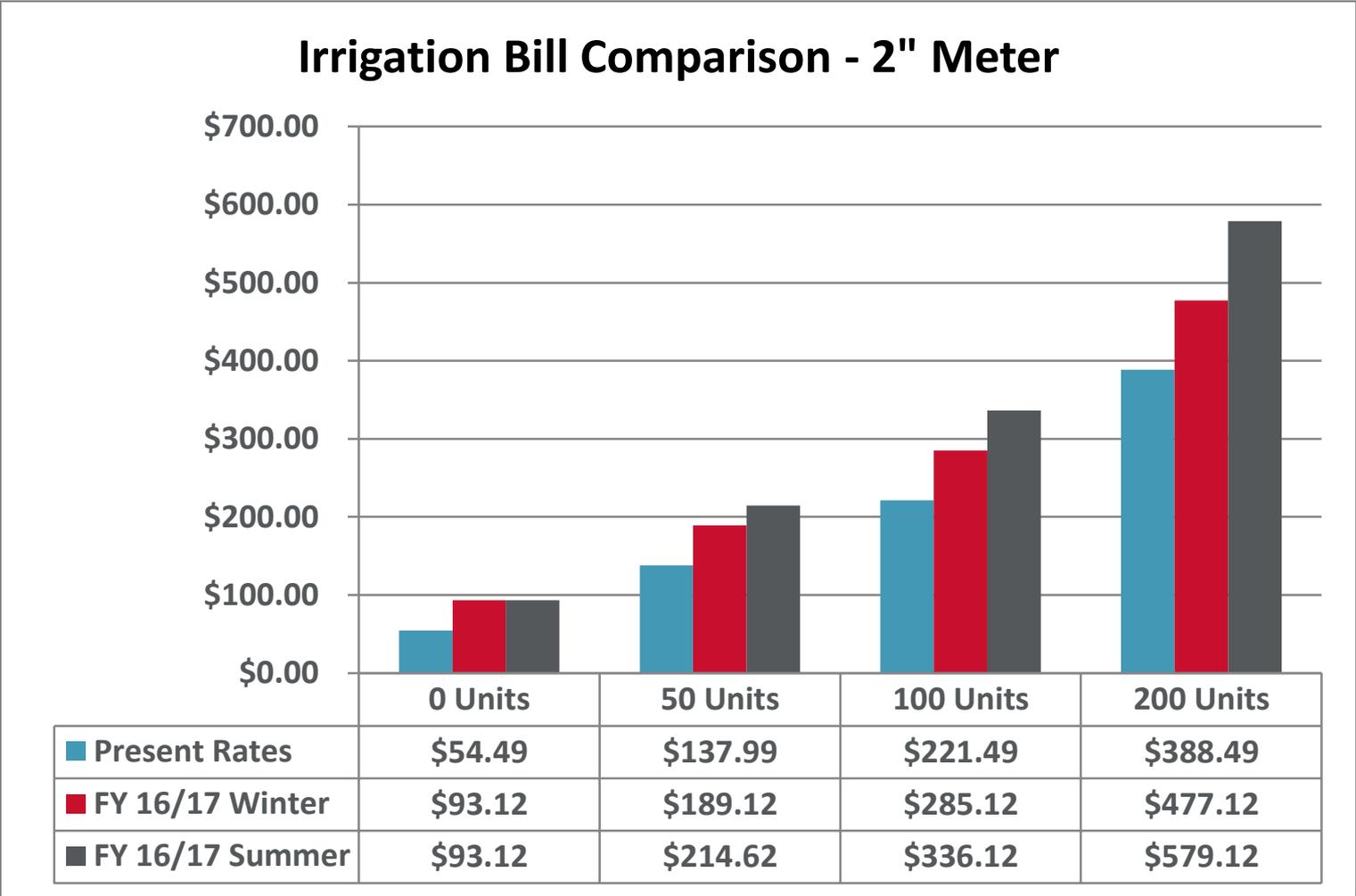


Proposed Irrigation Rate Schedule

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>
<u>Fixed Charge - \$/Month</u>					
1" & less	\$29.10	\$30.72	\$31.65	\$32.65	\$33.65
1 1/2"	58.20	61.44	63.30	65.30	67.30
2"	93.12	98.30	101.28	104.48	107.68
3"	174.60	184.32	189.90	195.90	201.90
4"	291.00	307.20	316.50	326.50	336.50
6"	582.00	614.40	633.00	653.00	673.00
8"	931.20	983.04	1,012.80	1,044.80	1,076.80
10"	1,338.60	1,413.12	1,455.90	1,501.90	1,547.90
12"	1,964.25	2,073.60	2,136.38	2,203.88	2,271.38
<u>Consumption Charge - \$/Unit</u>					
Winter (Oct - Apr)	\$1.92	\$2.03	\$2.09	\$2.15	\$2.21
Summer (May - Sept)	2.43	2.57	2.65	2.72	2.80
Note: 1 Unit = 748 gallons					

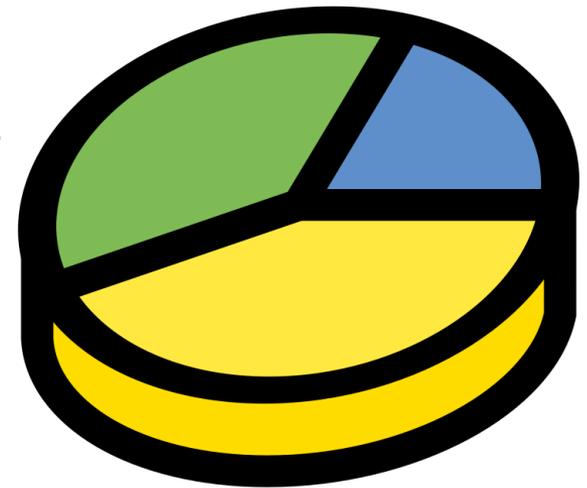
Bill Comparison – FY 16/17

Irrigation - 2" Meter



Summary of the Rate Designs

- Proposed rates are based on the results of the cost of service analysis
 - Proportional allocation of costs
- Proposed rate structure is more conservation oriented
- Proposed rates provide the funding necessary to meet the utility's financial obligations



Drought Surcharges

Drought Surcharges

- Purpose: Maintain sufficient revenues during times of voluntary or mandatory reductions in consumption
- Five stages of conservation savings (Council directed by municipal code)
 - Stage 1 = reduction up to 10%
 - Stage 2 = reduction of 10% to 20%
 - Stage 3 = reduction of 20% to 30%
 - Stage 4 = reduction of 30% to 40%
 - Stage 5 = reduction of 40% to 50%
- Surcharges are in addition to the proposed rates
- Customers that conserve in accordance with the target should have minimal bill impacts
 - Monthly bill will remain similar to pre-conservation levels

Drought Surcharges

<i>Targeted Savings</i>	Stage 1 10.0%	Stage 2 20.0%	Stage 3 30.0%	Stage 4 40.0%	Stage 5 50.0%
Single Family (\$/Unit)					
0 - 15 Units	\$0.25	\$0.56	\$0.97	\$1.51	\$2.26
15 + Units	0.25	0.56	0.97	1.51	2.26
Multi-Family (\$/Unit)					
Winter (Oct - Apr)	\$0.21	\$0.48	\$0.82	\$1.27	\$1.91
Summer (May - Sept)	0.21	0.48	0.82	1.27	1.91
Non Residential (\$/Unit)					
Winter (Oct - Apr)	\$0.22	\$0.50	\$0.86	\$1.34	\$2.00
Summer (May - Sept)	0.22	0.50	0.86	1.34	2.00
Irrigation (\$/Unit)					
Winter (Oct - Apr)	\$0.25	\$0.57	\$0.97	\$1.52	\$2.27
Summer (May - Sept)	0.25	0.57	0.97	1.52	2.27

Drought Rates – Proposed FY 16/17

(Proposed rates plus drought surcharges)

<i>Targeted Savings</i>	<i>Proposed FY 2017 Rates</i>	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
	<i>\$/Unit</i>	<i>10.0%</i>	<i>20.0%</i>	<i>30.0%</i>	<i>40.0%</i>	<i>50.0%</i>
Single Family						
0 - 15 Units	\$2.15	\$2.40	\$2.71	\$3.12	\$3.66	\$4.41
15 + Units	2.57	2.82	3.13	3.54	4.08	4.83
Multi-Family						
Winter (Oct - Apr)	\$1.84	\$2.05	\$2.32	\$2.66	\$3.11	\$3.75
Summer (May - Sept)	1.99	2.20	2.47	2.81	3.26	3.90
Non Residential						
Winter (Oct - Apr)	\$1.85	\$2.07	\$2.35	\$2.71	\$3.19	\$3.85
Summer (May - Sept)	2.13	2.35	2.63	2.99	3.47	4.13
Irrigation						
Winter (Oct - Apr)	\$1.92	\$2.17	\$2.49	\$2.89	\$3.44	\$4.19
Summer (May - Sept)	2.43	2.68	3.00	3.40	3.95	4.70

Example Drought Surcharge Bill Comparison

Total Monthly 1" or less Meter Bill - Proposed Single Family Rates

	Normal Water Conditions	Mandatory Conservation Stage 1	Mandatory Conservation Stage 2	Mandatory Conservation Stage 3	Mandatory Conservation Stage 4	Mandatory Conservation Stage 5
<i>Target Reduction Goal</i>	0%	10%	20%	30%	40%	50%
Residential Customer Using 15 Units						
Assuming No Change in Use (15 Units)	\$61.35	\$65.12	\$69.82	\$75.88	\$83.94	\$95.24
Assuming Reduced Usage - Revised Usage - Units	15.0	14.0	12.0	11.0	9.0	8.0
Total Monthly Bill	\$61.35	\$62.72	\$61.68	\$63.40	\$62.01	\$64.38
Residential Customer Using 30 Units						
Assuming No Change in Use (30 Units)	\$99.90	\$107.43	\$116.85	\$128.95	\$145.09	\$161.39
Assuming Reduced Usage - Revised Usage - Units	30.0	27.0	24.0	21.0	18.0	15.0
Total Monthly Bill	\$99.90	\$98.97	\$98.04	\$97.11	\$96.17	\$95.24
Residential Customer Using 45 Units						
Assuming No Change in Use (45 Units)	\$138.45	\$149.75	\$163.87	\$182.03	\$206.23	\$227.53
Assuming Reduced Usage - Revised Usage - Units	45.0	41.0	36.0	32.0	27.0	23.0
Total Monthly Bill	\$138.45	\$138.47	\$135.66	\$136.03	\$132.86	\$130.52

Summary of the Drought Surcharges

- Schedule of drought surcharges are adopted as part of the 5-year rate proposal
- Drought surcharges will be necessary starting in FY 16/17
 - Level will depend on current water consumption levels and State mandated reduction targets
- City Council declares drought stages, approves and implements, and removes the drought surcharges
- Drought surcharges adjust as rates are adjusted annually based on the maximum noticed rates

Rate Study Summary and Public Input

Summary of the Water Rate Study

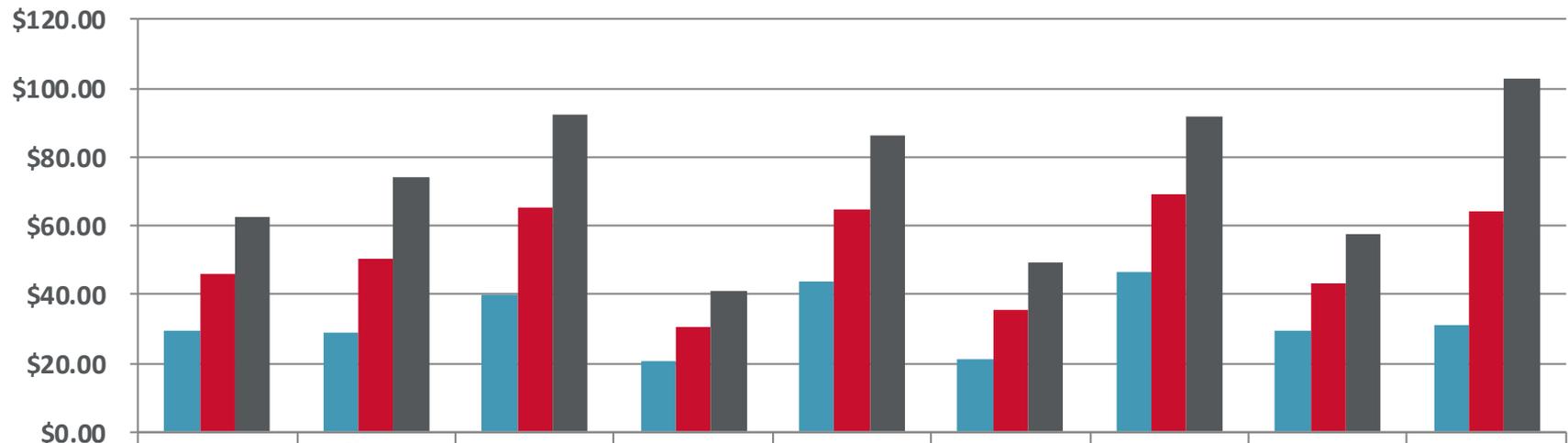
- Revenue adjustments are necessary
 - Need to meet legally required debt service coverage ratios
- Proposed rates are cost-based
- Drought surcharges have been proposed
- Both the proposed rate adjustment and drought surcharges are necessary to meet FY 16/17 debt service coverage ratios

Public Input Opportunities

- City Council meeting on March 29, 2016
 - Receive direction to begin Proposition 218 process and set the public hearing date
- Issue customer notification letter
 - 45 day notification period
- Hold public hearing on May 24, 2016
- Proposed rates and drought surcharges would be effective July 1, 2016 if approved by the City Council

FY 16/17 Local Bill Comparison – Single Family

Single Family Monthly Bill Impacts - Local Comparison



	City of Stockton - Present (1'')	City of Stockton - Proposed (1'' & less)	Cal Water - Stockton (1'')*	City of Tracy (1'')	City of Pleasanton* (1'')	City of Modesto (1'')	City of Lathrop (1'')	City of Manteca (1'')	City of Brentwood (1'')
@ 0 Units	\$29.24	\$29.10	\$40.24	\$20.40	\$44.04	\$21.33	\$46.75	\$29.25	\$31.27
@ 10 Units	\$45.94	\$50.60	\$65.27	\$30.40	\$65.04	\$35.33	\$69.15	\$43.55	\$63.97
@ 20 Units	\$62.64	\$74.20	\$92.16	\$41.30	\$86.04	\$49.33	\$91.55	\$57.85	\$102.87

* - Rate increase planned for 2016 - 2020 time frame
All Consumption rates are for the summer if a seasonal rate exists

Stockton North

Stockton South

Cal Water

Stockton Walnut Plant

Legend

- City of Stockton
- San Joaquin County
- County served by City
- Stockton East Water District
- California Water Service

Water Service Areas



Summary Bill Comparison

Comparison of Residential Monthly Water Bills at 20 units*

Tracy	\$41.30
Modesto	\$49.33
Manteca	\$57.85
Stockton (Current)	\$62.64
10 units	\$45.94
Stockton (Fiscal Year 2016-2017)	\$74.23
10 units	\$50.62
Pleasanton	\$86.04
Lathrop	\$91.55
Cal Water - Stockton	\$92.16
Brentwood	\$102.87

*1 unit = 748 gallons