A dynamic background image showing water being poured from a glass, creating a splash with many bubbles. The water is clear and blue, set against a white and light blue background. The splash is centered and extends across the width of the page.

City of Benicia

Rate Study Update: Water & Wastewater Rates

March 1, 2016

Prepared by:

Karin Schnaider, Finance Director, City of Benicia

Greg Clumpner, Director, NBS

Carmen Narayanan, Consultant, NBS

What Are the Issues?

- California is in the midst of a severe, multi-year long drought.
- Benicia residents have been California leaders in water conservation, reducing water consumption by up to 43% - **thank you!**
- Like many jurisdictions, the City of Benicia needs to
 - Upgrade our aging Water/Wastewater infrastructure
 - Implement current technologies to increase efficiency
 - Empowering our local water consumers to conserve even more
 - Achieve fiscal sustainability in utility funds

Community Outreach

- Community outreach regarding Benicia's water, sewer and conservation needs began in October 2015, including:
 - Information distributed via the City Manager's newsletter, Facebook, and mailer.
 - Presentations to local groups such as Rotary, Soroptimist, Chamber of Commerce & BIPA, as well as various City Boards and Commissions.
 - Information available on the City's website
- Staff will continue to reach out to the community to gather input and address questions/concerns from ratepayers.

Purpose of the Rate Study

- The quality, safety and reliability of our local water supply and the proper maintenance of our wastewater (sewer) system are essential to our community's health and safety, and water conservation efforts.
- Specifically, our aging water and sewer systems must be properly maintained and repaired in order to:
 - Ensure clean, safe drinking water for our residents and businesses
 - Increase water reliability and capacity in the event of a major earthquake, fire or catastrophic emergency
 - Continue Benicia's commendable water conservation efforts

Purpose of the Rate Study

- In August 2015, upon review of the 10-year forecast, the City Council directed staff to conduct a rate study that would address the structural deficit in the Water and Wastewater Utilities.
- The study provides scenarios for Council's consideration, along with associated impacts to proposed water and sewer rates.
- Staff's recommendations are consistent with the Council's goal of achieving a fiscally healthy and sustainable future for the utility funds.

Staff Recommendations

- Receive the draft Water and Wastewater Rate Study and provide direction regarding the following recommendations:
- It is recommended that the City Council select the rate design of 30% fixed and 70% variable for the residential water rates.
- It is recommended that the City Council select the rate design of adding a volumetric charge to the residential wastewater rates with a cap of 18 hundred-cubic-feet (hcf) per bi-monthly bill.
- It is recommended that the City Council approve the redesign of the Commercial/Industrial customer classes into low-, medium-, and high-strength groups with their individual rate.

Staff Recommendations (continued)

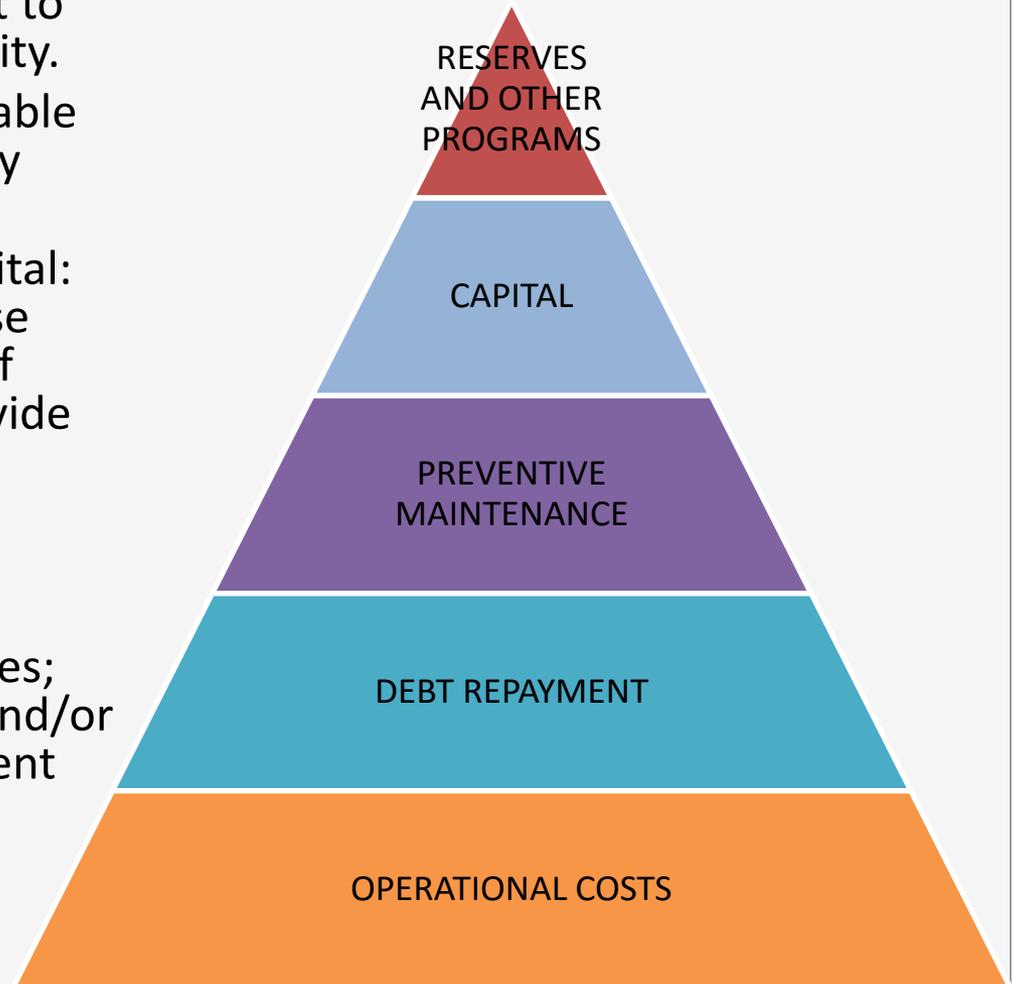
- It is recommended that the City Council approve a flat fee for the citywide AMI and replacement of water meters. Staff will adjust the amount down to match the actual funding terms.
- It is recommended that the drought surcharge stop upon the adoption of the proposed water rates and be replaced with the rates stabilization rates proposed.
- It is recommended that the Council direct staff to return on April 5, 2016 with a finalized rate study.

Overview of NBS report

- **Overview of Key Rate Study Tasks**
- **Financial Plan Scenarios based on Ten Year Forecast**
- **Water Rate Study**
 - ✓ Key Findings & Recommendations
 - ✓ Overview of Financial Plan
 - ✓ New Rate Alternatives and Bill Comparisons
- **Wastewater Rate Study**
 - ✓ Key Findings & Recommendations
 - ✓ Financial Plan
 - ✓ New Rate Alternatives and Bill Comparisons

Water and Wastewater fund's expenditure priority

1. Operational expenses: Equivalent to foundational expenses of the utility.
2. Debt repayment: If the City is unable to fund its loan obligations, it may threaten the City's assets.
3. Preventive maintenance and capital: The prolonged deferment of these expenses puts the utility at risk of failure and not being able to provide services to some or all of its customers.
4. Once these above expenses are funded, then the utility should consider other City Council policies; such as building reserves levels and/or funding various water management programs.



Water and Wastewater fund: three models

- To demonstrate the financial needs of preventive maintenance and capital, three models were developed:
 - Optimal
 - Achievable
 - Minimal

Defining the models (summary)

OPTIMAL

The full costs for preventive maintenance and capital as provided in the Water and Wastewater Master Plans from 2012.

ACHIEVABLE

The delay of some of preventive maintenance and capital without adding undo risk of failure to the system.

MINIMAL

Preventive maintenance and capital delayed out to future years to the point where risk of system failure is more likely to occur.

Optimal is shown for all charts & graphs, unless noted as otherwise

Overview of Key Rate Study Tasks

Key Components in the Rate Study:

1 FINANCIAL PLAN / REVENUE REQUIREMENTS

- Determines total revenue needed from rates.
- Determines annual % adjustments to rates needed.

2 COST-OF-SERVICE ANALYSIS

- Allocates revenue requirements to customer classes in a “fair and equitable” manner.
- Complies with Prop 218.

3 RATE DESIGN

- Determines the rate structure used to collect revenue from each customer class.
- Reflects City’s Policies & Rate Objectives.

Financial Plan/Revenue Requirements

- Meeting Net Revenue Requirements
- Building and Maintaining Reserve Funds
- CIP Funding Scenarios

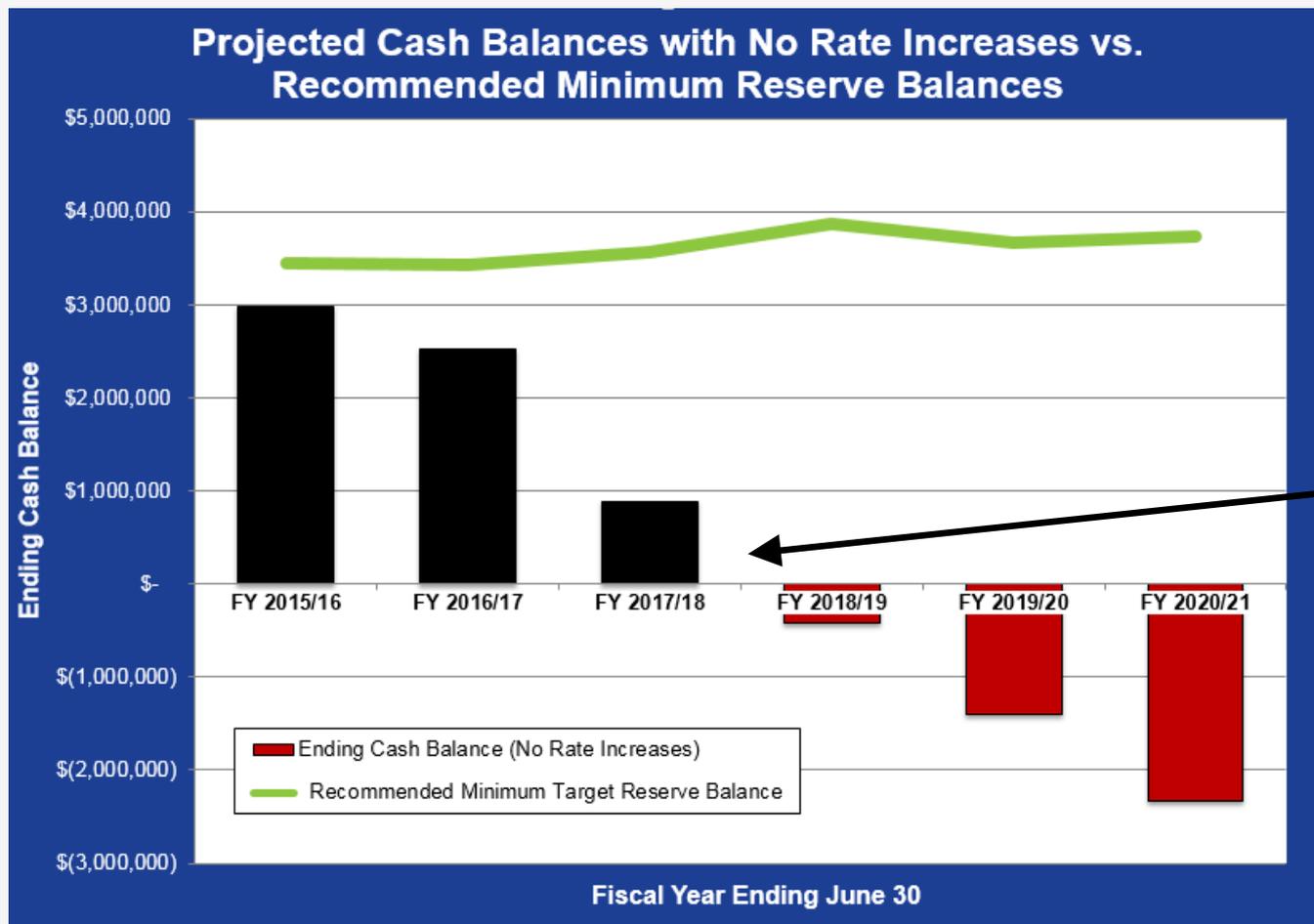
Water Rate Study

Water Fund: Financial Plan (Forecast for Optimal Model)

	Proposed	Proposed	Projected
<i>(in thousands)</i>	<u>FY 15-16</u>	<u>FY 16-17</u>	<u>FY 17-18</u>
Original Revenue Projections	8,056	7,448	7,866
Total Expenses	<u>8,525</u>	<u>8,814</u>	<u>9,287</u>
Net Revenues	(469)	(1,366)	(1,421)
Beginning Fund Balance	<u>2,577</u>	<u>2,108</u>	<u>742</u>
Ending Fund Balance	<u>2,108</u>	<u>742</u>	<u>(679)</u>
% of Fund Balance to Revenue	26.20%	10.00%	-8.60%

Water Financial Plan: Utility Projected Cash Performance

Projected Cash Balances, if No Adjustment to Rates is Implemented:



Given expected water conservation and planned expenditures, the utility is projected to exhaust cash reserves by the end of 2017/18.

**Target Balance is as calculated in Achievable Funding Scenario.*

Water Financial Plan: Funding models

OPTIMAL

- Capital costs are \$7.8 million in the next ten years (out of the identified \$17 million).
- Preventive maintenance is \$5.2 million.
- The annual average revenue shortfall is 22%, with some years as great as 47%.

ACHIEVABLE

- Capital costs are \$6.6 million in the next ten years (out of the identified \$17 million).
- Preventive maintenance is \$4.8 million.
- The annual average revenue shortfall is 17%, but vary from 8-45% year to year.

Water Financial Requirements: CIP Funding Scenarios

- **CIP Funding Scenarios** – City staff developed three levels of funding for capital improvement projects. Each carries a different level of funding and revenue requirements:
 - ***Optimal Funding Scenario*** – Funds a total of \$3.6 million from FY 2016/17 to FY 2020/21 and results in rate increases over this period of 20%, 16%, 10%, 3% and 3%.
 - ***Achievable Funding Scenario*** – Funds a total of \$3.4 million from FY 2016/17 to FY 2020/21 and results in rate increases over this period of 20%, 12%, 8%, 4% and 4%.

Water Financial Requirements: Funding Scenarios

Rate Increases Resulting from the Three Funding Scenarios:

Effective Dates	7/1/2016	7/1/2017	7/1/2018	7/1/2019	7/1/2020
Optimal Funding Scenario					
Rate Revenue Increases	20.00%	16.00%	10.00%	3.00%	3.00%
<i>Cumulative Rate Increases[^]</i>	20.00%	39.20%	53.12%	57.71%	62.45%
Achievable Funding Scenario					
Rate Revenue Increases	20.00%	12.00%	8.00%	4.00%	4.00%
<i>Cumulative Rate Increases[^]</i>	20.00%	34.40%	45.15%	50.96%	57.00%
Minimal Funding Scenario					
Rate Revenue Increases	10.00%	10.00%	10.00%	7.00%	7.00%
<i>Cumulative Rate Increases[^]</i>	10.00%	21.00%	33.10%	42.42%	52.39%

*Note that the current rate increase of 4% on July 2016 is replaced by these rate increases.

[^]Note that the cumulative rate increases account for compounding effect of the rates over time.

Water: Cost of Service and Rate Design

- *Cost of Services*: To allocate revenue requirements to all customer classes in a “fair and equitable” manner that complies with industry standards and legal requirements.
- *Rate Design*: The two primary components of rate design involve:
 - (1) The number of tiers used in collecting volumetric charges.
 - (2) The percentages collected from fixed vs. variable charges.

Water: Rate Design (continued)

Volumetric Tiers – NBS recommends a uniform (single-tier) rate for all customer classes.

Water: Rate Design (continued)

Fixed vs. Variable Costs:

- Alternative #1 – collects 70 percent of revenue from volumetric charges and 30 percent of revenue from fixed charges, and
- Alternative #2 – collects 30 percent of revenue from volumetric charges and 70 percent of revenue from fixed charges.

Water: Rate Design (optimal)

Water Rates SFR: Figures 7 and Figures 8 of the NBS Rate Study for Single Family Residential (3/4" or 5/8" meter size).

Alternative #1 (first year)

Fixed:	\$13.01 per month
Volumetric:	\$3.56 per hcf

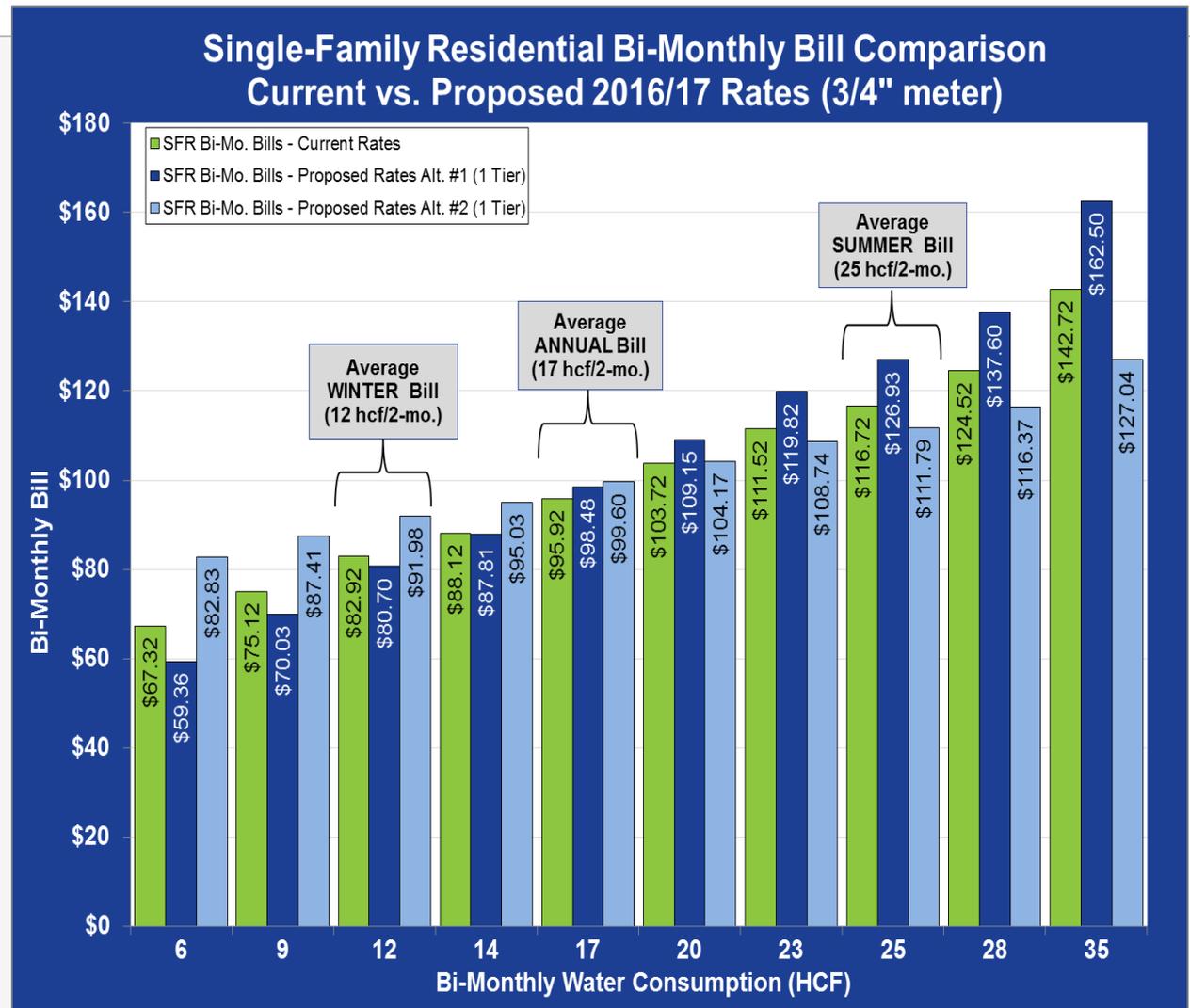
Alternative #2 (first year)

Fixed:	\$30.84 per month
Volumetric:	\$1.52 per hcf

Water Bill Comparisons SFR* – FY 2016/17

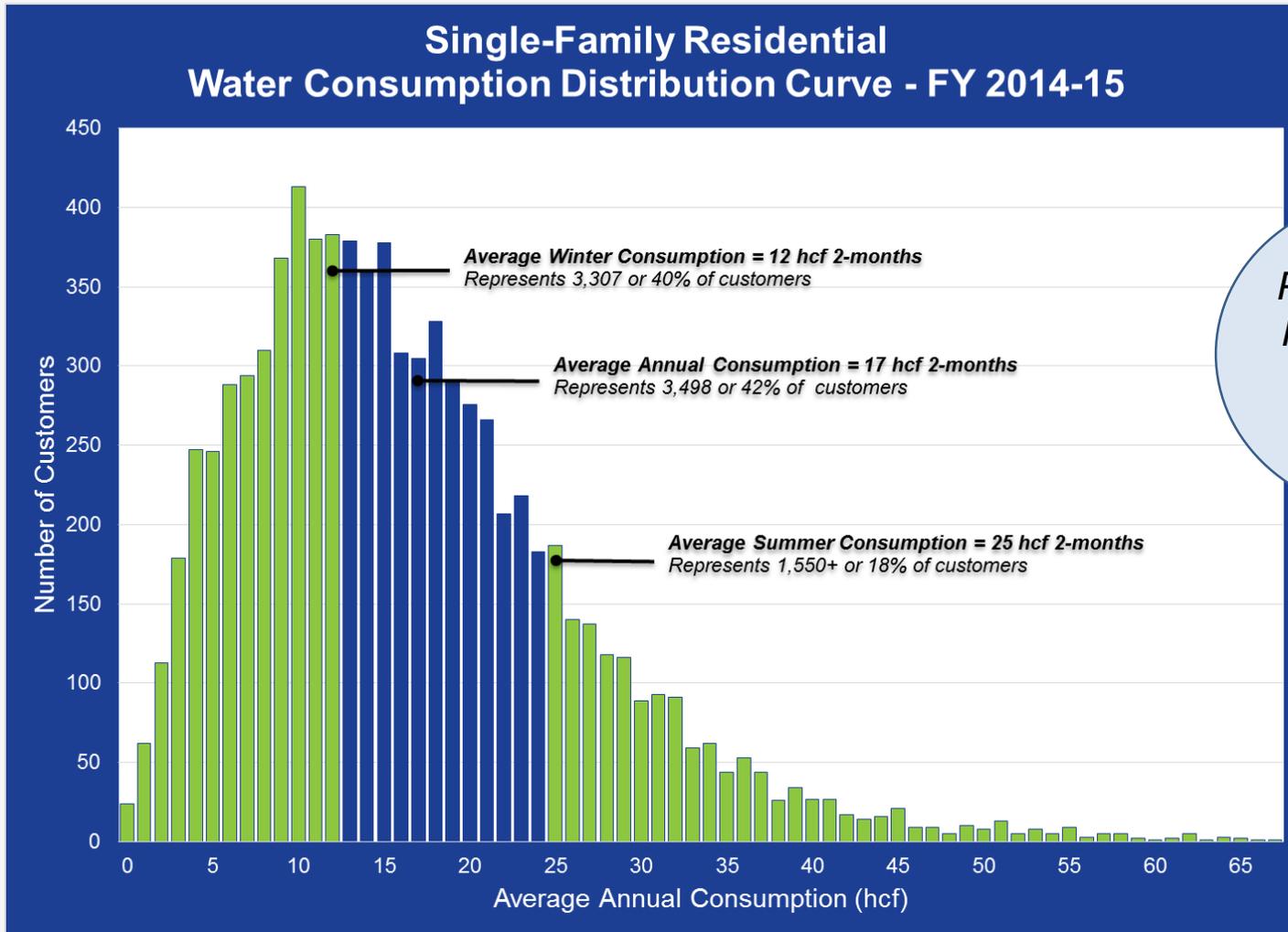
Alternative #1 =
30% Fixed /
70% Variable

Alternative #2 =
70% Fixed /
30% Variable



* This rate alternative is based on the "Optimal Funding Scenario"

SFR Distribution Curve – FY 2014/15 Consumption



*Presented for
Informational
Purposes
Only*

Water: Rate Design (optimal)

Water Rates Other : Figures 7 and Figures 8 of the NBS Rate Study for Multi-Family Residential and Commercial (3/4" or 5/8" meter size).

Alternative #1 (first year)

Fixed: \$14.91-22.71 per month

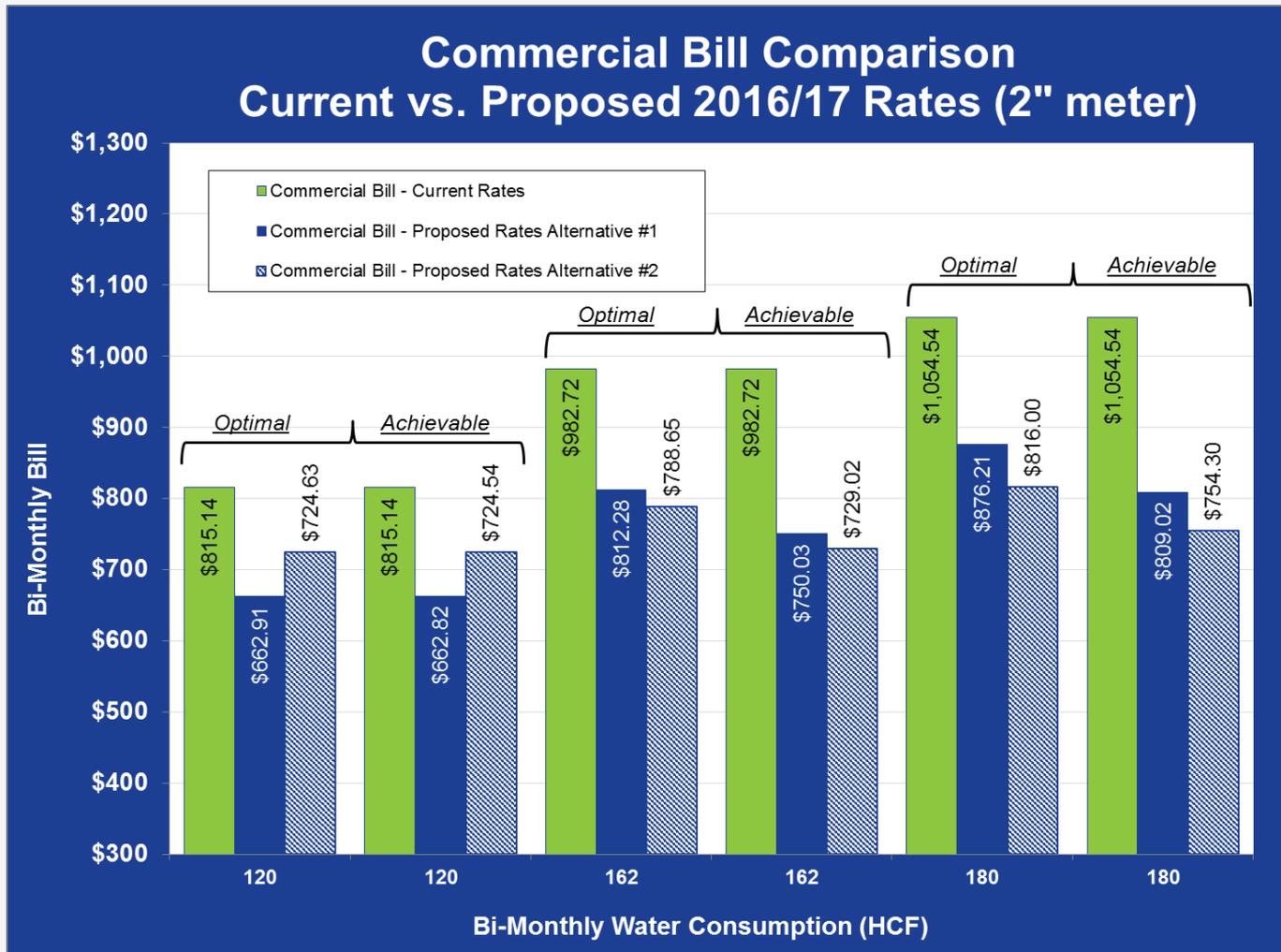
Volumetric: \$3.56 per hcf

Alternative #2 (first year)

Fixed: \$35.35-51.67 per month

Volumetric: \$1.52 per hcf

Water Bill Comparisons Commercial – FY 2016/17



Alternative #1 =
30% Fixed /
70% Variable

Alternative #2 =
70% Fixed /
30% Variable

Water: Rate Design (continued)

Recommendation:

By switching to a higher volumetric formula of 30% fixed and 70% consumption, customers who use more water will pay a much higher bill than low water users.

- ❖ It is recommended that the City Council select the rate design of 30% fixed and 70% variable for the residential water rates.

Water Rate Design: Low Income Discount

- The current rates adopted in 2012 introduced a Senior Low Income rate and began to phase out the prior “senior” discount rate.
 - phase out to conclude in June 2016
- The City has been subsidizing the program through a \$300,000 transfer annually from the General Fund.

Water Rate Design: Low Income Discount

- The proposed rates offer a low income discount that is broader to allow any households on the PG&E care program to also qualify for the low income discount.
- At this time, it is unknown the number of households that may qualify.
 - However, as the prior “senior” program expires, this proposal assumes that the General Fund transfer will remain unchanged or may potentially decrease.

Water: Rate Design (continued)

Recommendation:

It is recommended that the drought surcharge stop upon the adoption of the proposed water rates and be replaced with the rates stabilization rates proposed.

Water Rate Study Recommendations, cont'd.

Low Income Discount:

Alternative #1: 70% Variable, 30% Fixed						
Low Income Discount	Current Rates	Recommended Water Rates				
		FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
Low-Income Senior Citizen Discount:		Low Income Discount Per Account, Per Month (1):				
Single Family Service Charge:	\$ 9.93	\$ 7.10	\$ 8.20	\$ 9.10	\$ 9.30	\$ 9.60
Multiple Family Service Charge:	\$ 7.46	\$ 7.10	\$ 8.20	\$ 9.10	\$ 9.30	\$ 9.60
Water Rates per hcf:						
0 - 8 hcf	\$ 1.97	--	--	--	--	--
8+ - 30 hcf	\$ 3.10	--	--	--	--	--
30+ hcf	\$ 3.31	--	--	--	--	--

1. Proposed Low Income Discount applies to Fixed Rate only. This rate structure is easier to administer and is consistent with promoting conservation.

Alternative #2: 30% Variable, 70% Fixed						
Low Income Discount	Current Rates	Recommended Water Rates				
		FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
Low-Income Senior Citizen Discount:		Low Income Discount Per Account, Per Month (1):				
Single Family Service Charge:	\$ 9.93	\$ 16.80	\$ 19.50	\$ 21.40	\$ 22.10	\$ 22.70
Multiple Family Service Charge:	\$ 7.46	\$ 16.80	\$ 19.50	\$ 21.40	\$ 22.10	\$ 22.70
Water Rates per hcf:						
0 - 8 hcf	\$ 1.97	--	--	--	--	--
8+ - 30 hcf	\$ 3.10	--	--	--	--	--
30+ hcf	\$ 3.31	--	--	--	--	--

1. Proposed Low Income Discount applies to Fixed Rate only. This rate structure is easier to administer and is consistent with promoting conservation.

* This rate alternative is based on the "Optimal Funding Scenario"

Water Rate Design: Rate Stabilization

- Water revenues can be severely impacted if the drought worsens.
- Rate Stabilization Fund is designed to further promote financial stability when there are fluctuations in rate revenue.

Water Rate Design: Rate Stabilization

- This rate stabilization fee is tied to the City's drought ordinance.
 - At Stage 4 drought conditions, the volumetric rate per hcf goes up to 10%
 - At Stage 5, the volumetric rate per hcf goes up to 20%.
- This stabilizes rate revenue despite lower consumption so that the utility remains fiscally healthy even during an increase in drought-related conservation.

Water Rate Design: Rate Stabilization

Recommendation:

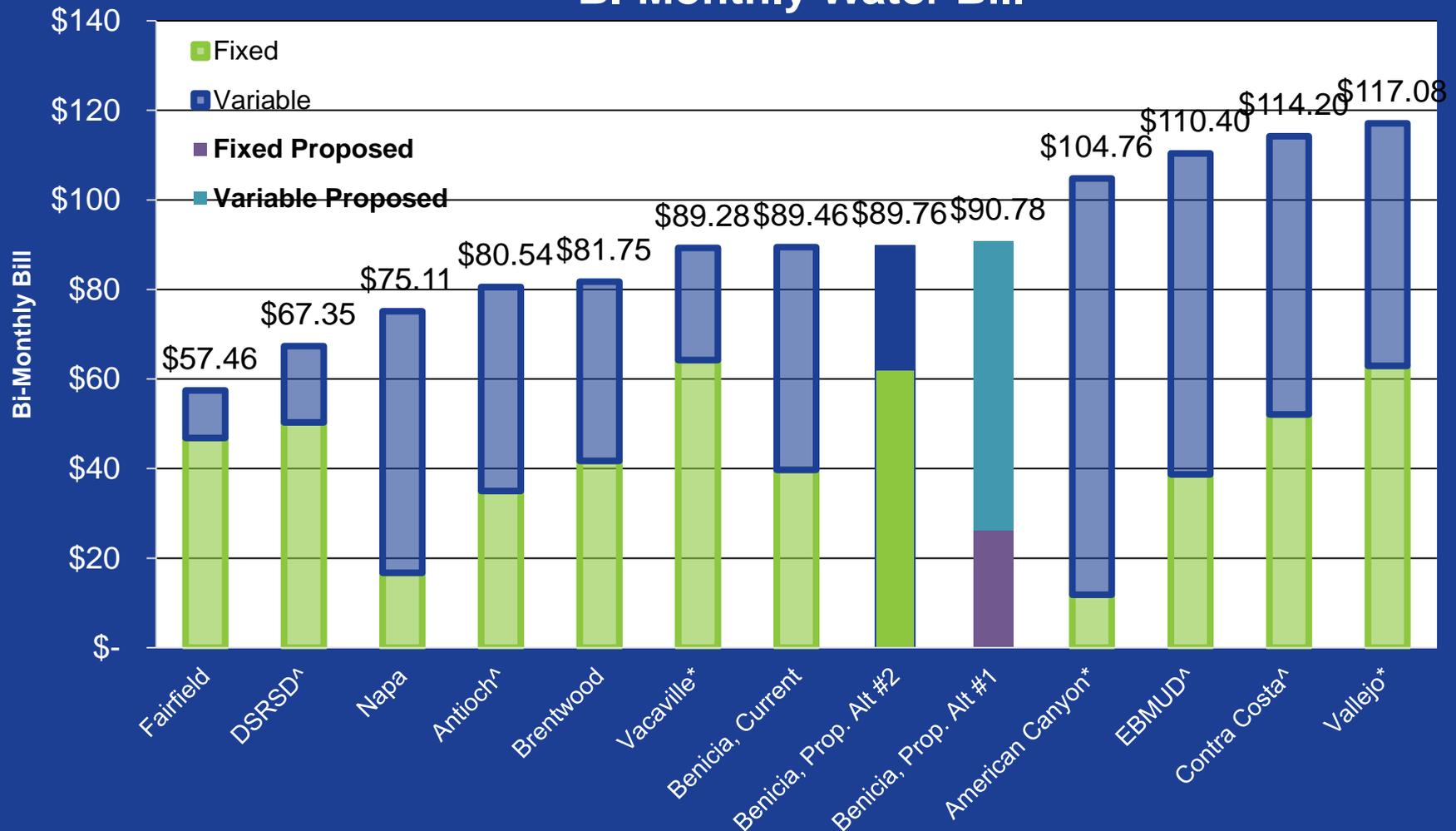
- ❖ It is recommended that the drought surcharge stop upon the adoption of the proposed water rates and be replaced with the rates stabilization rates proposed.

Water Bill Comparisons to Outside Agencies

- The City's proposed water rates are in the mean of other agencies.
- The range is \$57.46 to \$117.08 and the City Alternative #1 (30% fixed and 70% variable) is \$90.78.
 - Next page assumed consumption is 18 hcf per bi-monthly bill to show how the proposed rates compare to other agencies in the region.

Water Bill Comparisons to Outside Agencies, continued

City of Benicia- Regional Comparisons BI-Monthly Water Bill



Water: Results of Rate Study

- Water: approximately a \$10 bi-monthly (\$5 per month) bill increase based on funding the Optimal preventative maintenance and capital for 25 hcf.
- SFR customers under 14 hcf will see a reduction in their bi-monthly bill.

Water Results: Summary of Reserve Funds

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	FY 2020/21
Operating Reserve	\$ 1,166,491	\$ 490,420	\$ 455,943	\$ 825,669	\$ 1,745,101	\$ 2,589,667
<i>Recommended Minimum Target</i>	<i>1,420,000</i>	<i>1,409,000</i>	<i>1,515,000</i>	<i>1,719,000</i>	<i>1,585,000</i>	<i>1,621,000</i>
Capital Rehabilitation & Replacement Reserve	\$ 515,763	\$ 515,763	\$ 515,763	\$ 515,763	\$ 688,200	\$ 708,000
<i>Recommended Minimum Target</i>	<i>708,200</i>	<i>700,800</i>	<i>693,900</i>	<i>697,300</i>	<i>688,200</i>	<i>708,000</i>
Rate Stabilization Fund Reserve	\$ -	\$ -	\$ -	\$ -	\$ 643,000	\$ 657,000
<i>Recommended Minimum Target</i>	<i>576,000</i>	<i>571,000</i>	<i>614,000</i>	<i>697,000</i>	<i>643,000</i>	<i>657,000</i>
Debt Reserve	\$ 749,001	\$ 749,001	\$ 749,001	\$ 749,001	\$ 749,001	\$ 749,001
<i>Recommended Minimum Target</i>	<i>749,001</i>	<i>749,001</i>	<i>749,001</i>	<i>749,001</i>	<i>749,001</i>	<i>749,001</i>
Total Ending Balance	\$ 2,431,255	\$ 1,755,184	\$ 1,720,707	\$ 2,090,433	\$ 3,825,302	\$ 4,703,668
<i>Total Recommended Minimum Target</i>	<i>\$ 3,453,201</i>	<i>\$ 3,429,801</i>	<i>\$ 3,571,901</i>	<i>\$ 3,862,301</i>	<i>\$ 3,665,201</i>	<i>\$ 3,735,001</i>

Wastewater Results: Summary of Reserve Funds

- At the end of the 5 year rate period that the water reserve funds exceed the recommended minimum target by \$1 million.
- However, this is to meet the large capital costs coming in FY 2021/2022 of \$3.7 million (MIEX System project).
 - After funding this project, the reserves drop **below** the target reserves by \$2.7 million in the Water Fund.

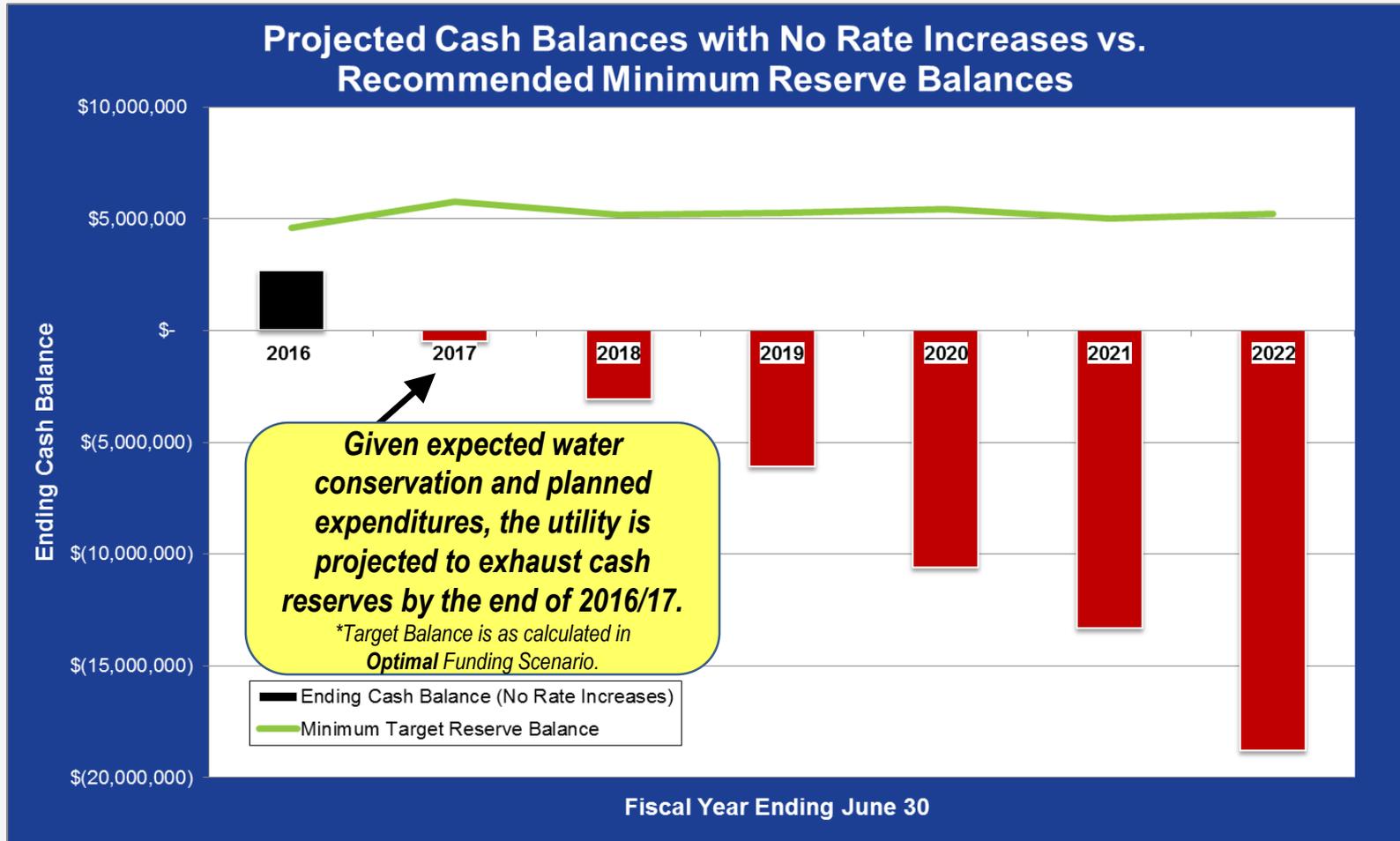
Wastewater Rate Study

Wastewater Fund: Financial Plan (Forecast for Optimal Model)

<i>(in thousands)</i>	Proposed <u>FY 15-16</u>	Proposed <u>FY 16-17</u>	Projected <u>FY 17-18</u>
Original Revenue Projections	8,728	8,904	8,905
Total Expenses	<u>8,451</u>	<u>11,892</u>	<u>11,219</u>
Net Revenues	277	(2,988)	(2,314)
Beginning Fund Balance	<u>2,616</u>	<u>2,893</u>	<u>(95)</u>
Ending Fund Balance	<u>2,893</u>	<u>(95)</u>	<u>(2,409)</u>
% of Fund Balance to Revenue	33.10%	-1.10%	-27.10%

Wastewater Financial Plan: Utility Projected Cash Performance

Projected Cash Balances, if No Adjustment to Rates is Implemented:



Wastewater Financial Plan: Funding models

OPTIMAL

- Capital costs are \$18.3 million in the next ten years (out of the identified \$25 million)
- Preventive maintenance is \$19.2 million.
- The annual average revenue shortfall is 30%, with some years as great as 47%.

ACHIEVABLE

- Capital costs are \$11.5 million in the next ten years (out of the identified \$25 million)
- Preventive maintenance is \$9.8 million.
- The annual average revenue shortfall is 13%, but vary from 3-26% year to year.

Wastewater Financial Requirements: Funding Scenarios

Increases Resulting from the Three Funding Scenarios evaluated:

Effective Dates	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20
Optimal Funding Scenario					
<i>Proposed Increases in Rate Revenue</i>	16.00%	12.00%	9.00%	7.00%	5.00%
<i>Cumulative Increase from Annual Revenue Increases</i>	16.00%	29.92%	41.61%	51.53%	59.10%
Achievable Funding Scenario					
<i>Proposed Increases in Rate Revenue</i>	8.00%	6.00%	6.00%	3.00%	2.00%
<i>Cumulative Increase from Annual Revenue Increases</i>	8.00%	14.48%	21.35%	24.99%	27.49%
Minimal Funding Scenario					
<i>Proposed Increases in Rate Revenue</i>	4.00%	3.00%	3.00%	3.00%	3.00%
<i>Cumulative Increase from Annual Revenue Increases</i>	4.00%	7.12%	10.33%	13.64%	17.05%

*Note that the current rate increase of 2% on July 2016 is replaced by these rate increases.

^Note that the cumulative rate increases account for compounding effect of the rates over time.

Wastewater: Rate Design

Use Volumetric Charges (*better ties to system loads*):

- *Residential Customers:*
 - Based on capped monthly water use of 9 hcf (18 hcf per bi-monthly bill)

- *Commercial & Industrial Customers:*
 - Based on monthly water use vs. current billing system of EDU (each dwelling unit) Factors & Reduction Ratios.

Wastewater: Rate Design

Reclassify Commercial & Industrial Customers –

Use low-, medium-, high-strength categories to:

- *Tie bills more closely to cost-of-service/system loads.*
- *Use flow & strength vs. meter sizes.*

Customer Class	BOD	TSS
	Average Strength Factor (mg/l) ¹	Average Strength Factor (mg/l) ¹
Commercial & Industrial - Low User	75	100
Commercial & Industrial - Medium User ²	150	175
Commercial & Industrial - High User	375	400

(1) Average strength factors for BOD and TSS are derived from the State Water Resources Control Board Revenue Program Guidelines, Appendix G.

(2) NBS assumed the 30 Commercial customers that were not categorized as low, medium or high users could conservatively be included in the Commercial - Medium User category.

Wastewater: Rate Design

Recommendations:

- ❖ It is recommended that the City Council select the rate design of adding a volumetric charge to the residential wastewater rates with a cap of 18 hcf per bi-monthly bill.
- ❖ It is recommended that the City Council approve the redesign of the Commercial/Industrial customer classes into low-, medium-, and high-strength groups with their individual rate.

Wastewater: Rate Design (optimal)

Wastewater Rates: Figures 23

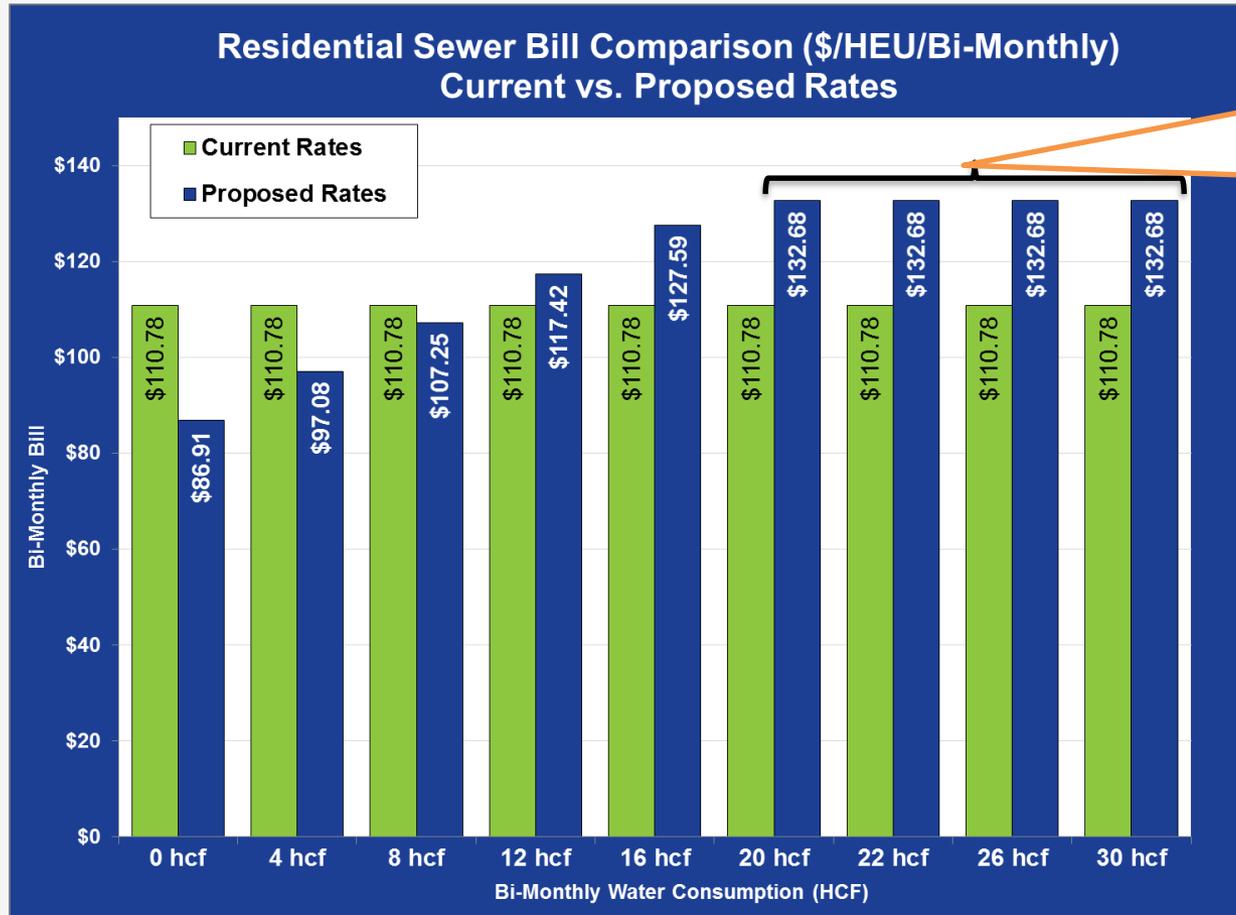
Residential (first year)

Fixed: \$43.45 per month
(each dwelling unit {EDU})

Volumetric: \$2.56 per hcf
(capped at 18 hcf per bi-monthly bill)

Wastewater: Rate Design (optimal)

Residential Bills Under New Wastewater Rate Structure*:



Residential Consumption is Capped at 9 hcf/month

* This rate alternative is based on the "Optimal Funding Scenario"

Wastewater: Rate Design (optimal)

Wastewater Commercial: Low, Medium, High

Commercial Low (first year)

Fixed: \$64.65 per month

Volumetric: \$4.05 per hcf

Commercial Medium (first year)

Fixed: \$134.18 per month

Volumetric: \$4.49 per hcf

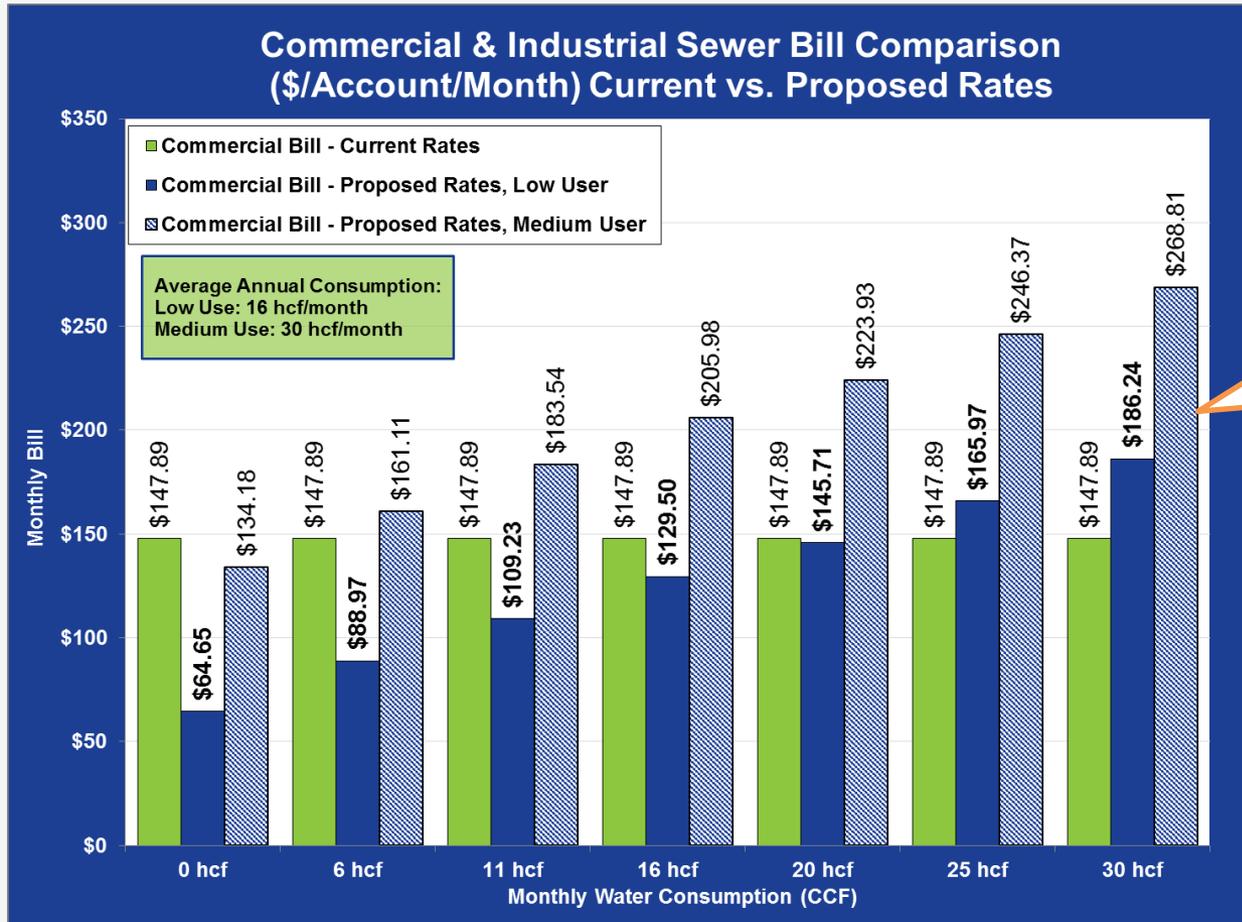
Commercial High (first year)

Fixed: \$403.20 per month

Volumetric: \$8.40 per hcf

Wastewater Bill Comparisons, continued

Commercial (2" Meter) Bills – New Wastewater Rates*:



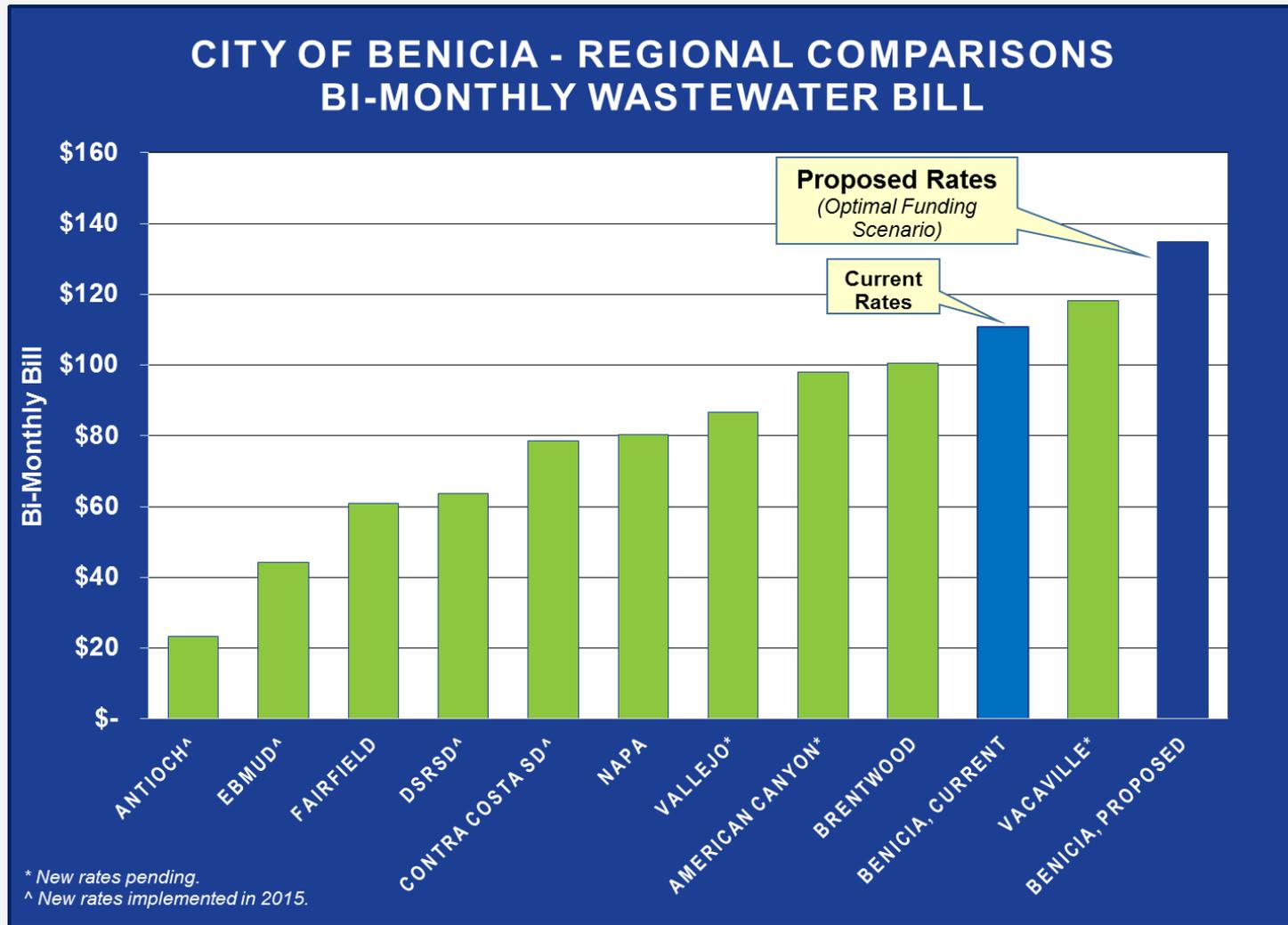
Proposed Wastewater Bills Reflect Different Costs of Treating Levels of Effluent Strengths

* This rate alternative is based on the "Optimal Funding Scenario"

Wastewater Bill Comparisons to Outside Agencies

- The City's proposed wastewater rates are at the high end of the regional comparison. The range is \$23.20 to \$134.66.
 - Some agencies with the lower fees are charging for only conveyance and do not have treatment included in the costs of services.
 - Some agencies such as EBMUD and DSRD collect portion of their costs through a property tax assessment.
- Next page assumed consumption is 18 hcf per bi-monthly bill to show how the proposed rates compare to other agencies in the region.

Wastewater Bill Comparisons to Outside Agencies



Wastewater Rate Design: Rate Stabilization

- Wastewater revenues can be impacted if the drought worsens.
- Rate Stabilization Fund is designed to further promote financial stability when there are fluctuations in rate revenue.

Water Rate Design: Rate Stabilization

- This rate stabilization fee is tied to the City's drought ordinance.
 - At Stage 4 drought conditions, the volumetric rate per hcf goes up to 8%
 - At Stage 5, the volumetric rate per hcf goes up to 16%.
- This stabilizes rate revenue despite lower consumption so that the utility remains fiscally healthy even during an increase in drought-related conservation.

Wastewater: Results of Rate Study

- Wastewater: approximately a \$22 bi-monthly (\$11 per month) bill increase based on funding the Optimal preventative maintenance and capital for 18 (or more) hcf.
- SFR customers under 8 hcf will see a reduction in their bi-monthly bill.

Wastewater Results: Summary of Reserve Funds

Beginning Reserve Fund Balances and Recommended Reserve Targets	Budget	Budget	Projected				
	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
Operating Reserve							
Ending Balance	\$ 1,436,797	\$ 1,556,572	\$ (403,998)	\$ (583,344)	\$ (110,075)	\$ (298,294)	\$ 1,981,296
<i>Recommended Minimum Target</i>	<i>1,566,000</i>	<i>1,569,000</i>	<i>2,310,000</i>	<i>1,958,000</i>	<i>2,024,000</i>	<i>2,098,000</i>	<i>2,104,000</i>
Capital Rehabilitation & Replacement Reserve							
Ending Balance	\$ 1,133,808	\$ 1,133,808	\$ 1,133,808	\$ 1,133,808	\$ 1,133,808	\$ 1,133,808	\$ 1,133,808
<i>Recommended Minimum Target</i>	<i>1,618,800</i>	<i>1,570,200</i>	<i>1,534,500</i>	<i>1,526,800</i>	<i>1,502,400</i>	<i>1,533,900</i>	<i>1,522,600</i>
Rate Stabilization Fund Reserve							
Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<i>Recommended Minimum Target</i>	<i>522,000</i>	<i>523,000</i>	<i>770,000</i>	<i>653,000</i>	<i>675,000</i>	<i>699,000</i>	<i>701,000</i>
Total Ending Balance	\$ 2,570,605	\$ 2,690,380	\$ 729,810	\$ 550,464	\$ 1,023,733	\$ 835,514	\$ 3,115,104
Total Recommended Minimum Target	\$ 3,706,800	\$ 3,662,200	\$ 4,614,500	\$ 4,137,800	\$ 4,201,400	\$ 4,330,900	\$ 4,327,600

Wastewater Results: Summary of Reserve Funds

- At the end of the 5 year rate period, the Wastewater reserve funds are **still below** the recommended minimum target by \$800,000.
 - It should also be noted that the capital improvement budget has a wastewater project planned in FY 2021/2022 that requires \$3.9 million (see Exhibit 2 in Wastewater appendences) that has not been sufficiently funded under this rate proposal.

Advanced Metering Infrastructure (AMI)

AMI: Water Meter Replacement

- In 2015, Solano County Grand Jury Report
 - Showed that 25-30% of the City's water leaves the plant and is not reported as billed consumption.
 - The industry expectation for unaccounted water is between 10-15%.
- The City estimates that 12-15% of unaccounted water is assumed to come from underperforming, aging water meters.

AMI: Water Meter Replacement

- AMI water meter replacement project:
 - \$12 per bi-monthly bill for the water meter replacement project (\$6 per month) for 3/4” and 5/8” meters.
 - \$14 per bi-monthly bill for the water meter replacement project (\$7 per month) for larger meters.
- ❖ *The fee would be reduced to match actual rate terms.*

AMI: Water Meter Replacement

Recommendation:

- ❖ It is recommended that the City Council approve a flat fee for the citywide AMI and replacement of water meters. Staff will adjust the amount down to match the actual funding terms.

Combined Residential Bills Impacts: Water & Wastewater

Estimated Average SFR Bi-monthly Bill Increase

Optimal Model

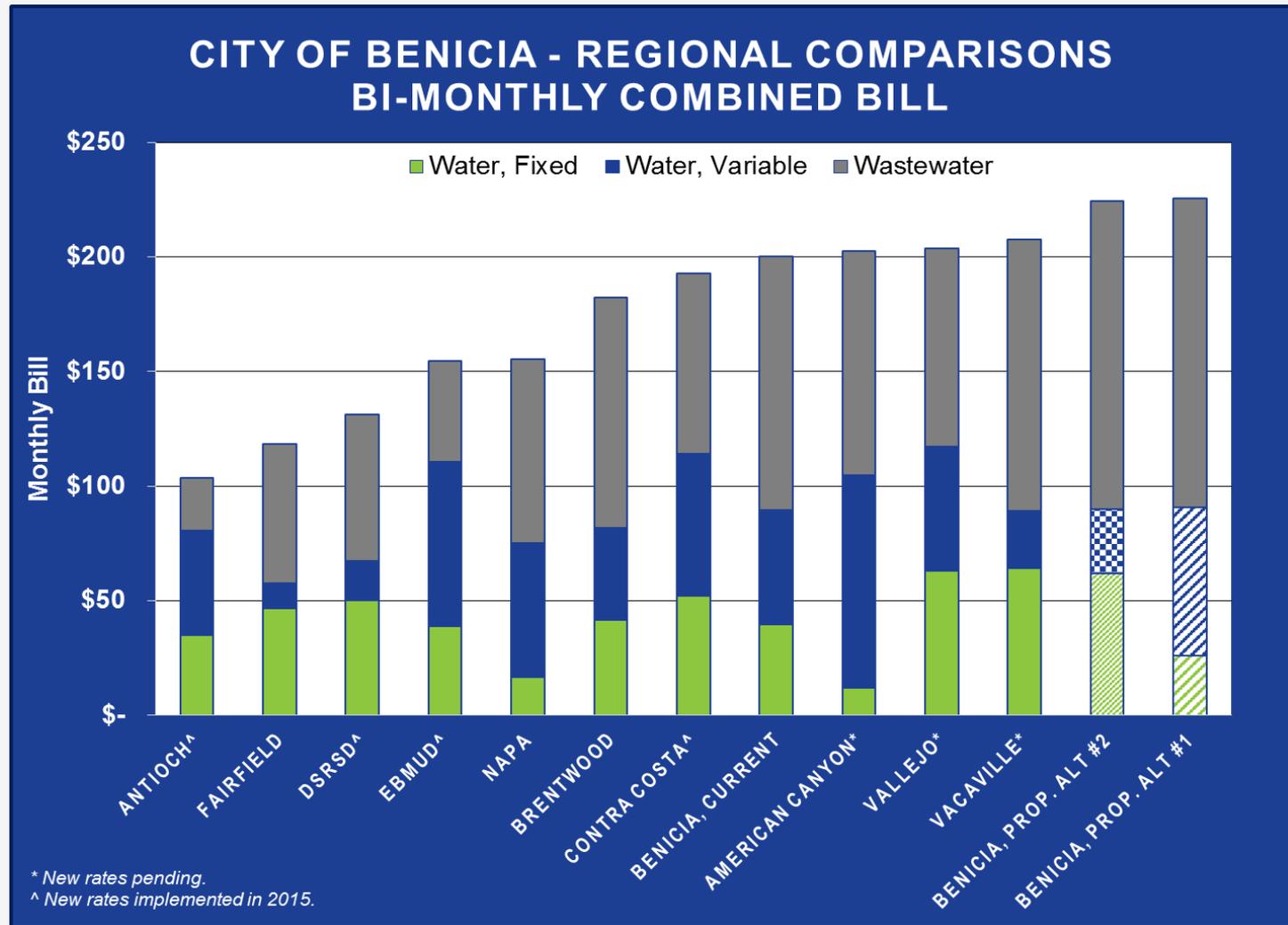
Water	\$	10
Wastewater	\$	22
AMI meter replacement	\$	12
		<hr/>
Total for 25 hcf (bi-monthly)	\$	44
		<hr/> <hr/>

Estimated Average SFR Bi-monthly Bill Increase

Achievable Model

Water	\$	10
Wastewater	\$	13
AMI meter replacement	\$	12
		<hr/>
Total for 25 hcf (bi-monthly)	\$	35
		<hr/> <hr/>

Water & Wastewater Bill Comparisons, cont'd.



Next Steps

- It is recommended that the City Council select the rate design of 30% fixed and 70% variable for the residential water rates.
- It is recommended that the City Council select the rate design of adding a volumetric charge to the residential wastewater rates with a cap of 18 hcf per bi-monthly bill.
- It is recommended that the City Council approve the redesign of the Commercial/Industrial customer classes into low-, medium-, and high-strength groups with their individual rate.

Next Steps

- It is recommended that the City Council approve a flat fee for the citywide AMI and replacement of water meters. Staff will adjust the amount down to match the actual funding terms.
- It is recommended that the drought surcharge stop upon the adoption of the proposed water rates and be replaced with the rates stabilization rates proposed.

Next Steps

After direction is provided, staff will return on April 5, 2016 with a finalized rate study. After the 45 day notice period, the City Council will conduct a public hearing on May 24, 2016. The adoption of new water and wastewater utility rates would go into effect on the July 2016 utility bills.

Questions

