

# South Tahoe PUD

Board Workshop

Water Rate Study  
Update

December 19, 2013



***Presented by:***

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*Associate Vice President*

# Objectives of the Review

- Provide an independent review of the long-term financial plan for the water utility
- Review impacts of various alternative capital plans
  - Timing of key improvements
  - Implementation of the metering plan/meters
- Developed a 5-year rate transition plan to meet the operating and capital needs
  - For each alternative
- Develop rates for the rate transition plan alternatives

# Overview of the Analysis

- Developed a 10-year financial plan
- The starting point was the 2014/2015 budget
  - Revenues and expenses were projected based on recent trends (e.g., growth, inflation)
- Independently calculated rate revenues
  - Based on recent metered water data and customer counts
- Developed 3 capital alternatives
  - Delayed A – Accelerated line replacement plus metering
  - Delayed B – Current 10 year plan plus metering
  - Delayed C – Reduced line replacement plus metering
- Assumes additional long-term debt
  - 0% for 20 years, and 5.5% for 20 years

# Summary of the Analysis (Delayed B)

	Revenue Requirement (in thousands)					
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
<b>Sources of Funds</b>						
Rate Revenues	\$9,281	\$9,304	\$9,328	\$9,351	\$9,374	\$9,398
Other Revenues	592	676	618	655	656	675
<b>Total Source of Funds</b>	<b>\$9,873</b>	<b>\$9,981</b>	<b>\$9,946</b>	<b>\$10,006</b>	<b>\$10,030</b>	<b>\$10,073</b>
<b>Application of Funds</b>						
Operation & Maintenance Expense	\$7,640	\$7,743	\$7,924	\$8,084	\$8,274	\$8,442
Capital Funded from Rates	1,300	1,450	1,600	1,800	2,400	2,600
Debt Service	1,861	1,298	934	1,390	1,595	1,800
Change in Working Capital +/-	(928)	95	740	677	447	286
<b>Total Revenue Requirement</b>	<b>\$9,873</b>	<b>\$10,586</b>	<b>\$11,198</b>	<b>\$11,951</b>	<b>\$12,716</b>	<b>\$13,128</b>
Balance/(Deficiency) of Funds	\$0	(\$605)	(\$1,252)	(\$1,945)	(\$2,685)	(\$3,055)
Balance as % of Rev from Rates	0.0%	6.5%	13.4%	20.8%	28.6%	32.5%
<b>Proposed Rate Adjustment</b>	<b>0.0%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>3.0%</b>

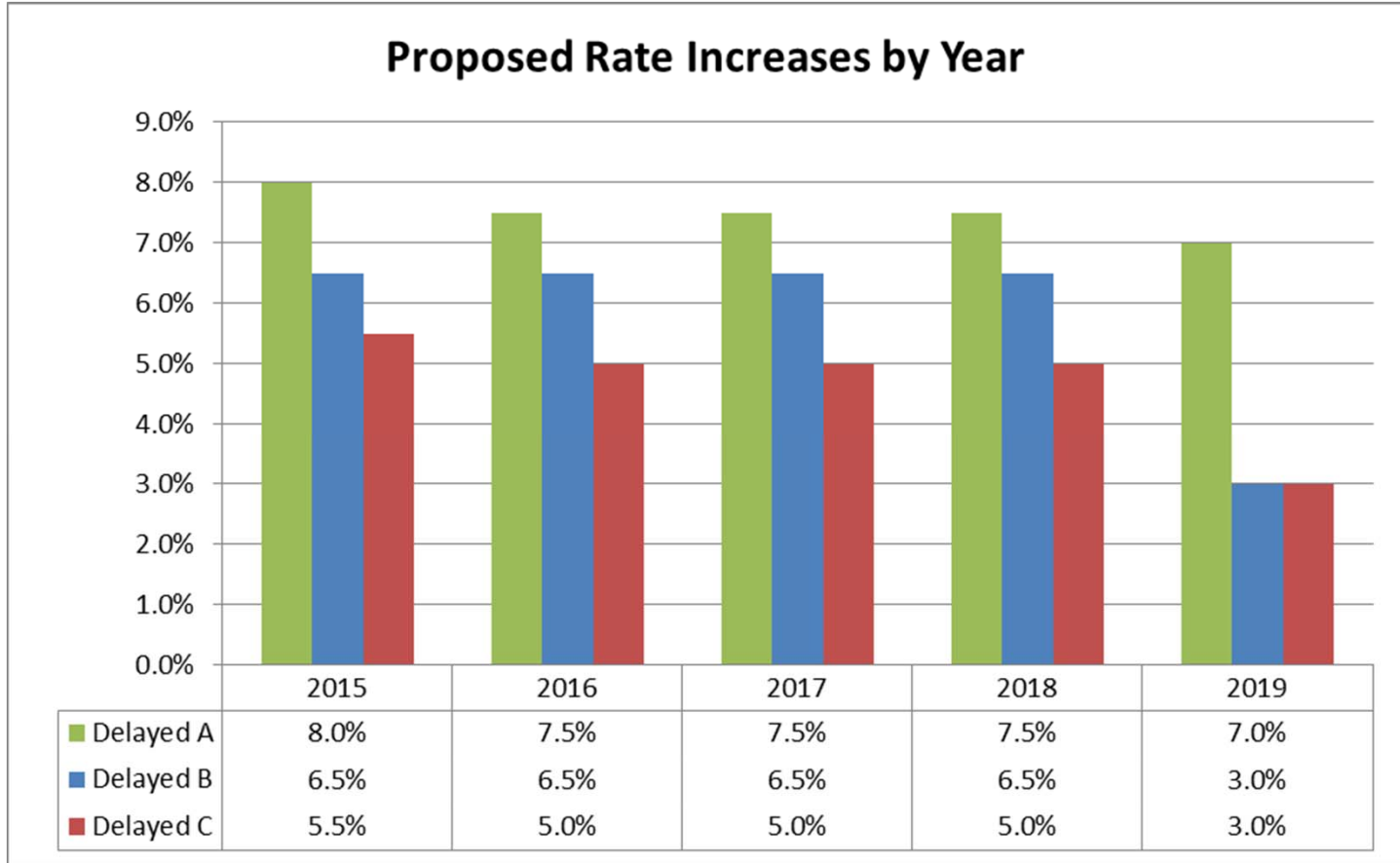
# Capital Funding Alternatives

- Key assumptions
  - Delayed A: 10-year CIP with accelerated waterline replacements
    - Increases the total capital needs over the 10-years as well as the long-term borrowing
  - Delayed B: Capital improvement plan provided in the current 10-year plan.
  - Delayed C: 10-year CIP with reduced waterline replacements.
    - Reduces the total capital needs over the 10-years as well as the long-term borrowing vs. baseline scenario

# Comparison of the Alternatives

- Delayed A:
  - Total CIP = \$54.1 million
  - Total Borrowing = \$27.5 million
  - Resulting cumulative 5-year rate increase = 43.6%
- Delayed B:
  - Total CIP = \$46.0 million
  - Total Borrowing = \$24.5 million
  - Resulting cumulative 5-year rate increase = 32.5%
- Delayed C:
  - Total CIP = \$40.1 million
  - Total Borrowing = \$21.5 million
  - Resulting cumulative 5-year rate increase = 25.8%

# Comparison of the Annual Rate Adjustments



# Conclusions of the Analysis

- Rate adjustments are necessary to fund the District's operating and capital needs over the next 10-year period
  - Focus is on the next 5-year period
- Rate impacts vary depending on the capital plan
  - Level and timing of the plan
  - Long-term debt impacts differences
- Rates have been developed for each scenario



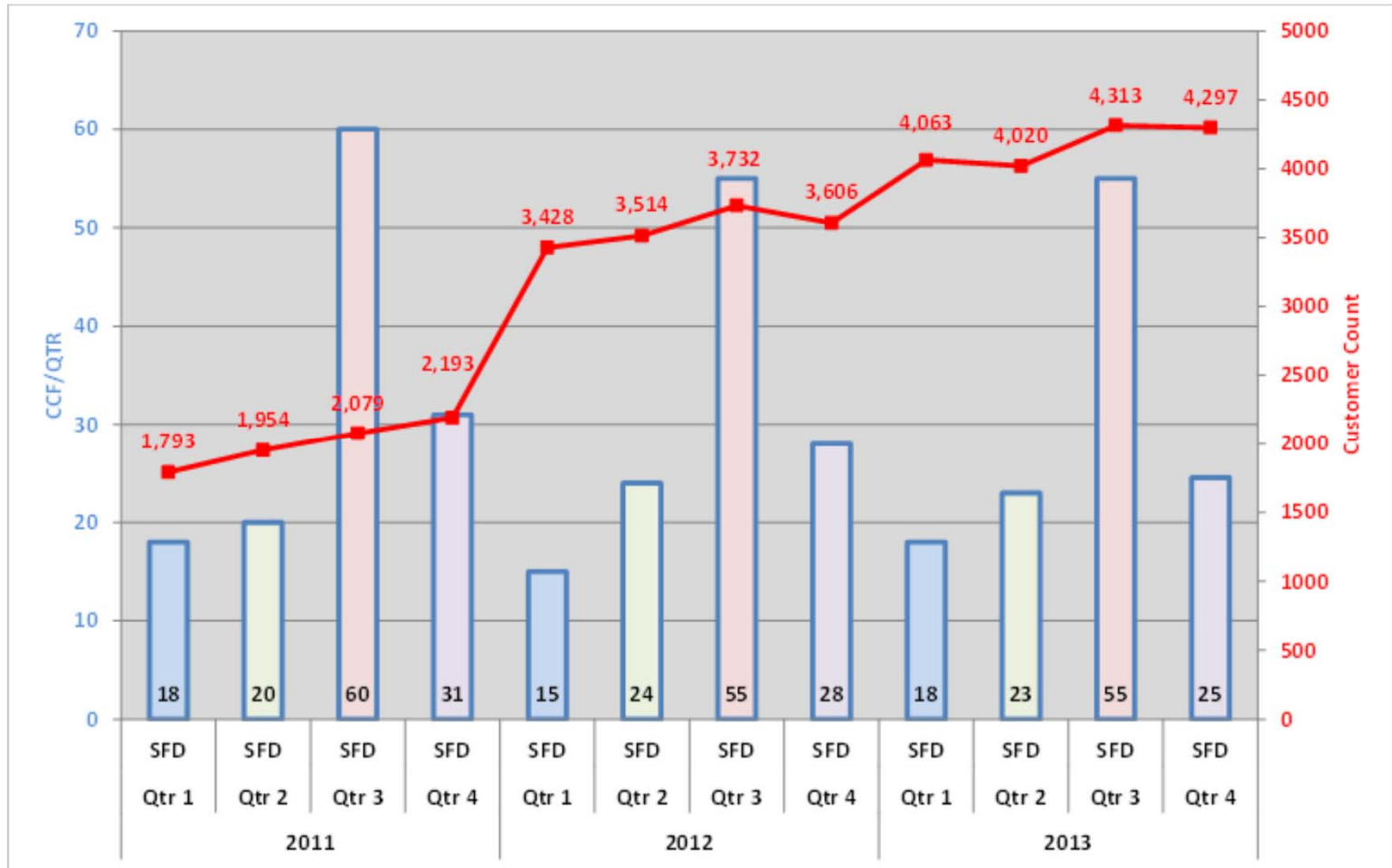
# Key Rate Design Assumptions

- Maintain current rate structure
  - Across the board adjustment
- Transitioning customers to metered rates
  - Price elasticity and impacts to rates
- Bill comparisons show the impact of the level of different rate transition plans
- Flat rate customer bills increased based on the overall rate adjustment
- Timing of proposed rate transition plans
  - Implement over a 5 year period utilizing a multi-year Proposition 218 notice

# Customer Consumption Assumptions

- SFR
  - Average metered customer is a  $\frac{3}{4}$ " meter and consumes about 9 CCF/month on annual average
- MFR
  - Average flat rate customer is in a duplex
  - Average metered customer has a  $\frac{3}{4}$ " meter and the complex uses about 34 CCF/month on annual average
- COM
  - Average metered customer is a 1" meter using about 90 CCF/month on annual average

# Single-Family Metered Consumption Summary



# Present and Proposed Quarterly Single-Family Water Rates (Delayed A)

	Present Rates	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Proposed Annual Adjustments</b>	<b>0.0%</b>	<b>8.0%</b>	<b>7.5%</b>	<b>7.5%</b>	<b>7.5%</b>	<b>7.0%</b>
<b>Bill increase per month</b>		\$3.26 /mo	\$3.30 /mo	\$3.55 /mo	\$3.82 /mo	\$3.83 /mo
<u>Flat Rate</u>						
Single Family Dwelling	\$122.30	\$132.08	\$141.99	\$152.64	\$164.09	\$175.57
Low Income (Discount 20%)	97.84	105.67	113.59	122.11	131.27	140.46
<u>Meter Charge by Size</u>						
3/4"	\$90.00	\$97.20	\$104.49	\$112.33	\$120.75	\$129.20
1"	150.30	162.32	174.50	187.59	201.65	215.77
1 1/2"	299.70	323.68	347.95	374.05	402.10	430.25
2"	479.70	518.08	556.93	598.70	643.60	688.66
Care 3/4"	72.00	77.76	83.59	89.86	96.60	103.36
Care 1"	120.24	129.86	139.60	150.07	161.32	172.62
Care 1 1/2"	239.76	258.94	278.36	299.24	321.68	344.20
<u>Consumption</u>						
Block 1 (1 - 45 CCF)	\$1.25	\$1.35	\$1.45	\$1.56	\$1.68	\$1.79
Block 2 (45 + CCF)	1.88	2.03	2.18	2.35	2.52	2.70

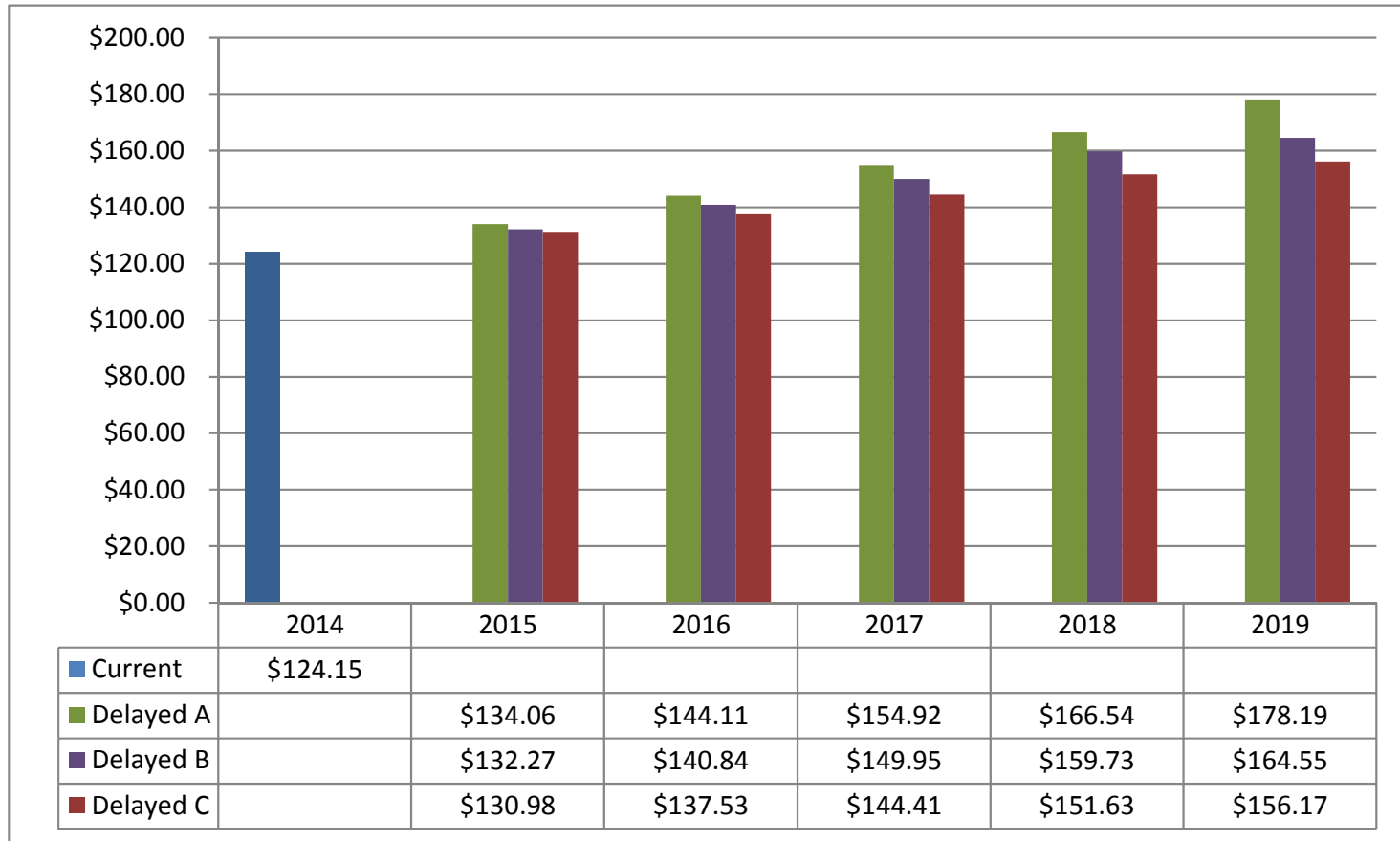
# Present and Proposed Quarterly Single-Family Water Rates (Delayed B)

	Present Rates	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Proposed Annual Adjustments</b>	<b>0.0%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>3.0%</b>
<b>Bill increase per month</b>		\$2.63 /mo	\$2.83 /mo	\$3.00 /mo	\$3.20 /mo	\$1.57 /mo
<u>Flat Rate</u>						
Single Family Dwelling	\$122.30	\$130.20	\$138.70	\$147.70	\$157.30	\$162.00
Low Income (Discount 20%)	97.84	104.20	111.00	118.20	125.90	129.70
<u>Meter Charge by Size</u>						
3/4"	\$90.00	\$95.90	\$102.10	\$108.70	\$115.80	\$119.30
1"	150.30	160.10	170.50	181.60	193.40	199.20
1 1/2"	299.70	319.20	339.90	362.00	385.50	397.10
2"	479.70	510.90	544.10	579.50	617.20	635.70
Care 3/4"	72.00	76.70	81.70	87.00	92.70	95.50
Care 1"	120.24	128.10	136.40	145.30	154.70	159.30
Care 1 1/2"	239.76	255.30	271.90	289.60	308.40	317.70
<u>Consumption</u>						
Block 1 (1 - 45 CCF)	\$1.25	\$1.33	\$1.42	\$1.51	\$1.61	\$1.66
Block 2 (45 + CCF)	1.88	2.00	2.13	2.27	2.42	2.49

# Present and Proposed Quarterly Single-Family Water Rates (Delayed C)

	Present Rates	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Proposed Annual Adjustments</b>	<b>0.0%</b>	<b>5.5%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>3.0%</b>
<b>Bill increase per month</b>		\$2.24 /mo	\$2.15 /mo	\$2.26 /mo	\$2.37 /mo	\$1.49 /mo
<u>Flat Rate</u>						
Single Family Dwelling	\$122.30	\$129.03	\$135.48	\$142.25	\$149.36	\$153.85
Low Income (Discount 20%)	97.84	103.22	108.38	113.80	119.49	123.08
<u>Meter Charge by Size</u>						
3/4"	\$90.00	\$94.95	\$99.70	\$104.68	\$109.92	\$113.21
1"	150.30	158.57	166.49	174.82	183.56	189.07
1 1/2"	299.70	316.18	331.99	348.59	366.02	377.00
2"	479.70	506.08	531.39	557.96	585.85	603.43
Care 3/4"	72.00	75.96	79.76	83.75	87.93	90.57
Care 1"	120.24	126.85	133.20	139.86	146.85	151.25
Care 1 1/2"	239.76	252.95	265.59	278.87	292.82	301.60
<u>Consumption</u>						
Block 1 (1 - 45 CCF)	\$1.25	\$1.32	\$1.38	\$1.45	\$1.53	\$1.57
Block 2 (45 + CCF)	1.88	1.98	2.08	2.19	2.30	2.36

# Average Single Family Customer Quarterly Bill Impacts (all alternatives)



# Present and Proposed Quarterly Multi-Family Water Rates (Delayed A)

	Present Rates	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Proposed Annual Adjustments</b>	<b>0.0%</b>	<b>8.0%</b>	<b>7.5%</b>	<b>7.5%</b>	<b>7.5%</b>	<b>7.0%</b>
<b>Bill increase per month</b>		\$5.80 /mo	\$5.87 /mo	\$6.31 /mo	\$6.78 /mo	\$6.81 /mo
<u>Flat Rate</u>						
Duplex	\$217.42	\$234.81	\$252.42	\$271.36	\$291.71	\$312.13
Triplex	295.39	319.02	342.95	368.67	396.32	424.06
Four-Plex and Above Base Charge	64.12	69.25	74.44	80.03	86.03	92.05
Multi-Family Unit Charge	382.12	412.69	443.64	476.91	512.68	548.57
<u>Meter Charge by Size</u>						
3/4"	\$90.00	\$97.20	\$104.49	\$112.33	\$120.75	\$129.20
1"	150.30	162.32	174.50	187.59	201.65	215.77
1 1/2"	299.70	323.68	347.95	374.05	402.10	430.25
2"	479.70	518.08	556.93	598.70	643.60	688.66
3"	900.00	972.00	1,044.90	1,123.27	1,207.51	1,292.04
4"	1,500.30	1,620.32	1,741.85	1,872.49	2,012.92	2,153.83
<u>Consumption</u>						
Consumption (CCF)	\$1.45	\$1.57	\$1.68	\$1.81	\$1.95	\$2.08



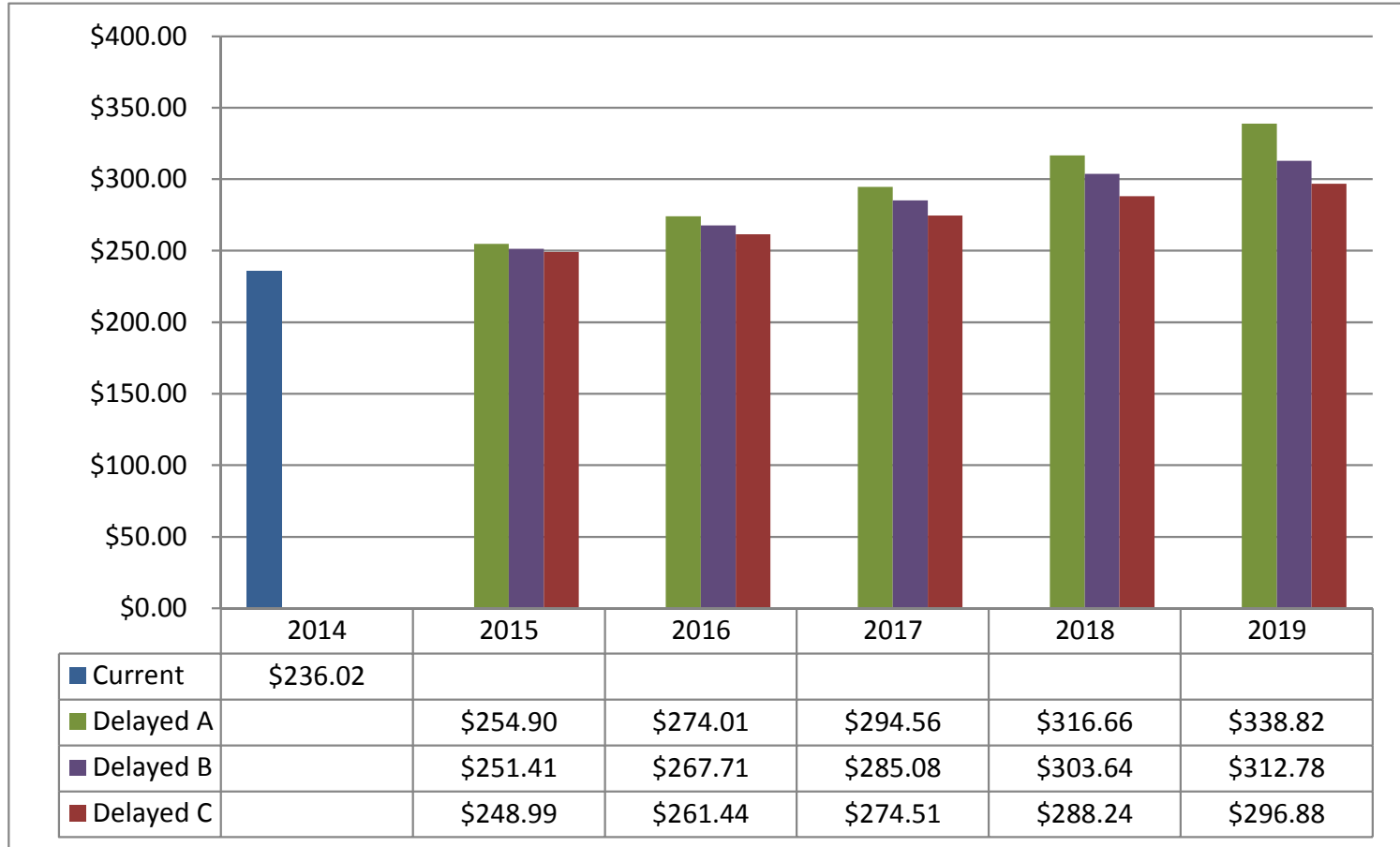
# Present and Proposed Quarterly Multi-Family Water Rates (Delayed B)

	<b>Present Rates</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Proposed Annual Adjustments</b>	<b>0.0%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>3.0%</b>
<b>Bill increase per month</b>		\$4.73 /mo	\$5.03 /mo	\$5.33 /mo	\$5.70 /mo	\$2.80 /mo
<b>Flat Rate</b>						
Duplex	\$217.42	\$231.60	\$246.70	\$262.70	\$279.80	\$288.20
Triplex	295.39	314.60	335.00	356.80	380.00	391.40
Four-Plex and Above Base Charge	64.12	68.30	72.70	77.40	82.40	84.90
Multi-Family Unit Charge	382.12	407.00	433.50	461.70	491.70	506.50
<b>Meter Charge by Size</b>						
3/4"	\$90.00	\$95.90	\$102.10	\$108.70	\$115.80	\$119.30
1"	150.30	160.10	170.50	181.60	193.40	199.20
1 1/2"	299.70	319.20	339.90	362.00	385.50	397.10
2"	479.70	510.90	544.10	579.50	617.20	635.70
3"	900.00	958.50	1,020.80	1,087.20	1,157.90	1,192.60
4"	1,500.30	1,597.80	1,701.70	1,812.30	1,930.10	1,988.00
<b>Consumption</b>						
Consumption (CCF)	\$1.45	\$1.54	\$1.64	\$1.75	\$1.87	\$1.92

# Present and Proposed Quarterly Multi-Family Water Rates (Delayed C)

	Present Rates	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Proposed Annual Adjustments</b>	<b>0.0%</b>	<b>5.5%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>3.0%</b>
<b>Bill increase per month</b>		\$3.99 /mo	\$3.82 /mo	\$4.01 /mo	\$4.21 /mo	\$2.66 /mo
<u>Flat Rate</u>						
Duplex	\$217.42	\$229.38	\$240.85	\$252.89	\$265.53	\$273.50
Triplex	295.39	311.64	327.22	343.58	360.76	371.58
Four-Plex and Above Base Charge	64.12	67.65	71.03	74.58	78.31	80.66
Multi-Family Unit Charge	382.12	403.14	423.29	444.46	466.68	480.68
<u>Meter Charge by Size</u>						
3/4"	\$90.00	\$94.95	\$99.70	\$104.68	\$109.92	\$113.21
1"	150.30	158.57	166.49	174.82	183.56	189.07
1 1/2"	299.70	316.18	331.99	348.59	366.02	377.00
2"	479.70	506.08	531.39	557.96	585.85	603.43
3"	900.00	949.50	996.98	1,046.82	1,099.16	1,132.14
4"	1,500.30	1,582.82	1,661.96	1,745.06	1,832.31	1,887.28
<u>Consumption</u>						
Consumption (CCF)	\$1.45	\$1.53	\$1.61	\$1.69	\$1.77	\$1.82

# Average Multi-Family Customer Quarterly Bill Impacts (all alternatives)



# Present and Proposed Quarterly Commercial Water Rates (Delayed A)

	Present Rates	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Proposed Annual Adjustments</b>	<b>0.0%</b>	<b>8.0%</b>	<b>7.5%</b>	<b>7.5%</b>	<b>7.5%</b>	<b>7.0%</b>
<b>Bill increase per month</b>		\$4.96 /mo	\$5.02 /mo	\$5.40 /mo	\$5.81 /mo	\$5.83 /mo
<u>Flat Rate</u>						
3/4" Business Flat	\$186.08	\$200.97	\$216.04	\$232.24	\$249.66	\$267.14
1" Business Flat	280.81	303.27	326.02	350.47	376.76	403.13
<u>Meter Charge by Size</u>						
3/4"	\$90.00	\$97.20	\$104.49	\$112.33	\$120.75	\$129.20
1"	150.30	162.32	174.50	187.59	201.65	215.77
1 1/2"	299.70	323.68	347.95	374.05	402.10	430.25
2"	479.70	518.08	556.93	598.70	643.60	688.66
3"	900.00	972.00	1,044.90	1,123.27	1,207.51	1,292.04
4"	1,500.30	1,620.32	1,741.85	1,872.49	2,012.92	2,153.83
6"	2,999.70	3,239.68	3,482.65	3,743.85	4,024.64	4,306.36
8"	4,799.70	5,183.68	5,572.45	5,990.39	6,439.66	6,890.44
10"	6,900.30	7,452.32	8,011.25	8,612.09	9,258.00	9,906.06
<u>Consumption</u>						
Consumption (CCF)	\$1.37	\$1.48	\$1.59	\$1.71	\$1.84	\$1.97

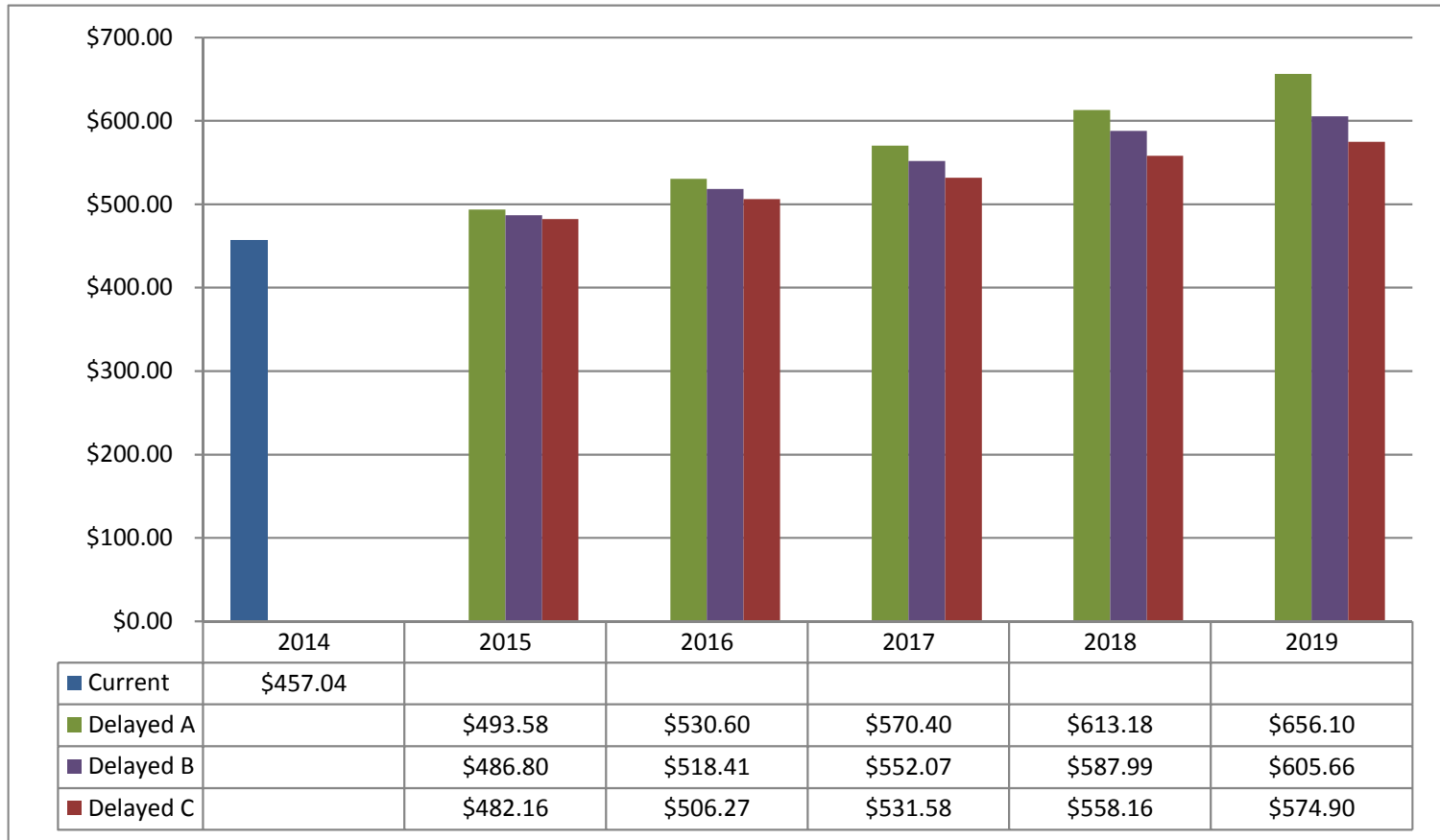
# Present and Proposed Quarterly Commercial Water Rates (Delayed B)

	Present Rates	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Proposed Annual Adjustments</b>	<b>0.0%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>6.5%</b>	<b>3.0%</b>
<b>Bill increase per month</b>		\$4.04 /mo	\$4.30 /mo	\$4.57 /mo	\$4.87 /mo	\$2.40 /mo
<u>Flat Rate</u>						
3/4" Business Flat	\$186.08	\$198.20	\$211.10	\$224.80	\$239.40	\$246.60
1" Business Flat	280.81	299.10	318.50	339.20	361.20	372.00
<u>Meter Charge by Size</u>						
3/4"	\$90.00	\$95.90	\$102.10	\$108.70	\$115.80	\$119.30
1"	150.30	160.10	170.50	181.60	193.40	199.20
1 1/2"	299.70	319.20	339.90	362.00	385.50	397.10
2"	479.70	510.90	544.10	579.50	617.20	635.70
3"	900.00	958.50	1,020.80	1,087.20	1,157.90	1,192.60
4"	1,500.30	1,597.80	1,701.70	1,812.30	1,930.10	1,988.00
6"	2,999.70	3,194.70	3,402.40	3,623.60	3,859.10	3,974.90
8"	4,799.70	5,111.70	5,444.00	5,797.90	6,174.80	6,360.00
10"	6,900.30	7,348.80	7,826.50	8,335.20	8,877.00	9,143.30
<u>Consumption</u>						
Consumption (CCF)	\$1.37	\$1.46	\$1.55	\$1.65	\$1.76	\$1.82

# Present and Proposed Quarterly Commercial Water Rates (Delayed C)

	Present Rates	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Proposed Annual Adjustments</b>	<b>0.0%</b>	<b>5.5%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>3.0%</b>
<b>Bill increase per month</b>		\$3.41 /mo	\$3.27 /mo	\$3.44 /mo	\$3.61 /mo	\$2.27 /mo
<u>Flat Rate</u>						
3/4" Business Flat	\$186.08	\$196.31	\$206.13	\$216.44	\$227.26	\$234.08
1" Business Flat	280.81	296.25	311.07	326.62	342.95	353.24
<u>Meter Charge by Size</u>						
3/4"	\$90.00	\$94.95	\$99.70	\$104.68	\$109.92	\$113.21
1"	150.30	158.57	166.49	174.82	183.56	189.07
1 1/2"	299.70	316.18	331.99	348.59	366.02	377.00
2"	479.70	506.08	531.39	557.96	585.85	603.43
3"	900.00	949.50	996.98	1,046.82	1,099.16	1,132.14
4"	1,500.30	1,582.82	1,661.96	1,745.06	1,832.31	1,887.28
6"	2,999.70	3,164.68	3,322.92	3,489.06	3,663.52	3,773.42
8"	4,799.70	5,063.68	5,316.87	5,582.71	5,861.85	6,037.70
10"	6,900.30	7,279.82	7,643.81	8,026.00	8,427.30	8,680.12
<u>Consumption</u>						
Consumption (CCF)	\$1.37	\$1.45	\$1.52	\$1.59	\$1.67	\$1.72

# Average Commercial Customer Quarterly Bill Impacts (all alternatives)



# Summary of the Rate Study Update

- Rate adjustments are needed to fund the operating and capital needs of the District over the next 10-year period
  - Metering program
  - Other capital funding
  - Inflationary impacts to O&M expenses
- No proposed change in the rate structure
  - Increased all components of the rate structure equally both metered and un-metered
- Proposed rates fund the operating and capital needs of the district
  - Based on the timing of the current plan