



# Council Workshop

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# Water and Wastewater Service Workshop

November 4, 2015

# Workshop Outline

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- Introduction
- Wastewater Rate Study
- Water Rate Study
- Historical CIP Expenditures
- Zone Pumping Charges
- Solar Energy Panels
- Water Waste Penalties
- Next Steps

# Priorities and Goals – Why?

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- Maintaining Public Health and Safety
  - ▣ Fight Fires and Protect Property
  - ▣ Provide Safe, Clean Drinking Water
  - ▣ Prevent Sewage Overflows and Spills
  - ▣ Maintain Reliable and Dependable Water and Wastewater Systems



# Priorities and Goals – How?

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- Maintaining Reliable, Safe Water and Wastewater Systems
- Continuing to Address Aging and Deteriorating Water and Wastewater Systems
- Being Good Stewards of Water Supply with Conservation
- Balancing Financial and Environmental Sustainability



# Water and Wastewater Financial Requirements

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## □ Reserve Fund Targets

- **Operations Reserve:** Per City Policy, Equal to 25% of Appropriated Operating Budget.
- **Rate Stabilization Reserve:** Per City Policy, Equal to 20% of Estimated Rate Revenue
- **Water System Replacement Reserve:** Equal to 3% of Net Assets.

## □ Debt Coverage Requirements

- 1.25 for Wastewater
- 1.20 for Water

# Wastewater Rate Study Recommendations

# Wastewater Rate Study Recommendations

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## □ Proposed Annual Increases in Sewer Rate Revenue

RATE REVENUE REQUIREMENTS SUMMARY	Budget	Projected			
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
<i>Projected Annual Rate Revenue Increase</i>	<b>3.50%</b>	2.00%	2.00%	2.00%	2.00%
<i>Cumulative Increase from Annual Revenue Increases</i>	3.50%	5.57%	7.68%	9.84%	12.03%
<i>Debt Coverage After Rate Increase</i>	<b>5.58</b>	1.66	1.73	1.81	1.87
<i>Target Debt Coverage</i>	1.25	1.25	1.25	1.25	1.25

- City would not implement the January 1, 2016 rate increase of 3.5% previously approved in a Proposition 218 process.

RATE REVENUE REQUIREMENTS SUMMARY	Budget	Projected			
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
<i>Projected Annual Rate Revenue Increase</i>	<b>3.50%</b>	2.00%	2.00%	2.00%	2.00%
<i>Cumulative Increase from Annual Revenue Increases</i>	0.00%	2.00%	4.04%	6.12%	8.24%
<i>Debt Coverage After Rate Increase</i>	<b>5.25</b>	1.48	1.54	1.60	1.65
<i>Target Debt Coverage</i>	1.25	1.25	1.25	1.25	1.25

# Wastewater Rate Study Recommendations

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## □ Proposed Annual Increases in Sewer Rate Revenue

- City would not implement the January 1, 2016 rate increase of 3.5% previously approved in a Proposition 218 process.

Summary of Sources and Uses of Funds and Net Revenue Requirements	City's Budget Projections				
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
<b>Sources of Wastewater Funds</b>					
Rate Revenue Under Prevailing Rates	\$ 9,921,864	\$ 10,164,637	\$ 10,376,951	\$ 10,589,265	\$ 10,789,561
Other Operating Revenue	175,843	179,543	183,354	187,280	191,323
Interest Earnings	41,394	15,959	34,463	54,988	52,583
<b>Total Sources of Funds</b>	<b>\$ 10,139,100</b>	<b>\$ 10,360,139</b>	<b>\$ 10,594,768</b>	<b>\$ 10,831,533</b>	<b>\$ 11,033,468</b>
<b>Uses of Wastewater Funds</b>					
Operating Expenses	\$ 7,566,286	\$ 7,861,132	\$ 8,180,753	\$ 8,517,079	\$ 8,862,574
Debt Service	502,299	1,841,791	1,845,120	1,844,478	1,844,003
Rate-Funded Capital Expenses	-	-	-	-	-
<b>Total Use of Funds</b>	<b>\$ 8,068,585</b>	<b>\$ 9,702,923</b>	<b>\$ 10,025,873</b>	<b>\$ 10,361,557</b>	<b>\$ 10,706,577</b>
<b>Surplus (Deficiency) before Rate Increase</b>	<b>\$ 2,070,516</b>	<b>\$ 657,216</b>	<b>\$ 568,895</b>	<b>\$ 469,976</b>	<b>\$ 326,890</b>
Additional Revenue from Rate Increases	-	101,646	313,384	537,977	774,907
<b>Surplus (Deficiency) after Rate Increase</b>	<b>\$ 2,070,516</b>	<b>\$ 758,862</b>	<b>\$ 882,279</b>	<b>\$ 1,007,953</b>	<b>\$ 1,101,798</b>
<b>Projected Annual Increase to Rate Revenue<sup>1</sup></b>	<b>0.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>	<b>2.00%</b>
<i>Cumulative Rate Increases</i>	0.00%	2.00%	4.04%	6.12%	8.24%
<b>Net Revenue Requirement<sup>2</sup></b>	<b>\$ 7,851,348</b>	<b>\$ 9,507,421</b>	<b>\$ 9,808,056</b>	<b>\$ 10,119,289</b>	<b>\$ 10,462,671</b>
<b>Projected Debt Coverage After Rate Increase</b>	<b>5.25</b>	<b>1.48</b>	<b>1.54</b>	<b>1.60</b>	<b>1.65</b>
<i>Debt Coverage Requirement</i>	1.25	1.25	1.25	1.25	1.25



# Wastewater Rate Study Recommendations

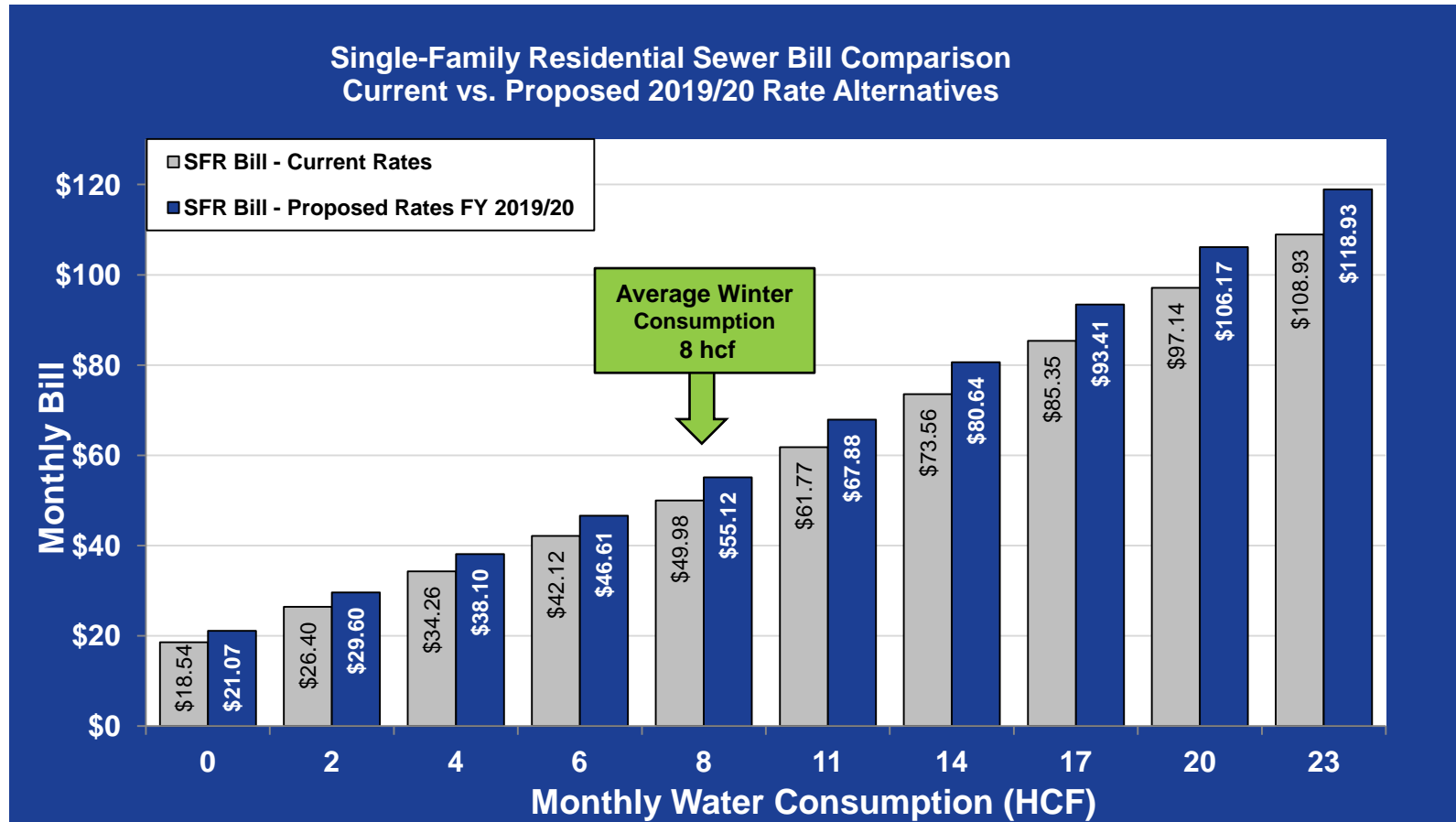
□ Projected Reserve Fund Balances

Beginning Reserve Fund Balances and Recommended Reserve Targets	Budget	Projected			
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
<b>Sewer Operations Fund (640)</b>	\$ 1,892,000	\$ 1,965,000	\$ 2,045,000	\$ 2,129,000	\$ 2,216,000
<i>Recommended Minimum Target</i>	<i>1,892,000</i>	<i>1,965,000</i>	<i>2,045,000</i>	<i>2,129,000</i>	<i>2,216,000</i>
<b>Sewer System Replacement Fund (643)</b>	\$ 4,491,747	\$ 4,927,609	\$ 5,286,749	\$ 4,882,124	\$ 4,205,220
<i>Recommended Minimum Target</i>	<i>1,473,700</i>	<i>1,662,300</i>	<i>1,950,100</i>	<i>2,153,500</i>	<i>2,402,600</i>
<b>Rate Stabilization Fund (652)</b>	\$ 1,509,814	\$ 1,763,589	\$ 2,022,406	\$ 2,112,575	\$ 2,178,419
<i>Recommended Minimum Target</i>	<i>1,984,373</i>	<i>2,053,257</i>	<i>2,138,067</i>	<i>2,225,448</i>	<i>2,312,894</i>
<b>Total Ending Balance</b>	<b>\$ 7,893,561</b>	<b>\$ 8,656,198</b>	<b>\$ 9,354,155</b>	<b>\$ 9,123,698</b>	<b>\$ 8,599,639</b>
<i>Total Recommended Minimum Target</i>	<i>\$ 5,350,073</i>	<i>\$ 5,680,557</i>	<i>\$ 6,133,167</i>	<i>\$ 6,507,948</i>	<i>\$ 6,931,494</i>

# Wastewater Rate Study Recommendations

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- Sewer Bill Comparison For Single-Family Residential



# Water Rate Study Analysis and Recommendations

# Water Rate Options: Staff and Consultant Recommendation

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- Projected Annual Rate Increases
  - 5-Year Water Reduction = 30%, 30%, 20%, 20%, 20%
  - **Includes 6.25% Previously Adopted Rate Increase on January 1, 2016**
  - Implementation Effective Date: April 1, 2016

Summary of Sources and Uses of Funds and Net Revenue Requirements	City's Budget Projections				
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
<b>Sources of Water Funds</b>					
Rate Revenue Under Prevailing Rates <sup>1</sup>	\$ 7,329,555	\$ 7,476,146	\$ 8,703,075	\$ 8,877,136	\$ 9,054,679
Non-Rate Revenues	1,111,704	939,388	923,229	948,840	962,224
Interest Earnings	47,138	3,182	3,557	6,460	16,645
<b>Total Sources of Funds</b>	<b>\$ 8,488,396</b>	<b>\$ 8,418,715</b>	<b>\$ 9,629,861</b>	<b>\$ 9,832,437</b>	<b>\$ 10,033,548</b>
<b>Uses of Water Funds</b>					
Operating Expenses	\$ 8,924,651	\$ 9,051,571	\$ 9,709,848	\$ 10,034,316	\$ 10,339,632
Debt Service	939,538	945,549	944,774	943,336	944,184
Rate-Funded Capital Expenses	-	-	419,639	1,109,361	1,148,410
<b>Total Use of Funds</b>	<b>\$ 9,864,189</b>	<b>\$ 9,997,120</b>	<b>\$ 11,074,261</b>	<b>\$ 12,087,013</b>	<b>\$ 12,432,227</b>
<b>Surplus (Deficiency) before Rate Increase</b>	<b>\$ (1,375,793)</b>	<b>\$ (1,578,405)</b>	<b>\$ (1,444,400)</b>	<b>\$ (2,254,576)</b>	<b>\$ (2,398,679)</b>
Additional Revenue from Rate Increases	404,271	1,517,140	2,525,139	3,405,968	4,382,423
<b>Surplus (Deficiency) after Rate Increase</b>	<b>\$ (971,522)</b>	<b>\$ (61,265)</b>	<b>\$ 1,080,738</b>	<b>\$ 1,151,392</b>	<b>\$ 1,983,744</b>
<b>Projected Annual Rate Increase</b>	<b>9.00%</b>	<b>7.25%</b>	<b>7.25%</b>	<b>7.25%</b>	<b>7.25%</b>
<i>Cumulative Rate Increases</i>	9.00%	16.90%	25.38%	34.47%	44.22%
<b>Net Revenue Requirement</b>	<b>\$ 8,705,347</b>	<b>\$ 9,054,551</b>	<b>\$ 10,147,475</b>	<b>\$ 11,131,713</b>	<b>\$ 11,453,358</b>
<b>Projected Debt Coverage After Rate Increase</b>	<b>1.59</b>	<b>1.88</b>	<b>2.64</b>	<b>3.11</b>	<b>3.63</b>
<i>Debt Coverage Requirement</i>	1.20	1.20	1.20	1.20	1.20

# Water Rate Options: Staff and Consultant Recommendation

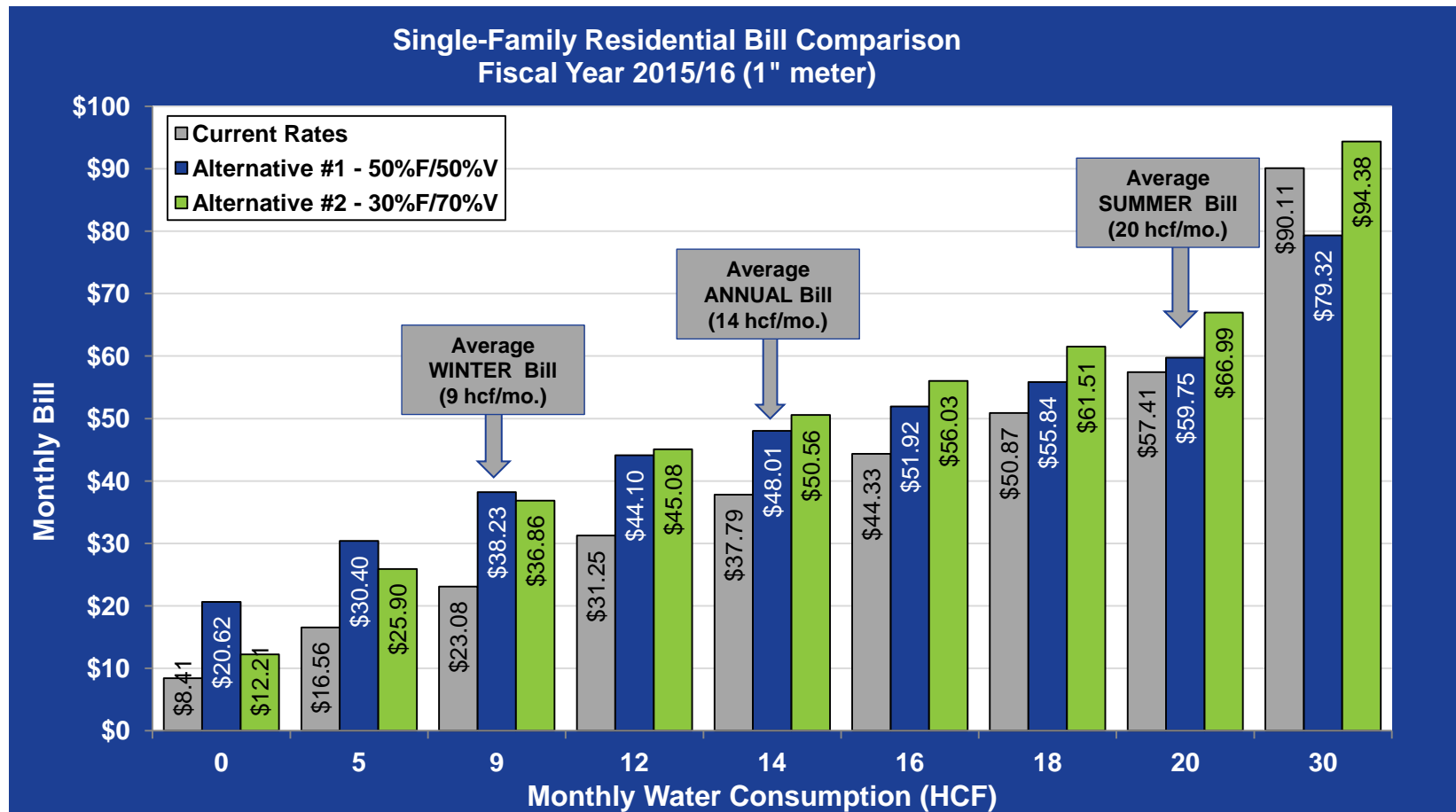
□ Projected Reserve Fund Balances

Beginning Reserve Fund Balances and Recommended Reserve Targets	Budget	Projected			
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Water Operations Fund (650)	\$ 1,272,626	\$ 711,361	\$ 1,292,100	\$ 2,184,000	\$ 2,540,000
<i>Recommended Minimum Target</i>	<i>2,231,000</i>	<i>2,263,000</i>	<i>2,427,000</i>	<i>2,509,000</i>	<i>2,585,000</i>
Water System Replacement Fund (653)	\$ -	\$ -	\$ -	\$ 35,283	\$ 1,640,834
<i>Recommended Minimum Target</i>	<i>1,407,700</i>	<i>1,399,400</i>	<i>1,426,500</i>	<i>1,437,600</i>	<i>1,436,900</i>
Rate Stabilization Fund (652)	\$ 536,968	\$ 1,038,310	\$ 1,543,502	\$ 1,775,427	\$ 1,810,936
<i>Recommended Minimum Target</i>	<i>1,465,911</i>	<i>1,495,229</i>	<i>1,740,615</i>	<i>1,775,427</i>	<i>1,810,936</i>
<b>Total Ending Balance</b>	<b>\$ 1,809,594</b>	<b>\$ 1,749,671</b>	<b>\$ 2,835,601</b>	<b>\$ 3,994,711</b>	<b>\$ 5,991,770</b>
<i>Total Recommended Minimum Target</i>	<i>\$ 5,104,611</i>	<i>\$ 5,157,629</i>	<i>\$ 5,594,115</i>	<i>\$ 5,722,027</i>	<i>\$ 5,832,836</i>

# Water Rate Options: Staff and Consultant Recommendation

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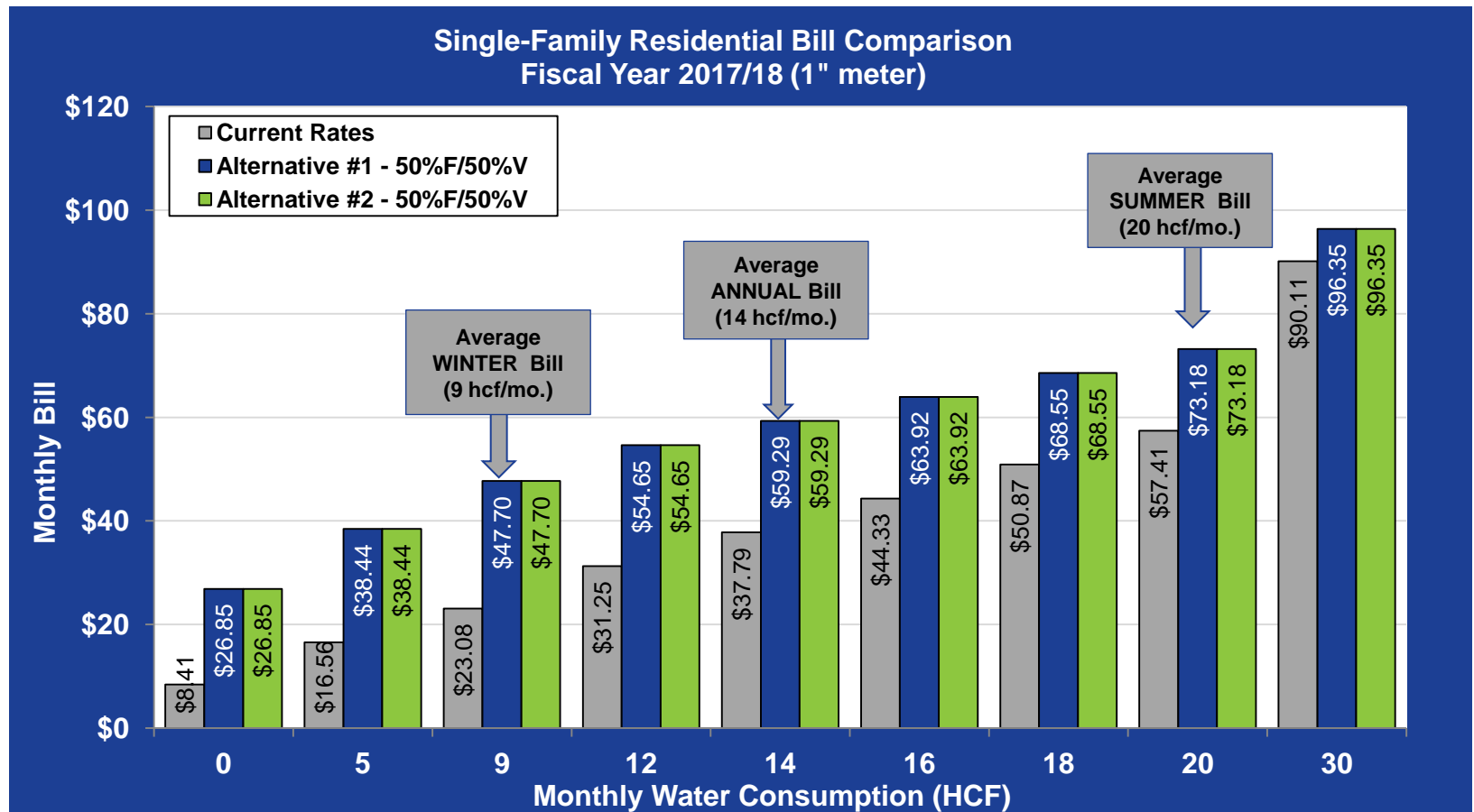
- Single Family Comparison – FY 2015/16



# Water Rate Options: Staff and Consultant Recommendation

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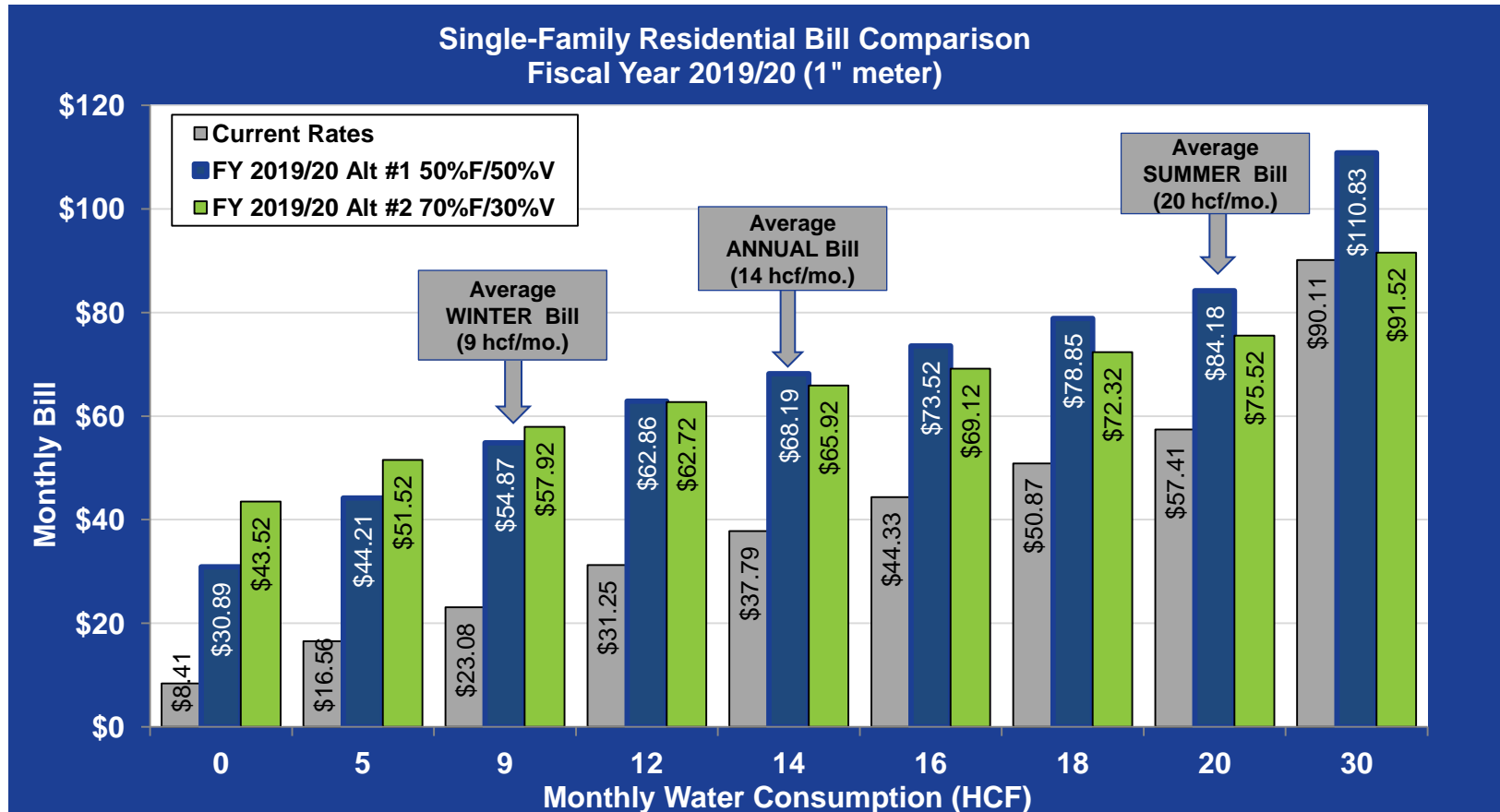
- Single Family Comparison – FY 2017/18



# Water Rate Options: Staff and Consultant Recommendation

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- Single Family Comparison – FY 2019/20





# Water Rate Options: Council Request

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- 5-Year Water Reduction = 30%, 30%, 30%, 30%, 30%
- Immediate 70% Fixed, 30% Variable
- Implementation Effective Date: July 1, 2016

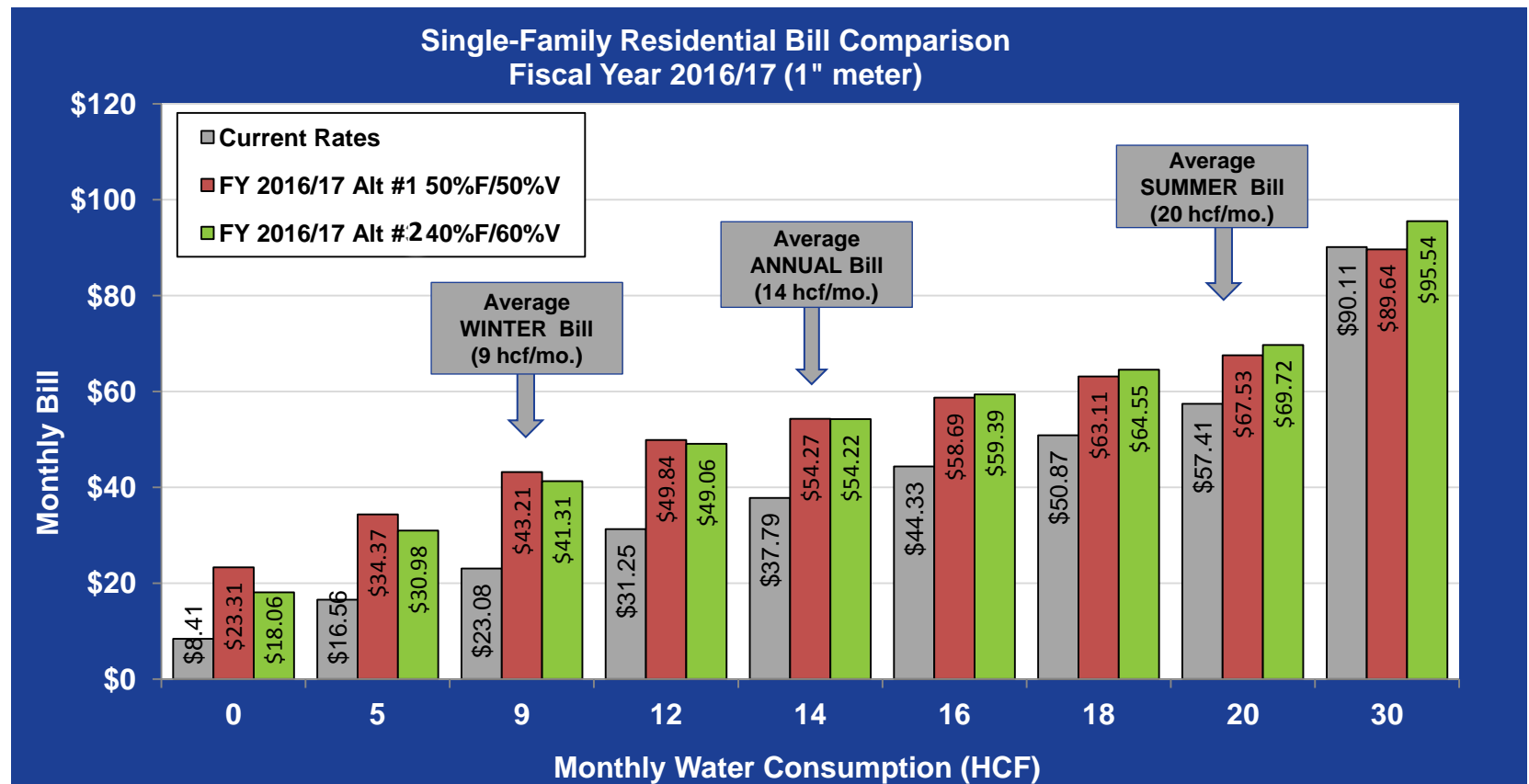
# Water Rate Options: Council Request

- Council Request #1
  - 5-Year Water Reduction = 30%, 30%, 30%, 30%, 30%
  - Includes 6.25% Previously Adopted Rate Increase on January 1, 2016
  - Implementation Effective Date: April 1, 2016

RATE REVENUE REQUIREMENTS SUMMARY	Budget	Projected			
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
<i>Projected Annual Rate Revenue Increase</i>	<b>9.00%</b>	<b>10.00%</b>	<b>10.00%</b>	<b>10.00%</b>	<b>10.00%</b>
<i>Cumulative Increase from Annual Revenue Increases</i>	9.00%	19.90%	31.89%	45.08%	59.59%
<i>Debt Coverage After Rate Increase<sup>6</sup></i>	<b>1.59</b>	<b>2.26</b>	<b>2.31</b>	<b>2.95</b>	<b>3.66</b>
<i>Target Debt Coverage</i>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>

# Water Rate Options: Council Request

- Council Request #1
  - ▣ Single-Family Residential Bill Comparison



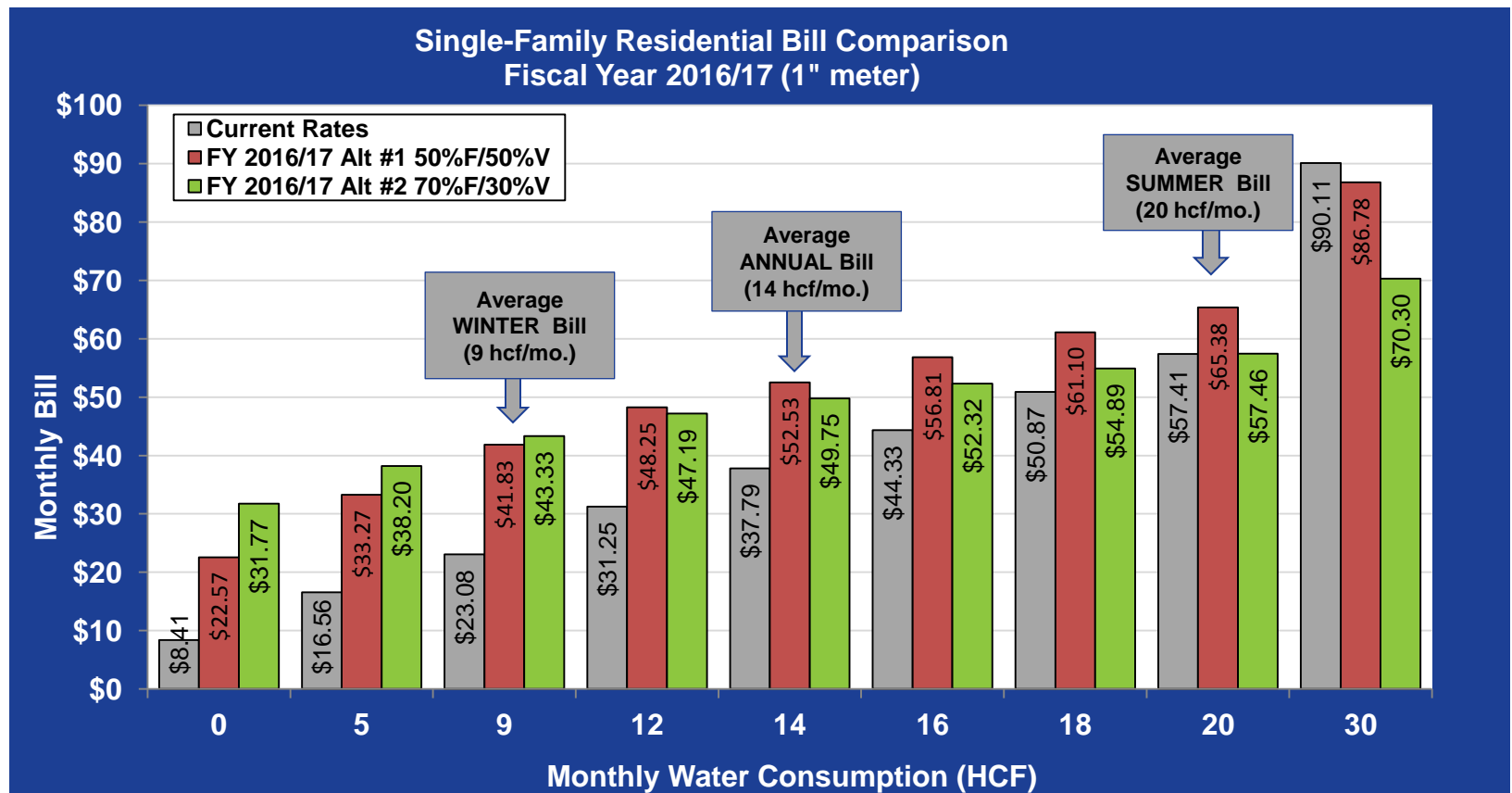
# Water Rate Options: Council Request

- Council Request #2
  - Immediate 70% Fixed / 30% Variable
  - Includes 6.25% Previously Adopted Rate Increase on January 1, 2016
  - 5-Year Water Reduction = 30%, 30%, 20%, 20%, 20%
  - Implementation Effective Date: April 1, 2016

RATE REVENUE REQUIREMENTS SUMMARY	Budget	Projected			
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
<b>Projected Annual Rate Revenue Increase</b>	<b>9.00%</b>	<b>7.25%</b>	<b>7.25%</b>	<b>7.25%</b>	<b>7.25%</b>
<i>Cumulative Increase from Annual Revenue Increases</i>	9.00%	16.90%	25.38%	34.47%	44.22%
<b>Debt Coverage After Rate Increase<sup>6</sup></b>	<b>1.59</b>	<b>1.87</b>	<b>2.62</b>	<b>3.10</b>	<b>3.61</b>
<b>Target Debt Coverage</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>

# Water Rate Options: Council Request

- Council Request #2
  - Single-Family Residential Bill Comparison



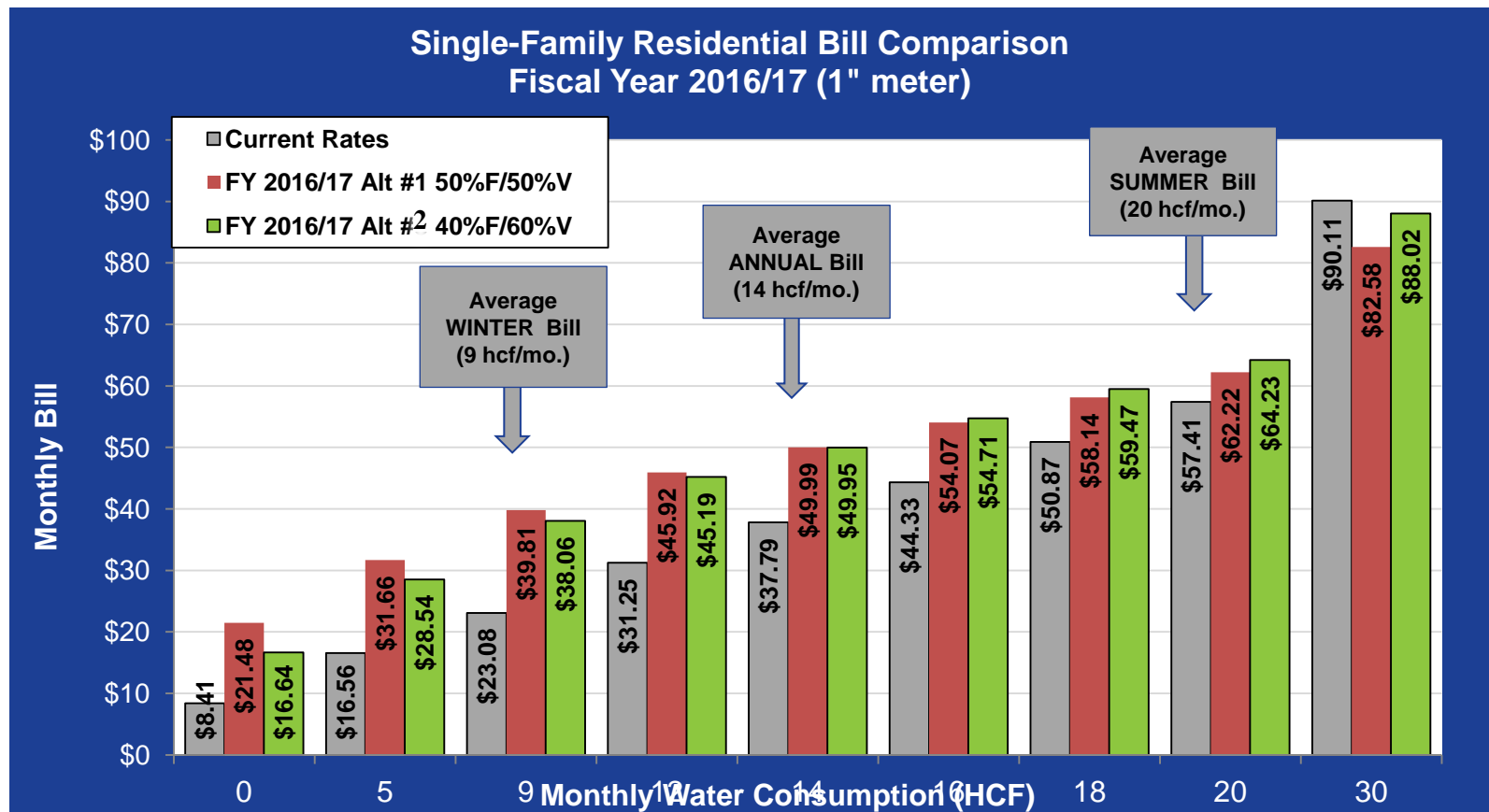
# Water Rate Options: Council Request

- Council Request #3
  - Implementation Effective Date: July 1, 2016
  - Includes 6.25% Previously Adopted Rate Increase on January 1, 2016
  - 5-Year Water Reduction = 30%, 30%, 20%, 20%, 20%
  - Phase-in Transition to 70% Fixed / 30% Variable

<b>RATE REVENUE REQUIREMENTS SUMMARY</b>	<b>Budget</b>	<b>Projected</b>			
	<b>FY 2015/16</b>	<b>FY 2016/17</b>	<b>FY 2017/18</b>	<b>FY 2018/19</b>	<b>FY 2019/20</b>
<b>Projected Annual Rate Revenue Increase</b>	<b>0.00%</b>	<b>11.25%</b>	<b>11.25%</b>	<b>11.25%</b>	<b>11.25%</b>
<b>Cumulative Increase from Annual Revenue Increases</b>	<b>0.00%</b>	<b>11.25%</b>	<b>23.77%</b>	<b>37.69%</b>	<b>53.18%</b>
<b>Debt Coverage After Rate Increase 6</b>	<b>1.48</b>	<b>1.79</b>	<b>2.41</b>	<b>3.14</b>	<b>3.97</b>
<b>Target Debt Coverage</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>	<b>1.20</b>

# Water Rate Options: Council Request

- Council Request #3
  - Single-Family Residential Bill Comparison



# Council Request: Historical CIP Expenditures

	<u>Sewer</u>	<u>Water</u>
FY 10-11	\$ 2,652,796	\$ 551,840
FY 11-12	\$ 2,457,025	\$ 464,282
FY 12-13	\$ 2,426,257	\$ 1,125,763
FY 13-14	\$ 2,575,440	\$ 863,362
FY 14-15	<u>\$ 6,486,572</u>	<u>\$ 2,470,247</u>
<b>Total</b>	<b>\$ 16,598,090</b>	<b>\$ 5,475,494</b>
<b>5-Year Annual Average</b>	<b>\$ 3,319,618</b>	<b>\$ 1,095,099</b>
<b>FY 15-16 through FY 19-20, 5-Year Annual Average</b>	<b>\$ 3,341,200</b>	<b>\$ 1,769,800</b>



# Council Request: Zone Pumping Charges

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Water Enterprise Calculation of Zonal Elevation Surcharges - Volumetric Surcharges									
Elevation Zones	Number of Customers	Average SFR Monthly Cost (at 14 hcf)	Current Surcharge	Current Average SFR Monthly Cost	Cumulative Surcharge (\$/hcf)	Surcharges (Fixed \$)	New Average SFR Monthly Cost (\$/hcf)	New Average SFR Monthly Cost (Fixed \$)	Potential New Revenue
Zone 1 Lift Stations	2,630	\$48.01	\$0.00	\$48.01	\$0.57	\$22.35	\$56.04	\$70.36	\$ 411,550
Zone 2 Lift Stations	701	\$48.01	\$0.00	\$48.01	\$2.06	\$22.35	\$76.82	\$70.36	\$ 380,461
Zone 3 Lift Stations	115	\$48.01	\$0.00	\$48.01	\$5.49	\$22.35	\$124.83	\$70.36	\$ 132,037
<b>Total</b>	<b>3,446</b>								<b>\$ 924,049</b>

Wastewater Enterprise Calculation of Zonal Elevation Surcharges - Volumetric Surcharges									
Elevation Zones	Number of Customers	Average SFR Monthly Cost (at 8 hcf)	Current Surcharge	Current Average SFR Monthly Cost	Surcharges (\$/hcf)	Surcharges (Fixed \$)	New Average SFR Monthly Cost (\$/hcf)	New Average SFR Monthly Cost (Fixed \$)	Potential New Revenue
Zone 1 Lift Stations	1,476	\$49.98	\$6.16	\$56.14	\$2.66	\$16.91	\$71.25	\$66.89	\$ 84,980
Zone 2 Lift Stations	515	\$49.98	\$6.16	\$56.14	\$5.20	\$16.91	\$91.57	\$66.89	\$ 122,394
Zone 3 Lift Stations	80	\$49.98	\$6.16	\$56.14	\$10.31	\$16.91	\$132.48	\$66.89	\$ 59,887
<b>Total</b>	<b>2,071</b>								<b>\$ 267,262</b>

# Water Rate Options Summary

Council Request	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	Cumulative
1) 5-Year Water Reduction = 30%, 30%, 30%, 30%, 30%	9.00%	10.00%	10.00%	10.00%	10.00%	59.59%
2) Immediate 70% Fixed / 30% Variable	9.00%	7.25%	7.25%	7.25%	7.25%	44.22%
3) Implementation Effective Date: July 1, 2016	0.00%	11.25%	11.25%	11.25%	11.25%	53.18%

Staff and Consultant Recommendation	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	Cumulative
5-Year Water Reduction = 30%, 30%, 20%, 20%, 20%						
50% Fixed / 50% Variable	9.00%	7.25%	7.25%	7.25%	7.25%	44.22%
Implementation Effective Date: April 1, 2016						

Zone Pumping Charges Alternatives	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	Cumulative
1) Leave As Is	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2a) Surcharge Based On Consumption - Water	\$ 231,012	\$ 924,049	\$ 924,049	\$ 924,049	\$ 924,049	\$ 3,927,208
2b) Surcharge Based On Consumption - Wastewater	\$ 66,815	\$ 267,262	\$ 267,262	\$ 267,262	\$ 267,262	\$ 1,135,863
3a) Fixed Surcharge for All Zones - Water	\$ 231,012	\$ 924,049	\$ 924,049	\$ 924,049	\$ 924,049	\$ 3,927,208
3b) Fixed Surcharge for All Zones - Wastewater	\$ 66,815	\$ 267,262	\$ 267,262	\$ 267,262	\$ 267,262	\$ 1,135,863

# Council Request: Solar Energy

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## Preliminary Site Layout – “Water Tank” Property 1.8MW Solar Power System



SolarCity

# Council Request: Solar Energy

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## City of Morgan Hill Solar Power Project Overview

<b>Contract Type</b>	Power Purchase Agreement (PPA)
<b>System Owner</b>	SolarCity SolarCity installs, maintains, owns and guarantees the performance of the solar system
<b>Solar System Size</b>	1.8 megawatt photovoltaic system Approximately 5.2 acres, located on the “water tank” property
<b>Solar System Production</b>	2,790,000 kilowatt hours in year 1 Through the “virtual” credit tariff offered only to local governments, this system will offset ~53% of the 50 largest City of Morgan Hill PG&E meters.
<b>Cost and Savings</b>	\$0 capital outlay by the City of Morgan Hill Year 1 savings on PG&E costs



# Council Request: Water Waste Penalties

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- Revenue from penalties cannot be considered in the rate-setting process
  
- Roles of the City's Urban Water Management Plan
  
- Two Possible Penalty Options:
  - Water restriction measure infractions
  - Penalty for use beyond set water budgets

# Council Request: Pass-Through Provision

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- California Government Code Section 53756
- Proposed rates assume SCVWD estimated increase in wholesale charge from \$0.82 per hcf to \$1.00 per hcf over the next 5 years
- Additional increases beyond the current SCVWD estimates would be passed through to consumers by adjusting the volumetric charges by the exact amount of the increase in cents per hcf

# Rate Adjustment Timeline

Action	2015			2016		
	October	November	December	January	February	March
Workshop #1	10/21 ◆					
Workshop #2		Tonight ★				
Approve Rate Study		11/18 ◆				
Prop 218 Protest Period		11/20/15 – 1/20/16				
Public Hearing				1/20 ◆		
Adopt Rates				1/27 ◆		
New Rates Effective						3/28 ◆

# Where to Find More Information

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- Visit:
  - <http://www.morgan-hill.ca.gov/1450/Rate-Adjustments>
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