



FALLBROOK PUBLIC UTILITY DISTRICT
MEETING OF THE FISCAL POLICY AND INSURANCE
COMMITTEE

AGENDA

MONDAY, MARCH 6, 2017
12:00 NOON

FALLBROOK PUBLIC UTILITY DISTRICT
990 E. MISSION RD., FALLBROOK, CA 92028
PHONE: (760) 728-1125

If you have a disability and need an accommodation to participate in the meeting, please call the Secretary at (760) 728-1125 for assistance so the necessary arrangements can be made.

Writings that are public records and are distributed during a public meeting are available for public inspection at the meeting if prepared by the local agency or a member of its legislative body or after the meeting if prepared by some other person.

I. PRELIMINARY FUNCTIONS

CALL TO ORDER / ROLL CALL

PUBLIC COMMENT (*limit 3 minutes*)

II. ACTION / DISCUSSION

A. PORTFOLIO PERFORMANCE PRESENTATION BY PFM ASSET MANAGEMENT LLC

B. MINOR UPDATES TO INVESTMENT POLICY

C. INFORMATION PROVIDED BY CALPERS ACTUARY

D. RATE STUDY PRESENTATION BY RAFTELIS FINANCIAL CONSULTANTS, INC.

III. ADJOURNMENT OF MEETING

DECLARATION OF POSTING

I, Mary Lou Boultinghouse, Secretary of the Board of Directors of the Fallbrook Public Utility District, do hereby declare that I posted a copy of the foregoing agenda in the glass case at the entrance of the District Office located at 990 East Mission Road, Fallbrook, California, at least 72 hours prior to the meeting in accordance with Government Code § 54954.2(a).

I, Mary Lou Boultinghouse, further declare under penalty of perjury and under the laws of the State of California that the foregoing is true and correct.

March 2, 2017
Dated / Fallbrook, CA

Secretary, Board of Directors

Fiscal Policy & Insurance Committee

March 6, 2017

Item A



PFM Asset Management LLC

FALLBROOK PUBLIC UTILITY DISTRICT

Investment Performance Review For the Quarter Ended December 31, 2016

Client Management Team

Sarah Meacham, Managing Director
Henry Sun, Senior Analyst

PFM Asset Management LLC

601 South Figueroa, Suite 4500
Los Angeles, CA 90017
213-489-4075

One Keystone Plaza, Suite 300
Harrisburg, PA 17101-2044
717-232-2723

Market Update

Over the Last 12 Months



Economy Grew
\$534 billion



Jobs Created
2.3 million



New Vehicles Sold
17.4 million



New Homes Sold
561 thousand

Economic Highlights



Consumer Confidence
Highest since 2001



Jobless Claims
Lowest since 1974



Consumer Prices
Highest since 2014



Housing Prices
Record high

Market Highlights



Equities
Record high



2-Yr Treasury Yield
Highest since 2011



US Dollar
Highest since 2003

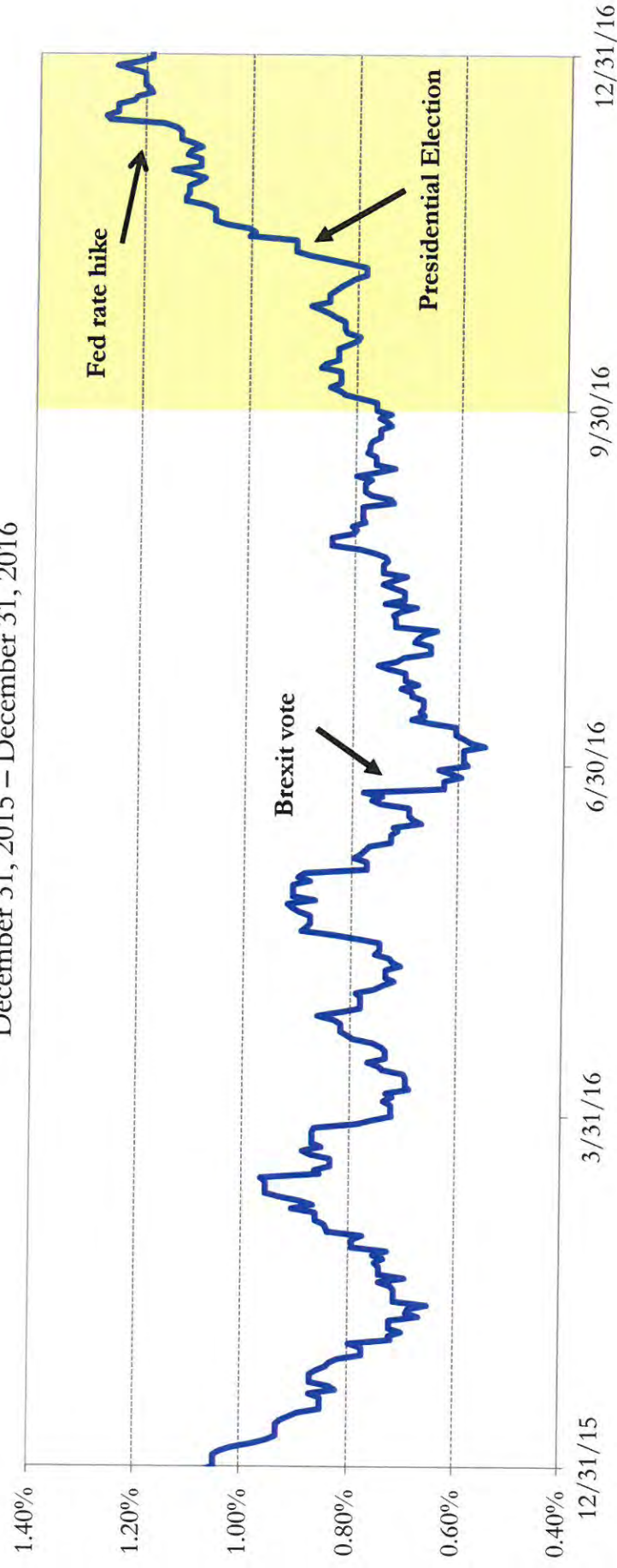


Oil
Highest since 2015

2-YEAR TREASURY YIELDS

- The largest increase in Treasury yields in 2016 occurred during the fourth quarter as the markets reacted to the results of the U.S. Presidential election and the FOMC's decision to increase the fed funds target rate.
- After a sharp increase in November, U.S. Treasury yields adopted a more gradual pace of increases in December as markets continued to price in possible economic growth and inflation as a result of President-elect Trump's promised fiscal policies.

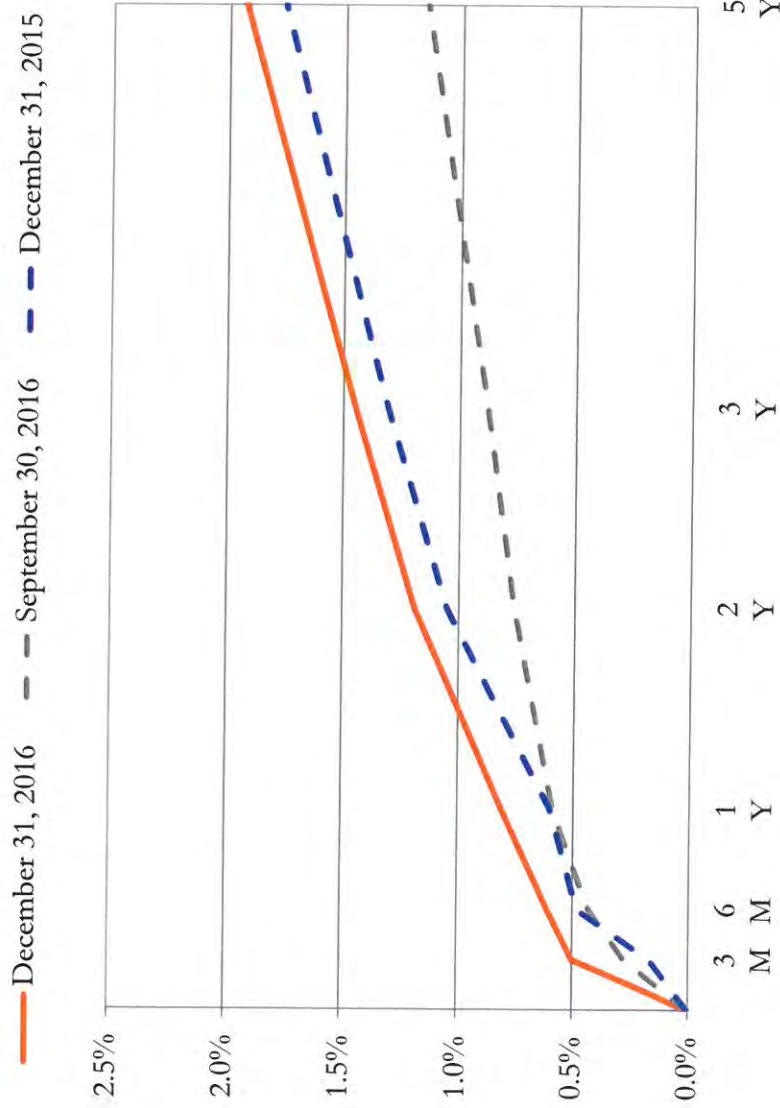
2-Year U.S. Treasury Yield
December 31, 2015 – December 31, 2016



YIELDS INCREASE ACROSS THE BOARD

- Treasury rates were volatile during the year on mixed global-economic conditions but ended the year modestly higher than they were at the end of 2015.
- Yields surged following the U.S. elections, with the longer maturities rising substantially on higher growth and inflation expectations. Shorter maturities also rose in anticipation of the Federal Reserve's December 14 rate hike.

U.S. Treasury Yield Curve



Yield Curve History

	12/31/15	09/30/16	12/31/16
1-Mo.	0.13%	0.19%	0.42%
3-Mo.	0.17%	0.28%	0.50%
6-Mo.	0.48%	0.43%	0.61%
1-Yr.	0.60%	0.59%	0.81%
2-Yr.	1.05%	0.76%	1.19%
3-Yr.	1.31%	0.88%	1.45%
5-Yr.	1.76%	1.15%	1.93%
7-Yr.	2.09%	1.42%	2.25%
10-Yr.	2.27%	1.60%	2.45%
30-Yr.	3.02%	2.32%	3.07%

• December 14, 2016 Meeting

- Federal Reserve raised interest rate range to **0.50% - 0.75%**.
- **Job gains have been solid in recent months and the unemployment rate has declined.**
- **Inflation has increased somewhat since earlier this year but is still below the Fed's 2 percent longer-run objective.**

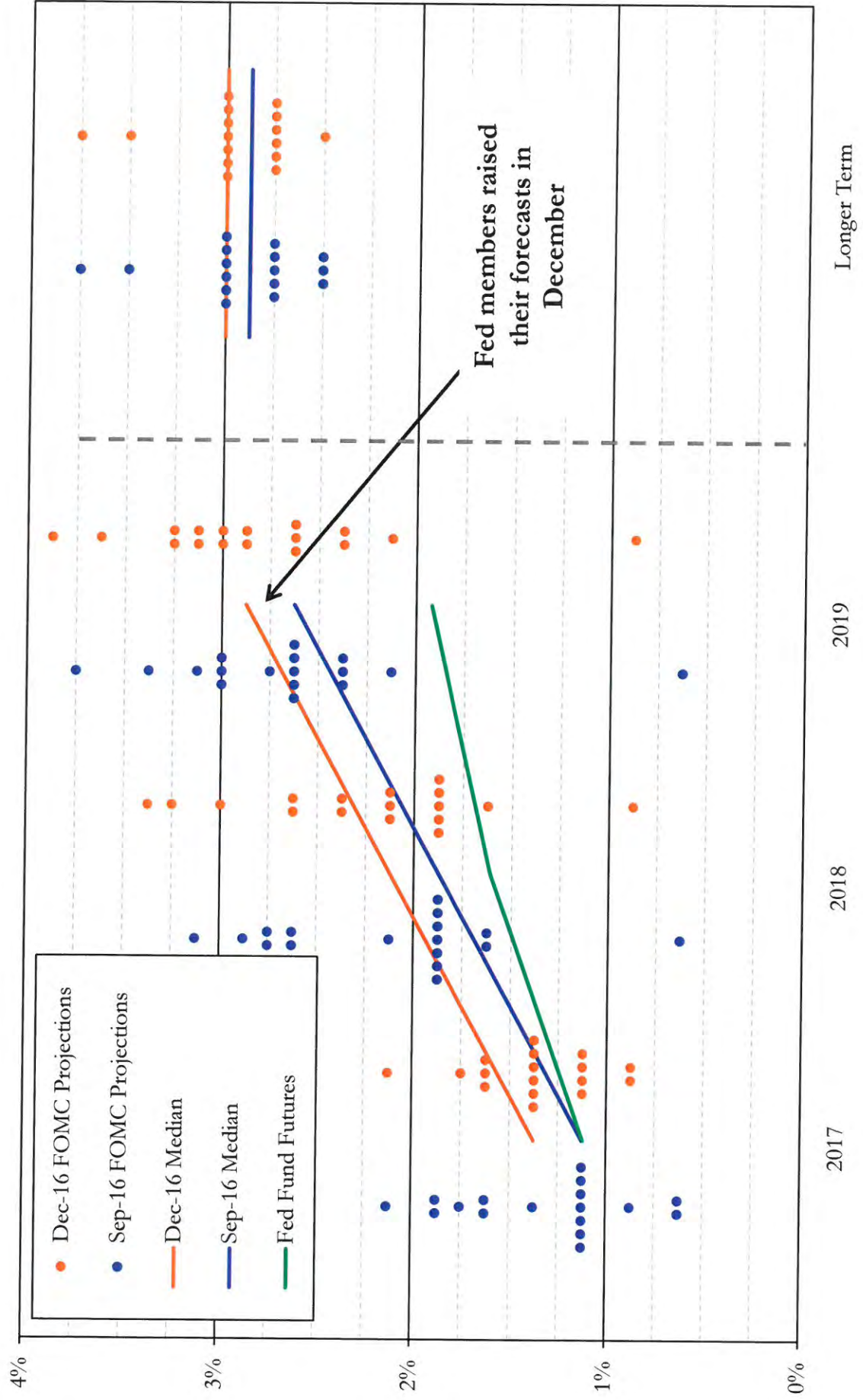
• February 1, 2017 Meeting

- In view of realized and expected labor market conditions and inflation, the Fed decided to **maintain the target range for the federal funds rate at $\frac{1}{2}$ to $\frac{3}{4}$ percent.**
- The Fed expects that economic conditions will evolve in a manner that will warrant only **gradual increases in the federal funds rate.**

• Janet Yellen's Report to Congress on February 14, 2017

- **"Waiting too long to remove accommodation would be unwise"** and may force the FOMC to raise rates rapidly, which could risk disrupting financial markets.
- The Fed will remain nimble and may adjust their outlook in response to changing economic circumstances.

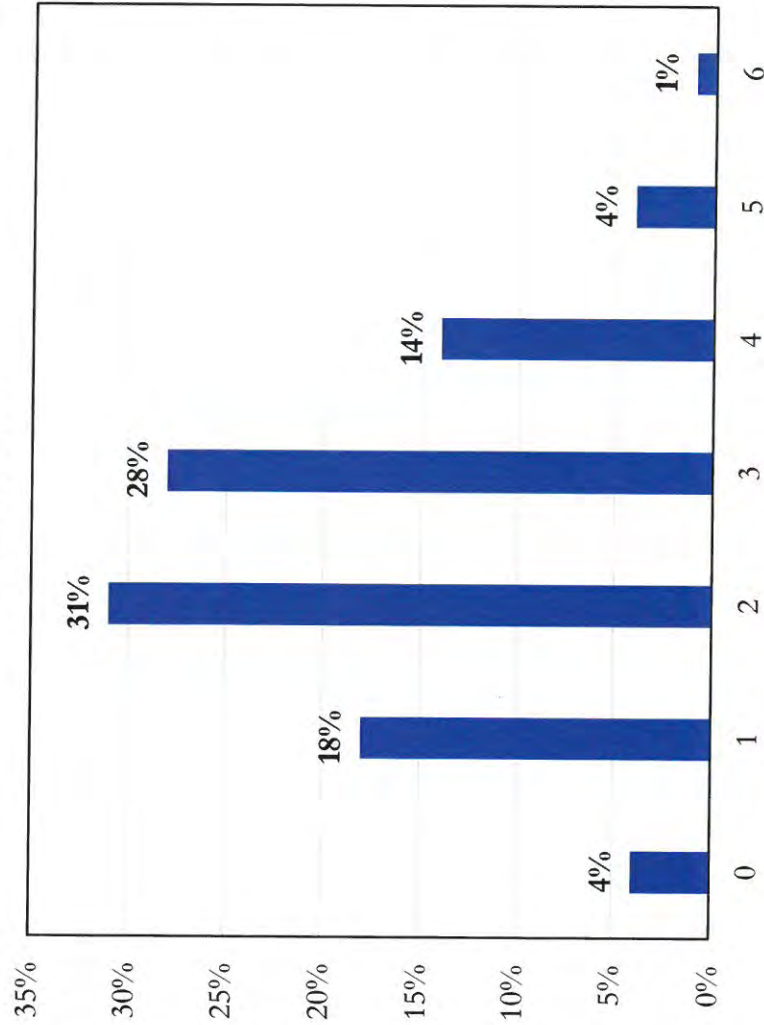
FOCM "DOT PLOT"



PROBABILITY OF A FED RATE HIKE

- Market-implied probabilities indicate that there is a 44% chance of the Fed raising rates at their March 15th meeting. Additionally, the market has also priced in a roughly 31% chance of two further rate hikes in 2017.

Number of Rate Hikes Expected Through December 2017



Probability of at least One Rate Hike

Meeting	2/15/2017
3/15/17	44%
5/3/17	64%
6/14/17	78%
7/27/17	82%
9/20/17	89%
11/1/17	91%
12/13/17	96%

Investment Performance Review

- The fourth quarter was dominated by the U.S. presidential election—first by general uncertainty, then more significantly by the surprise Trump victory. Yields surged in the post-election period as expectations for U.S. economic growth and inflationary expectations rose and in anticipation of a December FOMC rate hike.
- For much of the past year, we maintained a duration position generally neutral to that of the benchmark. By late October, however, uncertainty related to the election and the likelihood of a Fed rate increase reduced the attractiveness of a neutral duration position. We strategically shortened the portfolio duration in November, reducing the price sensitivity of the portfolio to interest rate changes, which is beneficial in a rising rate environment.
- Federal agency yield spreads continued to tighten over the quarter, erasing much of the value seen off and on during the year. We found it strategically advantageous to sell federal agencies to purchase U.S. Treasuries at similar yields.
- We generally maintained allocation to the corporate sector as valuations remained fair to modestly expensive amid tight yield spread levels. The sector once again outperformed comparable-maturity Treasuries during the quarter, finishing its strongest year of relative performance since 2012.
- In the fourth quarter, money market industry reform provided excellent investment opportunities, and we purchased negotiable certificates of deposits as attractive alternatives to Treasuries and agencies with longer maturities.
- In the fourth quarter, the District's portfolio had strong relative performance, outperforming its benchmark by 0.16%. This is the result of the portfolio's diversification and PFM's active management. In negative periods, returns that are "less negative" than benchmark returns contribute to increased outperformance since inception. It is important to clarify that negative returns over this period do not equate to the District realizing a loss of 0.88%. Because interest rates rose, and we have been in a prolonged low yield environment, unrealized declines in market values outweighed investment income the District received. Over the quarter, the District's portfolio realized positive income of \$59,132.54.

- Although we enter 2017 with a high degree of political uncertainty, our expectations are for a modest uptick in economic growth in the U.S., a trend toward higher inflation, and a continued, but gradual, upward trajectory of interest rates.
- The most recent Federal Open Market Committee “dot plot” projections anticipate three Fed rate hikes in 2017 and another three hikes in 2018. Market expectations are more conservative, expecting only two hikes over this year.
- As 2017 starts with the highest yields in several years, we plan to initially position the portfolio’s duration to be aligned with that of the benchmark.
- Agency yield spreads over Treasuries remain narrow. As a result, our strategy will generally favor U.S. Treasuries over agencies unless specific issues offer identifiable value.
- Yield spreads on corporate securities also remain narrow. Identifying incremental return potential in the corporate bond sector requires careful relative value analysis. Improving corporate profits, as well as anticipated pro-business tax reform from the incoming Trump administration, support favorable fundamentals of the credit sector.
- We will continue to evaluate opportunities in the mortgage-backed security sector, purchasing those issues we believe are well structured, offer adequate yield spreads, and which have limited duration variability.
- We will continue to monitor incoming economic data, Fed policy, and market relationships, adjusting portfolio positioning as needed. This will include monitoring and assessing the policies of the incoming Trump administration for their impact on economic and market conditions.

Security Type	Market Value as of December 31, 2016	Percentage of Portfolio	% Change vs. 9/30/16	Permitted by Policy	In Compliance
U.S. Treasury	\$3,462,354	24%	+10%	100%	✓
Federal Agencies	\$2,204,199	15%	-9%	100%	✓
Federal Agency CMOs	\$105,398	1%	-	100%	✓
Commercial Paper	\$738,776	5%	-3%	25%	✓
Certificate of Deposit	\$3,151,402	22%	+2%	30%	✓
Corporate Notes	\$4,133,528	29%	-	30%	✓
Asset-Backed Securities	\$398,718	3%	-	20%	✓
Money Market Fund	\$45,809	<1%	-	20%	✓
Totals	\$14,240,184	100%			

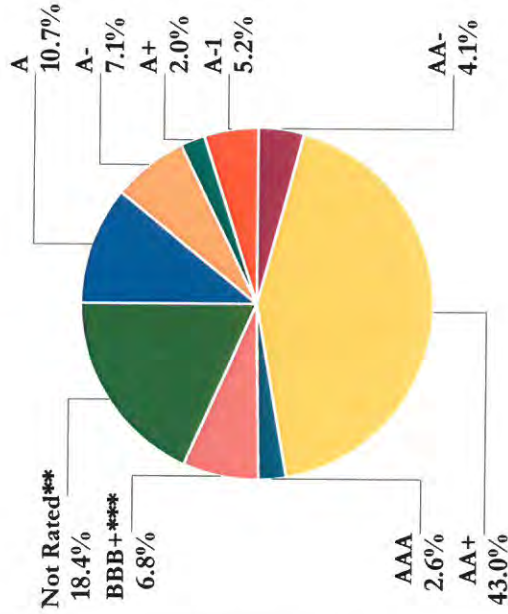
End of quarter trade-date market values of portfolio holdings include accrued interest.

Portfolio Statistics

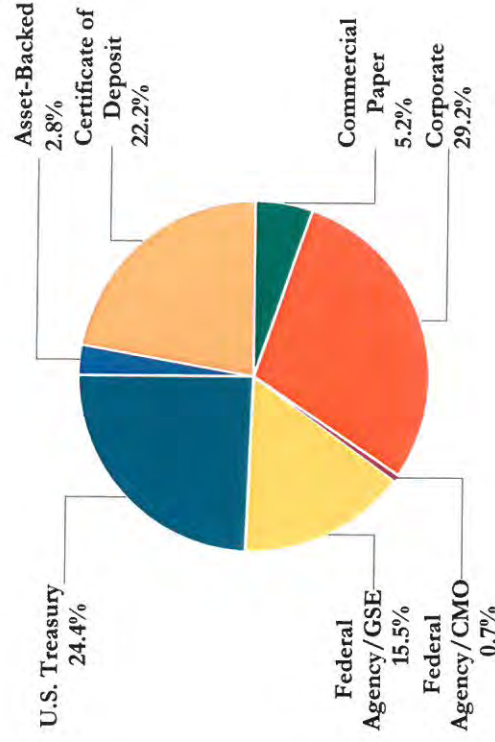
As of December 31, 2016

Par Value:	14,087,000
Total Market Value:	14,240,184
Security Market Value:	14,142,766
Accrued Interest:	51,609
Cash:	45,809
PFM	-
Amortized Cost:	14,225,196
Yield at Market:	1.62%
Yield at Cost:	1.50%
Effective Duration:	2.59 Years
Duration to Worst:	2.63 Years
Average Maturity:	2.75 Years
Average Credit: *	AA

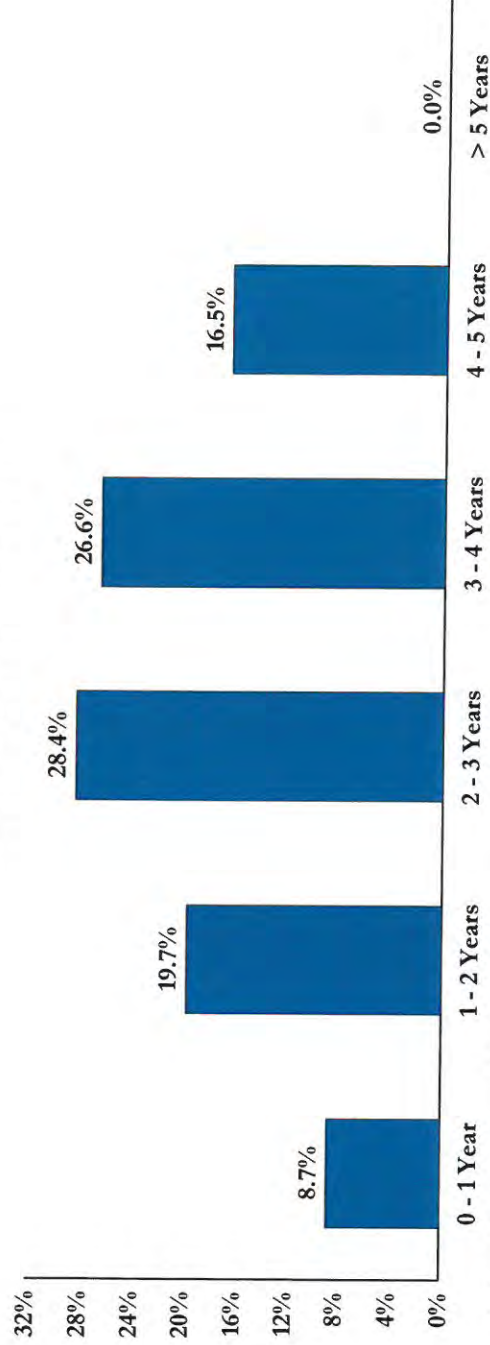
Credit Quality (S&P Ratings)



Sector Allocation



Maturity Distribution



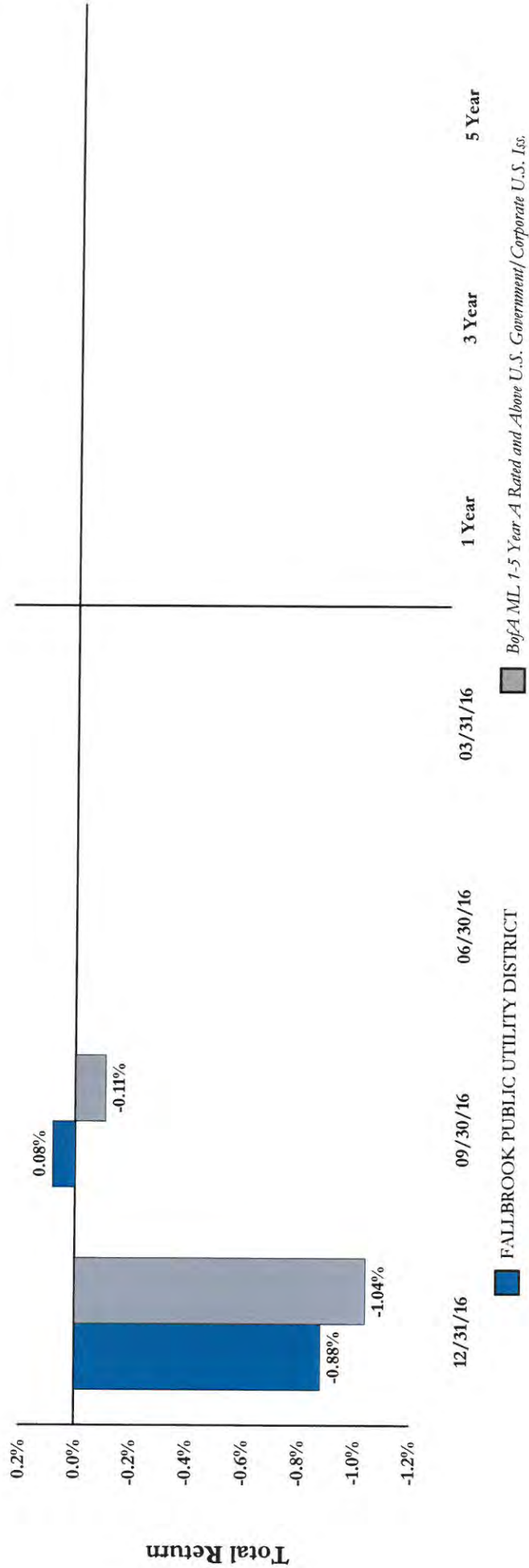
015 An average of each security's credit rating assigned a numeric value and adjusted for its relative weighting in the portfolio.

Non-negotiable CDs are FDIC-insured and not rated by S&P. John Deere ABS is not rated by S&P but is rated Aaa by Moody's and AAAA by Fitch.

*Citigroup is rated BBB+ by S&P but A by Fitch, Goldman Sachs is rated BBB+ by S&P but A3 by Moody's and A by Fitch, Morgan Stanley is rated BBB+ by S&P but A3 by Moody's and A by Fitch.

Portfolio Performance (Total Return)

Portfolio/Benchmark	Effective Duration	Quarter Ended				Annualized Return		
		12/31/16	09/30/16	06/30/16	03/31/16	1 Year	3 Year	5 Year
FALLBROOK PUBLIC UTILITY DISTRICT	2.59	-0.88%	0.08%	-	-	-	-	-
<i>Net of Fees *</i>	-	-0.90%	0.05%	-	-	-	-	-
BofA ML 1-5 Year A Rated and Above U.S. Government/Corporate U.S. Issuers Only Index	2.61	-1.04%	-0.11%	-	-	-	-	-
Difference (Gross)		0.16%	0.19%	-	-	-	-	-
Difference (Net)		0.14%	0.16%	-	-	-	-	-



016

Portfolio performance is gross of fees unless otherwise indicated. *Fees were calculated based on average assets during the period at the contractual rate.

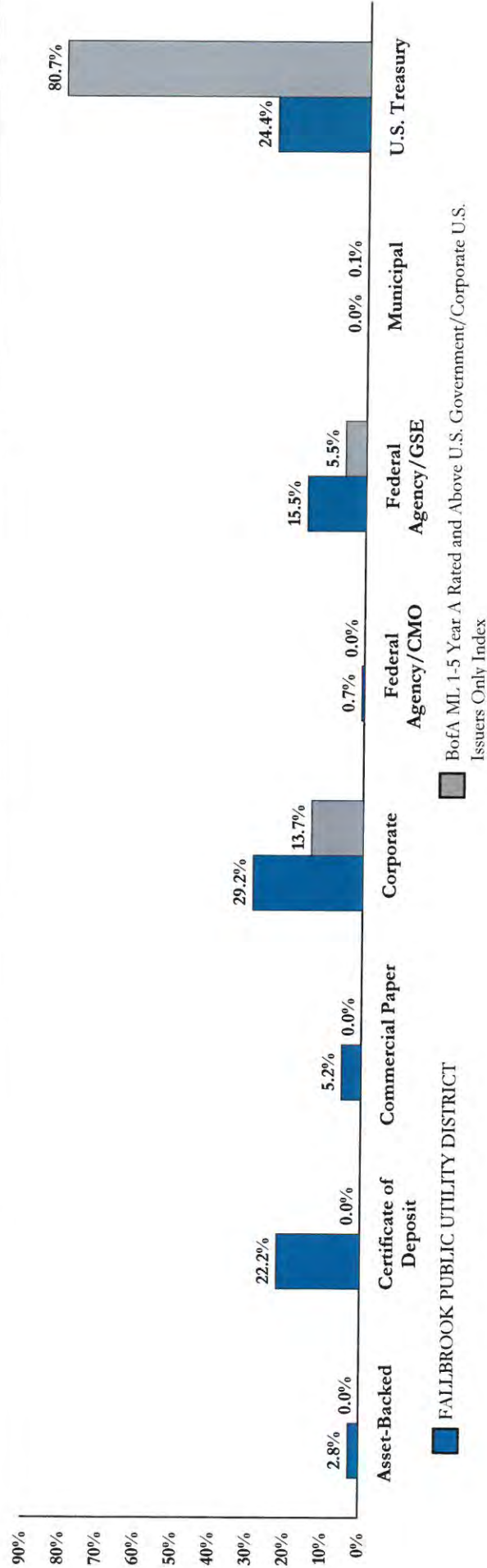
Portfolio Earnings

Quarter-Ended December 31, 2016

	Market Value Basis	Accrual (Amortized Cost) Basis
Beginning Value (09/30/2016)	\$14,285,588.62	\$14,203,395.50
Net Purchases/Sales	\$43,036.54	\$43,036.54
Change in Value	(\$185,859.43)	(\$21,235.84)
Ending Value (12/31/2016)	\$14,142,765.73	\$14,225,196.20
Interest Earned	\$59,132.54	\$59,132.54
Portfolio Earnings	(\$126,726.89)	\$37,896.70

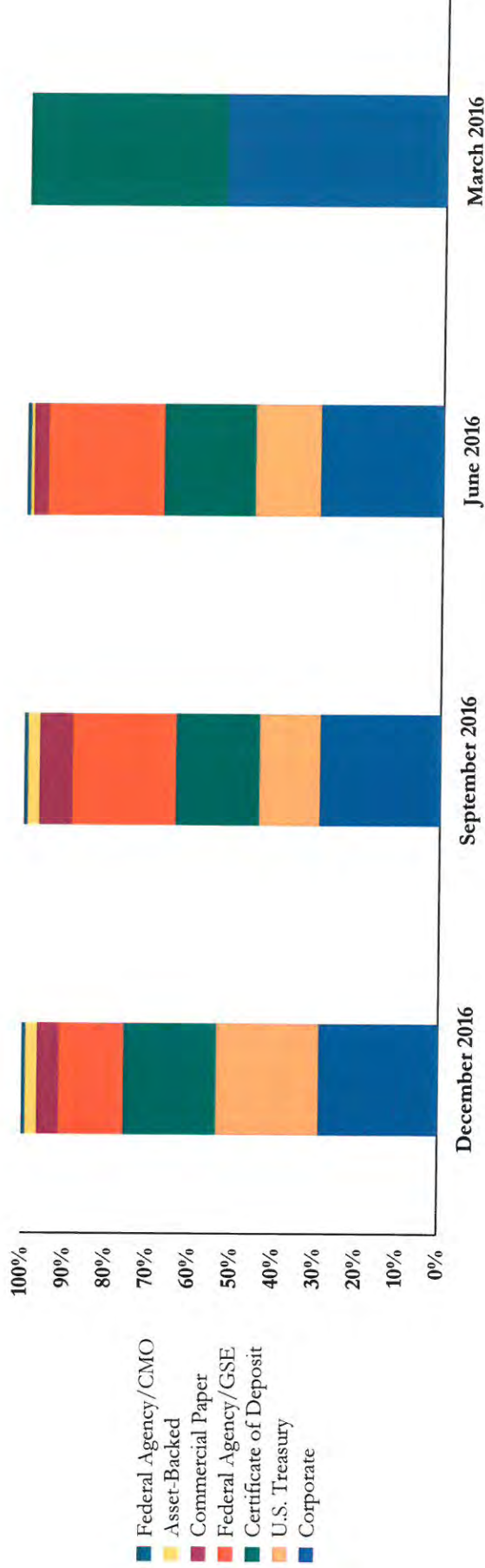
Sector Allocation
 As of December 31, 2016

Sector	Market Value (\$)	% of Portfolio	% of Benchmark
Corporate	4,110,510	29.2%	13.7%
U.S. Treasury	3,452,284	24.4%	80.7%
Certificate of Deposit	3,139,620	22.2%	-
Federal Agency/GSE	2,197,835	15.5%	5.5%
Commercial Paper	738,776	5.2%	-
Asset-Backed	398,499	2.8%	-
Federal Agency/CMO	105,242	0.7%	-
Municipal	0	-	0.1%
Total	14,142,766	100.0%	100.0%



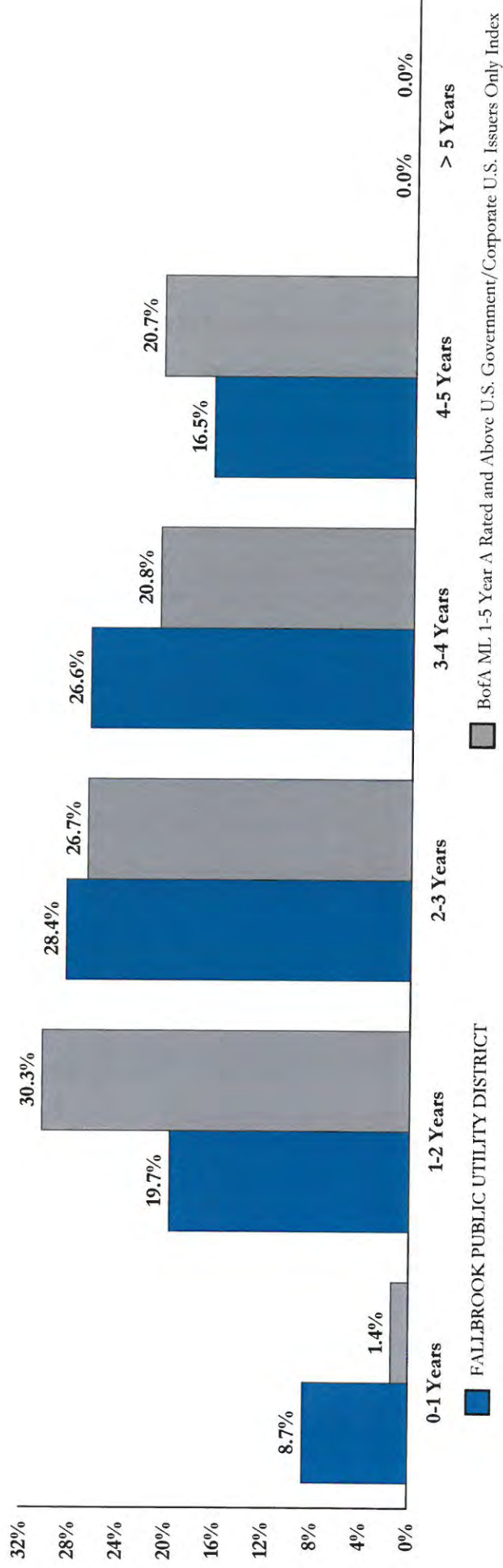
Sector Allocation

Sector	December 31, 2016		September 30, 2016		June 30, 2016		March 31, 2016	
	MV (\$MM)	% of Total	MV (\$MM)	% of Total	MV (\$MM)	% of Total	MV (\$MM)	% of Total
Corporate	4.1	29.2%	4.2	29.3%	4.2	29.8%	3.5	53.1%
U.S. Treasury	3.5	24.4%	2.1	14.5%	2.2	15.7%	0.0	0.0%
Certificate of Deposit	3.1	22.2%	2.8	19.9%	3.1	21.8%	3.1	46.9%
Federal Agency/GSE	2.2	15.5%	3.5	24.8%	3.9	27.7%	0.0	0.0%
Commercial Paper	0.7	5.2%	1.1	8.0%	0.5	3.4%	0.0	0.0%
Asset-Backed	0.4	2.8%	0.4	2.8%	0.1	0.8%	0.0	0.0%
Federal Agency/CMO	0.1	0.7%	0.1	0.7%	0.1	0.8%	0.0	0.0%
Total	\$14.1	100.0%	\$14.3	100.0%	\$14.2	100.0%	\$6.6	100.0%



Maturity Distribution
 As of December 31, 2016

Portfolio/Benchmark	Yield at Market	Average Maturity	0-1 Years	1-2 Years	2-3 Years	3-4 Years	4-5 Years	>5 Years
FALLBROOK PUBLIC UTILITY DISTRICT	1.62%	2.75 yrs	8.7%	19.7%	28.4%	26.6%	16.5%	0.0%
BofA ML 1-5 Year A Rated and Above U.S. Government/Corporate U.S. Issuers Only Index	1.51%	2.81 yrs	1.4%	30.3%	26.7%	20.8%	20.7%	0.0%



Issuer Distribution
As of December 31, 2016

Issuer	Market Value (\$)	% of Portfolio
UNITED STATES TREASURY	3,452,284	24.4%
FANNIE MAE	1,350,500	9.6%
FEDERAL HOME LOAN BANKS	656,540	4.6%
CATERPILLAR INC	567,307	4.0%
MORGAN STANLEY	567,071	4.0%
AMERICAN EXPRESS CO	529,831	3.8%
CAPTIAL ONE FINANCIAL CORP	495,514	3.5%
BNP PARIBAS	489,651	3.5%
JP MORGAN CHASE & CO	483,307	3.4%
WELLS FARGO & COMPANY	385,440	2.7%
BANK OF NEW YORK CO INC	350,963	2.5%
APPLE INC	328,083	2.3%
CHEVRON CORP	298,768	2.1%
FREDDIE MAC	296,037	2.1%
GOLDMAN SACHS GROUP INC	287,894	2.0%
NORDEA BANK AB	282,260	2.0%
CANADIAN IMPERIAL BANK OF COMMERCE	282,260	2.0%
BANK OF MONTREAL	249,125	1.8%

Top 5 = 46.6%

Top 10 = 63.5%

FALLBROOK PUBLIC UTILITY DISTRICT

Issuer	Market Value (\$)	% of Portfolio
SYNCHRONY BANK	248,723	1.8%
STATE BANK OF INDIA	248,039	1.8%
BANK OF BARODA	247,803	1.8%
FIRST RESOURCE BANK	246,952	1.8%
RONDOUT SAVINGS BANK	246,913	1.8%
CELTIC BANK	246,378	1.7%
GOLD COAST BANK	246,192	1.7%
BB&T CORPORATION	245,362	1.7%
BURLINGTON NORTHERN SANTA FE	215,087	1.5%
TOYOTA AUTO RECEIVABLES	154,352	1.1%
CARMAX AUTO OWNER TRUST	134,918	1.0%
CIT BANK	100,360	0.7%
CITIGROUP INC	99,623	0.7%
HYUNDAI AUTO RECEIVABLES	74,396	0.5%
JOHN DEERE OWNER TRUST	34,833	0.3%
Grand Total:	14,142,766	100.0%

Portfolio Holdings



Managed Account Detail of Securities Held

For the Month Ending December 31, 2016

FPUD - INVESTMENT PORTFOLIO

Security Type/Description Dated Date/Coupon/Maturity	CUSIP	S&P Rating	Moody's Rating	Trade Date	Settle Date	Original Cost	YTM at Cost	Accrued Interest	Amortized Cost	Market Value
U.S. Treasury Bond / Note										
US TREASURY NOTES DTD 01/31/2013 1.375% 01/31/2020	912828UL2	AA+	Aaa	05/03/16	05/06/16	197,201.37	1.07	1,122.04	196,822.52	194,261.15
US TREASURY NOTES DTD 06/01/2015 1.500% 05/31/2020	912828XE5	AA+	Aaa	09/01/16	09/02/16	533,469.73	1.06	692.31	532,735.96	523,400.33
US TREASURY NOTES DTD 06/01/2015 1.500% 05/31/2020	912828XE5	AA+	Aaa	06/27/16	06/29/16	588,903.32	0.87	758.24	587,126.69	573,247.98
US TREASURY NOTE DTD 06/30/2015 1.625% 06/30/2020	912828XH8	AA+	Aaa	11/01/16	11/02/16	325,300.00	1.16	14.36	325,070.16	320,150.08
US TREASURY NOTE DTD 12/02/2013 2.000% 11/30/2020	912828A42	AA+	Aaa	04/27/16	04/29/16	752,299.22	1.31	1,283.52	749,101.59	737,556.96
US TREASURY NOTES DTD 06/02/2014 2.000% 05/31/2021	912828WN6	AA+	Aaa	10/04/16	10/05/16	413,828.13	1.23	703.30	413,133.24	402,453.20
US TREASURY N/B DTD 07/31/2014 2.250% 07/31/2021	912828WY2	AA+	Aaa	11/22/16	11/23/16	301,268.75	1.78	2,777.65	301,134.45	299,620.88
US TREASURY NOTES DTD 09/02/2014 2.000% 08/31/2021	912828D72	AA+	Aaa	12/01/16	12/05/16	401,406.25	1.92	2,718.23	401,386.48	401,593.60
Security Type Sub-Total						3,513,676.77	1.27	10,069.65	3,506,511.09	3,452,284.18
Federal Agency Collateralized Mortgage Obligation										
FNMA SERIES 2016-M9 ASQ2 DTD 06/01/2016 1.785% 06/01/2019	3136ASPX8	AA+	Aaa	06/09/16	06/30/16	106,049.95	1.05	156.19	105,839.43	105,241.80
Security Type Sub-Total						106,049.95	1.05	156.19	105,839.43	105,241.80
Federal Agency Bond / Note										
FHLB NOTES DTD 07/08/2016 0.625% 08/07/2018	3130A8PK3	AA+	Aaa	08/01/16	08/02/16	423,491.25	0.80	1,062.50	423,799.42	421,622.10
FHLB NOTES DTD 12/08/2016 1.250% 01/16/2019	3130AAE46	AA+	Aaa	12/07/16	12/08/16	234,990.60	1.25	187.67	234,990.60	234,917.99



Managed Account Detail of Securities Held

For the Month Ending December 31, 2016

FPUD - INVESTMENT PORTFOLIO

Security Type / Description	Dated Date / Coupon / Maturity	CUSIP	Par	S&P Rating	Moody's Rating	Trade Date	Settle Date	Original Cost	YTM at Cost	Accrued Interest	Amortized Cost	Market Value
Federal Agency Bond / Note												
FNMA BENCHMARK NOTE	DTD 02/23/2016 1.000% 02/26/2019	3135G0J53	1,000,000.00	AA+	Aaa	04/27/16	04/29/16	998,230.00	1.06	3,472.22	998,648.86	993,783.00
FHLMC REFERENCE NOTE	DTD 07/20/2016 0.875% 07/19/2019	3137EAEB1	300,000.00	AA+	Aaa	07/19/16	07/20/16	299,274.00	0.96	1,173.96	299,381.03	296,037.30
FANNIE MAE GLOBAL NOTES	DTD 10/25/2016 1.000% 10/24/2019	3135G0R39	255,000.00	AA+	Aaa	10/24/16	10/25/16	254,224.80	1.10	467.50	254,271.56	251,474.88
Security Type Sub-Total			2,215,000.00					2,210,210.65	1.02	6,363.85	2,211,091.47	2,197,835.27
Corporate Note												
MORGAN STANLEY CORP NOTE	DTD 04/25/2013 2.125% 04/25/2018	6174467U7	220,000.00	BBB+	A3	07/13/16	07/18/16	222,382.60	1.50	857.08	221,779.96	220,876.48
APPLE INC GLOBAL NOTES	DTD 05/06/2014 2.100% 05/06/2019	037833AO3	325,000.00	AA+	Aa1	05/29/14	05/29/14	329,582.50	1.80	1,042.71	327,230.04	328,083.28
CHEVRON CORP NOTES	DTD 05/16/2016 1.561% 05/16/2019	166764BH2	300,000.00	AA-	Aa2	05/09/16	05/16/16	300,000.00	1.56	585.38	300,000.00	298,767.90
CITIGROUP INC CORP NOTES	DTD 06/09/2016 2.050% 06/07/2019	172967KS9	100,000.00	BBB+	Baa1	06/02/16	06/09/16	99,948.00	2.07	136.67	99,957.46	99,622.50
BURLINGTON NRTH CORP	DTD 09/24/2009 4.700% 10/01/2019	12189TBC7	200,000.00	A	A3	06/03/16	06/08/16	220,780.00	1.48	2,350.00	217,315.70	215,086.80
CATERPILLAR FINANCIAL CORP NOTES	DTD 12/01/2014 2.250% 12/01/2019	14912L6F3	565,000.00	A	A3	04/24/15	04/24/15	577,181.40	1.76	1,059.38	572,834.80	567,306.90
MELLON BANK (CALLABLE) CORPORATE NOTE	DTD 02/24/2015 2.150% 02/24/2020	06406HCZ0	352,000.00	A	A1	07/07/15	07/07/15	352,148.30	2.14	2,669.82	352,105.02	350,963.36
JP MORGAN CHASE & CO NOTES	DTD 07/22/2010 4.400% 07/22/2020	46625HHS2	455,000.00	A-	A3	04/27/16	04/29/16	493,065.30	2.31	8,842.17	487,271.00	483,306.92
WELLS FARGO & COMPANY NOTES	DTD 12/07/2015 2.550% 12/07/2020	94974BGR5	385,000.00	A	A2	04/27/16	04/29/16	391,579.65	2.16	654.50	390,662.70	385,440.06



Managed Account Detail of Securities Held

For the Month Ending December 31, 2016

FPUD - INVESTMENT PORTFOLIO

Security Type/Description Dated Date/Coupon/Maturity	CUSIP	S&P Rating	Moody's Rating	Trade Date	Settle Date	Original Cost	YTM at Cost	Accrued Interest	Amortized Cost	Market Value
Corporate Note										
MORGAN STANLEY CORP NOTES DTD 04/21/2016 2.500% 04/21/2021	61746BEAO	BBB+	A3	05/10/16	05/13/16	352,009.00	2.38	1,701.39	351,766.44	346,194.80
GOLDMAN SACHS GRP INC CORP NT (CALLABLE) DTD 04/25/2016 2.625% 04/25/2021	38141GVU5	BBB+	A3	08/10/16	08/15/16	296,693.20	2.11	1,395.63	296,172.45	287,894.31
AMERICAN EXPRESS CREDIT CORP NOTES DTD 05/05/2016 2.250% 05/05/2021	0258M0EB1	A-	A2	05/05/16	05/10/16	286,558.95	2.13	997.50	286,367.69	281,603.94
BRANCH BANKING & TRUST CORP NOTE DTD 05/10/2016 2.050% 05/10/2021	05531FAV5	A-	A2	05/10/16	05/16/16	249,835.00	2.06	726.04	249,855.17	245,362.25
Security Type Sub-Total						4,171,763.90	1.98	23,018.27	4,153,318.43	4,110,509.50
Commercial Paper										
BNP PARIBAS NY BRANCH COMM PAPER -- 0.000% 02/03/2017	09659BP38	A-1	P-1	05/09/16	05/10/16	486,155.54	1.06	0.00	489,528.38	489,650.63
BANK OF MONTREAL CHICAGO COMM PAPER -- 0.000% 04/21/2017	06366GRM3	A-1	P-1	07/25/16	07/26/16	247,907.78	1.13	0.00	249,144.45	249,125.00
Security Type Sub-Total						734,063.32	1.08	0.00	738,672.83	738,775.63
Certificate of Deposit										
GOLD COAST BANK LT CD DTD 12/30/2013 1.200% 10/30/2017	38058KCS3	NR	NR	12/31/13	12/31/13	245,000.00	1.13	16.11	245,000.00	246,191.68
CELTIC BANK LT CD DTD 12/20/2013 1.250% 12/20/2017	15118RJL2	NR	NR	12/21/13	12/21/13	245,000.00	1.22	100.68	245,000.00	246,378.37
CIT BANK LT CD DTD 03/13/2013 1.100% 03/13/2018	17284A6P8	NR	NR	03/14/13	03/14/13	100,000.00	1.08	331.51	100,000.00	100,360.30
RONDOUT SAVINGS BANK LT CD DTD 01/23/2015 1.350% 07/23/2018	77632ZAP4	NR	NR	01/24/15	01/24/15	245,000.00	1.32	1,467.99	245,000.00	246,912.72



Managed Account Detail of Securities Held

For the Month Ending December 31, 2016

FPUD - INVESTMENT PORTFOLIO

Security Type/Description	Dated Date/Coupon/Maturity	CUSIP	S&P Rating	Moody's Rating	Trade Date	Settle Date	Original Cost	YTM at Cost	Accrued Interest	Amortized Cost	Market Value
Certificate of Deposit											
FIRST RESOURCE BANK LT CD	01/28/2015 1.300% 07/30/2018	336177A03	NR	NR	01/29/15	01/29/15	245,000.00	1.10	1,369.99	245,000.00	246,951.92
CAPTIAL ONE BANK USA NA LT CD	08/12/2015 1.700% 08/13/2018	14042E5N6	NR	NR	08/12/15	08/12/15	245,000.00	1.40	1,620.36	245,000.00	246,784.34
SYNCHRONY BANK LT CD	10/25/2013 2.150% 10/25/2018	36157OSM0	NR	NR	10/25/13	10/25/13	245,000.00	2.05	981.34	245,000.00	248,723.02
BANK OF BARODA LT CD	10/28/2013 2.050% 10/29/2018	0606246K4	NR	NR	10/29/13	10/29/13	245,000.00	1.96	894.42	245,000.00	247,802.56
CANADIAN IMPERIAL BANK NY CD	12/05/2016 1.760% 11/30/2018	13606A5Z7	A+	Aa3	12/01/16	12/05/16	279,781.60	1.78	369.60	279,789.73	282,259.60
NORDEA BANK FINLAND NY CD	12/05/2016 1.760% 11/30/2018	65558LWAG	AA-	Aa3	12/01/16	12/05/16	280,000.00	1.74	369.60	280,000.00	282,259.60
STATE BANK OF INDIA LT CD	12/18/2013 2.050% 12/18/2018	856283VY9	NR	NR	12/19/13	12/19/13	245,000.00	1.96	192.64	245,000.00	248,039.47
AMERICAN EXPRESS BK FSB LT CD	07/24/2014 2.000% 07/24/2019	02587CAJ9	NR	NR	07/25/14	07/25/14	245,000.00	1.92	2,161.37	245,000.00	248,227.39
CAPTIAL ONE BANK USA NA LT CD	08/12/2015 2.000% 08/12/2019	140420UE8	NR	NR	08/12/15	08/12/15	245,000.00	1.94	1,906.30	245,000.00	248,729.39
Security Type Sub-Total							3,109,781.60	1.61	11,781.91	3,109,789.73	3,139,620.36
Asset-Backed Security / Collateralized Mortgage Obligation											
CARMAX ABS 2016-3 A2	07/20/2016 1.170% 08/15/2019	14314EAB7	AAA	NR	07/14/16	07/20/16	134,988.98	1.18	70.20	134,990.66	134,918.31
TOYOTA ABS 2016-B A3	05/11/2016 1.300% 04/15/2020	89231UAD9	AAA	Aaa	05/02/16	05/11/16	109,994.38	1.30	63.56	109,995.46	109,647.35
JOHN DEERE ABS 2016-B A3	07/27/2016 1.250% 06/15/2020	47788NAC2	NR	Aaa	07/19/16	07/27/16	34,997.21	1.25	19.44	34,997.58	34,833.22
TOYOTA ABS 2016-C A3	08/10/2016 1.140% 08/15/2020	89237WAD9	AAA	Aaa	08/01/16	08/10/16	44,998.79	1.14	22.80	44,998.93	44,704.43

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Managed Account Detail of Securities Held

For the Month Ending December 31, 2016

FPUD - INVESTMENT PORTFOLIO

Security Type / Description	Dated Date / Coupon / Maturity	CUSIP	S&P Rating	Moody's Rating	Trade Date	Settle Date	Original Cost	YTM at Cost	Accrued Interest	Amortized Cost	Market Value
Asset-Backed Security / Collateralized Mortgage Obligation											
HYUNDAI AUTO RECEIVABLES TRUST	DTD 09/21/2016 1.290% 04/15/2021	44891EAC3	AAA	Aaa	09/14/16	09/21/16	74,989.91	1.30	43.00	74,990.59	74,395.68
Security Type Sub-Total			400,000.00				399,969.27	1.24	219.00	399,973.22	398,498.99
Managed Account Sub-Total			14,087,000.00				14,245,515.46	1.50	51,608.87	14,225,196.20	14,142,765.73
Securities Sub-Total			\$14,087,000.00				\$14,245,515.46	1.50%	\$51,608.87	\$14,225,196.20	\$14,142,765.73
Accrued Interest											\$51,608.87
Total Investments											\$14,194,374.60

Glossary

- **ACCRUED INTEREST:** Interest that is due on a bond or other fixed income security since the last interest payment was made.
- **AGENCIES:** Federal agency securities and/or Government-sponsored enterprises.
- **AMORTIZED COST:** The original cost of the principal of the security is adjusted for the amount of the periodic reduction of any discount or premium from the purchase date until the date of the report. Discount or premium with respect to short term securities (those with less than one year to maturity at time of issuance) is amortized on a straight line basis. Such discount or premium with respect to longer term securities is amortized using the constant yield basis.
- **BANKERS' ACCEPTANCE:** A draft or bill or exchange accepted by a bank or trust company. The accepting institution guarantees payment of the bill, as well as the insurer.
- **COMMERCIAL PAPER:** An unsecured obligation issued by a corporation or bank to finance its short-term credit needs, such as accounts receivable and inventory.
- **CONTRIBUTION TO DURATION:** Represents each sector or maturity range's relative contribution to the overall duration of the portfolio measured as a percentage weighting. Since duration is a key measure of interest rate sensitivity, the contribution to duration measures the relative amount or contribution of that sector or maturity range to the total rate sensitivity of the portfolio.
- **DURATION TO WORST:** A measure of the sensitivity of a security's price to a change in interest rates, stated in years, computed from cash flows to the maturity date or to the put date, whichever results in the highest yield to the investor.
- **EFFECTIVE DURATION:** A measure of the sensitivity of a security's price to a change in interest rates, stated in years.
- **EFFECTIVE YIELD:** The total yield an investor receives in relation to the nominal yield or coupon of a bond. Effective yield takes into account the power of compounding on investment returns, while nominal yield does not.
- **FDIC:** Federal Deposit Insurance Corporation. A federal agency that insures bank deposits to a specified amount.
- **INTEREST RATE:** Interest per year divided by principal amount, expressed as a percentage.
- **MARKET VALUE:** The value that would be received or paid for an investment in an orderly transaction between market participants at the measurement date.
- **MATURITY:** The date upon which the principal or stated value of an investment becomes due and payable.
- **NEGOTIABLE CERTIFICATES OF DEPOSIT:** A CD with a very large denomination, usually \$1 million or more that can be traded in secondary markets.
- **PAR VALUE:** The nominal dollar face amount of a security.

Glossary

- **PASS THROUGH SECURITY:** A security representing pooled debt obligations that passes income from debtors to its shareholders. The most common type is the mortgage-backed security.
- **REPURCHASE AGREEMENTS:** A holder of securities sells these securities to an investor with an agreement to repurchase them at a fixed price on a fixed date.
- **SETTLE DATE:** The date on which the transaction is settled and monies/securities are exchanged. If the settle date of the transaction occurs on a non-business day (i.e. coupon payments and maturity proceeds), the funds are exchanged on the next business day.
- **TRADE DATE:** The date on which the transaction occurred however the final consummation of the security transaction and payment has not yet taken place.
- **UNSETTLED TRADE:** A trade which has been executed however the final consummation of the security transaction and payment has not yet taken place.
- **U.S. TREASURY:** The department of the U.S. government that issues Treasury securities.
- **YIELD:** The rate of return based on the current market value, the annual interest receipts, maturity value and the time period remaining until maturity, stated as a percentage, on an annualized basis.
- **YTM AT COST:** The yield to maturity at cost is the expected rate of return, based on the original cost, the annual interest receipts, maturity value and the time period from purchase date to maturity, stated as a percentage, on an annualized basis.
- **YTM AT MARKET:** The yield to maturity at market is the rate of return, based on the current market value, the annual interest receipts, maturity value and the time period remaining until maturity, stated as a percentage, on an annualized basis.

Important Disclosures

This material is based on information obtained from sources generally believed to be reliable and available to the public, however PFM Asset Management LLC cannot guarantee its accuracy, completeness or suitability. This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation. All statements as to what will or may happen under certain circumstances are based on assumptions, some but not all of which are noted in the presentation. Assumptions may or may not be proven correct as actual events occur, and results may depend on events outside of your or our control. Changes in assumptions may have a material effect on results. Past performance does not necessarily reflect and is not a guaranty of future results. The information contained in this presentation is not an offer to purchase or sell any securities.

- Market values which include accrued interest, are derived from closing bid prices as of the last business day of the month as supplied by Interactive Data, Bloomberg or Telerate. Where prices are not available from generally recognized sources the securities are priced using a yield based matrix system to arrive at an estimated market value.
- In accordance with generally accepted accounting principles, information is presented on a trade date basis; forward settling purchases are included in the monthly balances and forward settling sales are excluded.
- Performance is presented in accordance with the CFA Institute's Global Investment Performance Standards (GIPS). Unless otherwise noted, performance is shown gross of fees. Quarterly returns are presented on an unannualized basis. Returns for periods greater than one year are presented on an annualized basis. Past performance is not indicative of future returns.
- Bank of America/Merrill Lynch Indices provided by Bloomberg Financial Markets.
- Money market fund/cash balances are included in performance and duration computations.
- Standard & Poor's is the source of the credit ratings. Distribution of credit rating is exclusive of money market fund/LGIP holdings.
- Callable securities in portfolio are included in the maturity distribution analysis to their stated maturity date, although they may be called prior to maturity.
- MBS maturities are represented by expected average life.

Fiscal Policy & Insurance Committee

March 6, 2017

Item B



March 6, 2017

Memorandum

To: Marcie Eilers, Fallbrook Public Utility District

From: Sarah Meacham, PFM

Re: 2017 Investment Policy Review

PFM Asset Management has completed the annual review of the District's Investment Policy. The Policy is in compliance with the California Government Code (Code). We have recommendations to update the Policy to reflect a recent change to ratings language in the Code. We have provided a marked up version of the District's Policy with these recommendations included.

We have revised the ratings language for commercial paper, medium-term notes, negotiable certificates of deposit, state obligations, California local agency obligations, mortgage pass-through securities, asset-backed securities and supranationals to reflect changes caused by Senate Bill 974, which took effect on January 1, 2017. This bill clarifies that the Code's rating requirements apply to the rating category required at purchase without regard to modifiers such as "+", "-", or 1, 2, and 3. This change codified the interpretation used by most public agencies. We recommend the District incorporate this Code change. This revision applies to all of the Policy's sections that specify a credit rating requirement for purchase.

We would be happy to discuss any questions there may be regarding these recommended changes to the District's Investment Policy.

Article 27. Investment Policy

Sec. 27.1 General.

The District's Investment Policy and practices of the District Treasurer are based on prudent money management principles and California Government Code, specifically Sections 53600 and 53630 et. seq.

27.1.1 Delegation of Authority. The Board of Directors delegates the investment authority of the District to the Treasurer under the supervision of the General Manager. The Treasurer shall deposit money under the Treasurer's supervision and control in such institutions and upon such terms as the laws of the State of California and the Board of Directors may permit.

The Treasurer may delegate day-to-day investment decision making and execution authority to an investment advisor. Eligible investment advisors must be registered with the Securities and Exchange Commission (SEC) under the Investment Advisors Act of 1940. The advisor will follow the Policy and such other written instructions as are provided by the District.

27.1.2 Investment Objectives. The practices of this District will always comply with the legal authority and limitations placed on it by the governing legislative bodies. The implementation of these laws, allowing for the dynamics of the money markets, will be the focus of this Investment Policy. When investing, reinvesting, purchasing, acquiring, exchanging, selling and managing public funds, the objectives of this District shall be:

1. The primary objective shall be to safeguard the principal of the funds under the Treasurer's control.
2. The secondary objective shall be to meet the liquidity needs of the District.
3. The third objective shall be to achieve a return on the funds under control of the Treasurer within the parameters of prudent risk management.

27.1.3 Prudent Investor Standard. The Board of Directors, General Manager, and Treasurer adhere to the guidance provided by the "prudent investor standard," California Government Code (Section 53600.3), which obligates a fiduciary to insure that "When investing, reinvesting, purchasing, acquiring, exchanging, selling, or managing public funds, a trustee shall act with care, skill, prudence, and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the agency, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the agency. Within the limitations of this section and considering individual

investments as part of an overall strategy, investments may be acquired as authorized by law.”

Sec. 27.2 Treasurer’s Annual Statement of Investment Policy.

The following is the District’s annual statement of investment policy rendered pursuant to Section 53646 (a) of the Government Code:

27.2.1 Security of Principal Policy. The policy issues directed to protecting the District are:

- a) Limiting exposure to each type of security.
- b) Limiting exposure to each issue and issuer of debt.
- c) Determining the minimum credit requirement for each type of security at the time of purchase.

27.2.2 Liquidity Policy. The policy issues directed to provide necessary liquidity are:

- a) Limiting the length of maturity for securities in the portfolio.
- b) Limiting exposure to illiquid securities.

27.2.3 Return Policy. The policy issues directed to achieving a return are:

- a) Attaining a market rate of return taking into account the investment risk constraints and liquidity needs.
- b) Return is of least importance compared to the safety and liquidity policies described above.
- c) Majority of the investments shall be limited to low risk securities in anticipation of earning a fair return relative to the risk being taken.
- d) The performance of the portfolio shall be compared to an industry benchmark established by the Fiscal Policy and Insurance Committee and shall be reported quarterly. The Fiscal Policy and Insurance Committee shall review the performance benchmark on an annual basis to ensure that it remains appropriate for the District’s investment objectives.

27.2.4 Maturity Policy. The maximum maturity allowed by the California Government Code is five (5) years with shorter limitations specified for specific types of securities. However, the legislative body may grant express authority to make investments either specifically or as a part of an investment program approved by the legislative body that exceeds this five-year maturity limit. Such approval must be issued no less than three (3) months prior to the purchase of any security exceeding the five-year maturity limit.

27.2.5 Prohibited Securities. The California Government Code does not authorize a local agency to invest in any of the following derivative notes:

- a) Inverse Floater
- b) Range Notes
- c) Interest-only strips derived from a pool of mortgages
- d) Any security that could result in zero interest accrual

Sec. 27.3 Internal Controls.

The Treasurer is responsible for establishing and maintaining an internal control structure designed to ensure that the assets of the District are protected from loss, theft or misuse. The internal control structure shall be designed to provide reasonable assurance that these objectives are met. The concept of reasonable assurance recognizes that: 1) the cost of a control should not exceed benefits likely to be derived; and, 2) the valuation of costs and benefits requires estimates and judgments by management. Accordingly, the Treasurer shall establish a process for annual independent review by an external auditor to assure compliance with policies and procedures. The internal controls shall address the following points:

Control of Collusion: Collusion is a situation where two or more employees are working in conjunction to defraud their employer.

Separation of Transaction Authority from Accounting and Record Keeping: By separating the person who authorizes or performs the transaction from the person who records or otherwise accounts for the transaction, a separation of duties is achieved.

Custodial Safekeeping: Securities purchased from any bank or dealer including appropriate collateral (as defined by Government Code) shall be placed with an independent third party for custodial safekeeping.

Avoidance of Physical Delivery Securities: Book entry securities are much easier to transfer and account for since actual delivery of a document never takes place. Delivered securities must be properly safeguarded against loss or destruction. The potential for fraud and loss increases with physically delivered securities.

Clear Delegation of Authority to Subordinate Staff Members: Subordinate staff members must have a clear understanding of their authority and responsibilities to avoid improper actions. Clear delegation of authority also preserves the internal control structure that is contingent on the various staff positions and their respective responsibilities.

Written Confirmation of Telephone Transactions for Investments and/or Wire Transfers: Due to the potential for error and improprieties arising from telephone transactions, all telephone transactions should be supported by written communications and approved by the appropriate person. Written communications may be via fax if on letterhead and the safekeeping institution has a list of authorized signatures.

Development of a Wire Transfer Agreement with the Lead Bank or Third Party Custodian: This agreement should outline the various controls, security provisions, and delineate responsibilities of each party making and receiving wire transfers.

Sec. 27.4 Permissible Investments.

Where this Policy specifies a percentage limitation for a particular security type, that percentage is applicable only on the date of purchase. Credit criteria listed in this Policy refers to the credit rating at the time the security is purchased. If an investment advisor is used and an investment's credit rating falls below the minimum rating required at the time of purchase, the investment advisor will immediately notify the Treasurer. The securities shall be reviewed and a plan of action shall be recommended by the Treasurer or investment advisor. The course of action to be followed will be decided on a case-by-case basis, considering such factors as the reason for the rate drop, prognosis for recovery or further drop, and market price of the security. The Fiscal Policy and Insurance Committee will be advised of the situation and intended course of action by e-mail or fax.

The District will limit investments in any one non-government issuer, except investment pools and money market funds, to no more than 5% regardless of security type.

Government Code 53601 addresses permissible investments. These investment categories are:

27.4.1 Government Obligations. Two categories of Government Obligations, U.S. Treasury and Agency obligations may be invested. Both are issued at the federal level. U.S. Treasury obligations are United States Treasury notes, bonds, bills, or certificates of indebtedness, or those for which the faith and credit of the United States are pledged for the payment of principal and interest. Agency obligations are federal agency or United States government-sponsored enterprise obligations, participations, or other instruments, including those issued by or fully guaranteed as to principal and interest by federal agencies or United States government-sponsored enterprises..

Maximum Maturity: The maximum maturity of an issue shall be the current 5 year issue or an issue which at the time of the investment has a term remaining to maturity not in excess of five (5) years.

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for this category is unlimited.

- 1) Treasury: Unlimited.
- 2) Agencies: Unlimited. No more than 75% of the portfolio value shall be invested in any single issuer.

Minimum Credit Requirement: None.

27.4.2 Banker's Acceptance. This is a draft or bill of exchange, accepted by a bank or trust company and brokered to investors in a secondary market. The purpose of the banker's acceptance (BA) is to facilitate trade and provide liquidity to the import-export markets. Acceptances are collateralized by the pledge of documents such as invoices, trust receipts, and other documents evidencing ownership and insurance of the goods financed.

Maximum Maturity: The maximum maturity of an issue shall be 180 days.

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for this category shall be 25%.

Minimum Credit Requirement: "A-1" or equivalent by a nationally recognized statistical rating organization (NRSRO)

27.4.3 Commercial Paper. These are short-term, unsecured, promissory notes issued by firms in the open market. Commercial paper (CP) is generally backed by a bank credit facility, guarantee/bond of indemnity, or some other support agreement. The entity that issues the commercial paper must meet all of the following conditions in either paragraph a or paragraph b:

- a. The entity meets the following criteria: (i) is organized and operating in the United States as a general corporation, (ii) has total assets in excess of five hundred million dollars (\$500,000,000), and (iii) has debt other than commercial paper, if any, that is rated in a rating category of "A", the equivalent or higher by a NRSRO.
- b. The entity meets the following criteria: (i) is organized within the United States as a special purpose corporation, trust, or limited liability company, (ii) has program-wide credit enhancements including, but not limited to, over collateralization, letters of credit, or surety bond, and (iii) has commercial paper that is rated "A-1" or higher, or the equivalent, by a NRSRO.

Maximum Maturity: The maximum maturity of an issue shall be 270 days.

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for this category shall be 25%. The District may purchase no more than 10% of the outstanding commercial paper of any single issuer.

Minimum Credit Requirements: "A-1", ~~the or~~ equivalent or higher by a NRSRO.

27.4.4 Medium-Term Notes. Corporate and depository institution debt securities issued by corporations organized and operating within the United States, or by depository institutions licensed by the U.S. (or any state) and operating within the U.S.

Maximum Maturity: The maximum maturity of an issue shall be 5 years.

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for this category shall be 30%.

Minimum Credit Requirements: Rated in a rating category of “A”, the equivalent or higher by a NRSRO

27.4.5 Repurchase Agreements. A repurchase agreement (RP) consists of two simultaneous transactions. One is the purchase of securities by an investor (i.e., the District), the other is the commitment by the seller (i.e., a broker/dealer) to repurchase the securities at the same price, plus interest, at some mutually agreed future date.

Maximum Maturity: The maximum maturity of repurchase agreements shall be up to one year.

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for this category shall be 10%.

Minimum Credit Requirements: None

27.4.6 Negotiable Certificates of Deposit. Certificates of deposit must be issued by a nationally or state-chartered bank, a savings association or a federal association (as defined by Section 5102 of the Financial code), a state or federal credit union, or by a federally licensed or state-licensed branch of a foreign bank.

Maximum Maturity: The maximum maturity of an issue shall be five (5) years.

Maximum Exposure to Portfolio: The maximum exposure to the portfolio for this category shall be 30%.

Minimum Credit Requirements: Rated in a rating category of “A”, the equivalent or higher for CDs issued with a long-term rating and “A-1” or higher for CDs issued with a short-term rating or their equivalents by a NRSRO.

27.4.7 State Local Agency Investment Fund (LAIF). There is no limit by law on the amount of funds that can be placed in this account. Interest is paid directly into the account by the State Local Agency Investment Fund.

27.4.8 San Diego County Treasurer’s Fund. There is no limit by law on the amount of funds that can be placed in this account. Interest is paid directly into the account by the County Treasurer.

27.4.9 Passbook and Money Market Savings Accounts. Savings accounts and/or money market accounts shall be maintained for monies that are needed on a day-to-day basis.

27.4.10 State Obligations / State of California and Other States. Registered state warrants or treasury notes or bonds of this state, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled or operated by the state or by a department, board, agency or authority of the state.

Registered treasury notes or bonds of any of the other 49 United States in addition to California, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by a state or by a department, board, agency, or authority of any of the other 49 United States, in addition to California.

Maximum Maturity: The maximum maturity of an issue shall be the current 5 year issue or an issue which at the time of the investment has a term remaining to maturity not in excess of five (5) years.

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for 27.4.10 and 27.4.11-California Local Agency Obligations, category shall be a combined 25% of the book value of the investment portfolio. No more than 5% of the book value of the portfolio at the time of purchase may be invested in bonds issued by any one agency.

Minimum Credit Requirements: Rated in a rating category of “A”, the equivalent or higher for obligations issued with a long-term rating and “A-1” for obligations issued with a short-term rating or their equivalents by a NRSRO .

27.4.11 California Local Agency Obligations. Bonds, notes warrants or other evidences of indebtedness of any local agency within California, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by the local agency, or by a department, board, agency, or authority of the local agency.

Maximum Maturity: The maximum maturity of an issue shall be the current 5 year issue or an issue which at the time of the investment has a term remaining to maturity not in excess of five (5) years.

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for 27.4.10 and 27.4.11-California Local Agency Obligations, category shall be a combined 25% of the book value of the investment portfolio. No more than 5% of the book value of the portfolio at the time of purchase may be invested in bonds issued by any one agency.

Minimum Credit Requirements: Rated in a rating category of “A”, the equivalent or higher for obligations issued with a long-term rating and “A-1” for obligations issued with a short-term rating or their equivalents by a NRSRO.

27.4.12 Joint Powers Authority Pool. The investment with a Joint Powers Authority Pool is mandated by that pool. To be eligible under this section, the joint powers authority issuing the shares shall have retained an investment adviser that meets all of the following criteria: (1) The adviser is registered or exempt from registration with

the Securities and Exchange Commission; (2) The adviser has not less than five years of experience investing in the securities and obligations authorized in subdivisions (a) to (q), inclusive; and (3) The adviser has assets under management in excess of five hundred million dollars (\$500,000,000).

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for this category is unlimited.

Minimum Credit Requirement: None.

27.4.13 Money Market Mutual Funds.

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for this category is 20%.

Minimum Credit Requirements: A mutual fund must receive the highest ranking by not less than two nationally recognized rating agencies or the fund must retain an investment advisor who is registered with the SEC (or exempt from registration), has assets under management in excess of \$500 million, and has at least five years experience investing in instruments authorized by Sections 53601 and 53635.

A money market mutual fund must receive the highest ranking by not less than two nationally recognized statistical rating organizations or retain an investment advisor registered with the SEC or exempt from registration and who has not less than five years experience investing in money market instruments with assets under management in excess of \$500 million.

27.4.14 Mortgage Pass-Through Securities and Asset-Backed Securities. A mortgage pass-through security, collateralized mortgage obligation, mortgage-backed or other pay-through bond, equipment lease-backed certificate, consumer receivable passthrough certificate, or consumer receivable-backed bond.

Maximum Maturity: The maximum maturity of an issue shall be the current 5 year issue or an issue which at the time of the investment has a term remaining to maturity not in excess of five (5) years.

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for this category is 20%.

Minimum Credit Requirements: ~~Rated in a rating category of "AA", the or equivalent or higher~~ by a NRSRO. Issuer must have at least ~~be rated in a rating category of an "A" rating or, the equivalent or higher~~ for the issuer's debt as provided by a NRSRO.

27.4.15 Supranationals. United States dollar denominated senior unsecured unsubordinated obligations issued or unconditionally guaranteed by the International

Bank for Reconstruction and Development, International Finance Corporation, or Inter-American Development Bank.

Maximum Maturity: The maximum maturity of an issue shall be the current 5 year issue or an issue which at the time of the investment has a term remaining to maturity not in excess of five (5) years.

Maximum Exposure of Portfolio: The maximum exposure to the portfolio for this category is 30%.

Minimum Credit Requirements: Rated in a rating category of “AA”, the or equivalent or higher by a NRSRO.

Approval: Investments in supranational securities may only be made with prior approval of the Fiscal Policy and Insurance Committee.

Sec. 27.5 Maturity/Limit of Investments.

With the exception of U.S. Treasury and Federal Agency securities, the maturity of a give investment will not exceed five (5) years, without prior board approval per Section 27.2.4.

Sec. 27.6 Reporting Requirements.

The Treasurer shall prepare an investment report monthly and provide it to the Board of Directors. The report will include language incorporated from AB 564 (Johnston-Stockton), adopted by the Legislature, which requires that a local agency’s Treasurer report to their governing body on a monthly or quarterly basis and provide specified information on their investment activities, including type of investment, issuer, date of maturity, par and dollar amount invested, current market value and the source of such valuation and rate of interest.

The report shall additionally include a description of contracted parties (including the lending programs), if any. The report shall also state its compliance of the portfolio with the statement of investment policy, or the manner in which the portfolio is not in compliance.

A subsidiary ledger of investments may be used in the report in accordance with accepted accounting practices.

In the event that an investment originally purchased within policy guidelines is downgraded by any one of the credit rating agencies, the Treasurer shall report it at the next regular scheduled meeting of the Board.

ARTICLE 27

Revised in its entirety: 2/94

Adopted in current form:

1/96, 1/97, 1/98, 1/99

Sec. 27.2.4 – Rev. 1/00

Adopted in current form:

1/01

Sec. 27.4.7 – Rev. 10/01

Sec. 27.6 – Rev. 1/03

Sec. 27.2.4 – Rev. 1/07

Sec. 27.4.4 – Rev. 3/07

Sec. 27.2.3, 27.4.1(2); Sec.

27.4.2; 27.4.3; 27.4.4, &

27.4.6 – Rev. 9/07

27.2.1 – Rev. 1/10

Secs. 27.4.10-12 – Rev. 1/12

Secs. 27.2.4; 27.2.5; 27.4.5;

27.4.6; 27.4.7; 27.4.10;

27.4.11; 27.4.13; 27.4.14;

27.5 – Rev. 2/13

Secs. 27.4.6; 27.4.11 – Rev.

1/14

Secs. 27.1, 27.1.1,

Attachment A – Rev. 3/15

Secs. 27.1; 27.1.1; 27.1.2;

27.1.3; 27.2; 27.2.3; 27.2.4;

27.3; 27.4; 27.4.1; 27.4.2;

27.4.3; 27.4.4; 27.4.6;

27.4.10; 27.4.11; 27.4.12;

27.4.13; 27.4.14; 27.4.15;

27.5 – Rev. 2/16

Fiscal Policy & Insurance Committee

March 6, 2017

Item C

CalPERS Questions

1. What happens to Employer rates for Misc. employers as top heavy Misc. members retire?

In Fallbrook PUD's case, the District is pooled with all other agencies with less than 100 members so experience factors are pooled and spread over all pooled agencies.

Staff has sent a follow up email to ask what, in general, would happen to a non-pooled agency.

2. What do you anticipate will happen to Employer rates with changes in actuarial assumptions?

Per our Actuary, Nancy Campbell, the recently approved change to start decreasing the discount rate is by far the largest item affecting Employer rates. This phase in will begin in FY 18-19 and the approved assumptions from 7.5% to 7.0% per the attached CalPERS Circular Letter 200-004-17. She indicated that a few members of the CalPERS board believe the discount rate should eventually be lowered to 6.5% but no action has been taken to reduce beyond the 7.0%. She indicated that CalPERS is investing more conservatively and has implemented risk mitigation.

Additionally, CalPERS actuaries are currently conducting "experience studies" to review salaries and mortality but so far, the studies have not indicated a need for much change. These studies will most likely go to the CalPERS board in 2017. If the board takes any action, it will impact the Employer FY 19-20 rates.

When she was asked for any additional insights, she said that the best thing agencies can do is watch the CalPERS board packets because they reference very clearly what the intents of the CalPERS board.

3. Regarding question 2 and the actuarial assumptions the next question is, will the Unfunded Actuarial Liability (UAL) lump sum normalize after implementation and if so, how?

These UAL lump sum payments based on changes in the discount rate are ramped up in years 1-5, then level off for years 6-15 then ramp down for years 16-20. Changes are amortized over a 20 year period.



Actuarial Circular Letter

California Public Employees' Retirement System
P.O. Box 942715
Sacramento, CA 94229-2715
(888) CalPERS (or 888-225-7377)
TTY: (877) 249-7442
www.calpers.ca.gov

January 19, 2017

Circular Letter: 200-004-17
Distribution: VI

To: All Public Agency Employers

Subject: Discount Rate Change

The purpose of this Circular Letter is to inform you of recent changes to the CalPERS discount rate assumption and the impact these changes are expected to have on required employer and PEPRA member contributions. This Circular Letter will assist you in calculating projected pension cost increases in future years. The June 30, 2016, annual valuations will provide updated projections of expected future year pension contributions. These reports will be available this summer.

At the December 21, 2016, meeting, the CalPERS Board of Administration approved lowering the CalPERS discount rate assumption, the long-term rate of return, from 7.50 percent to 7.00 percent over the next three years. This will increase public agency employer contribution costs beginning in Fiscal Year 2018-19.

The phase-in of the discount rate change approved by the Board for the next three Fiscal Years is as follows:

Valuation Date	Fiscal Year for Required Contribution	Discount Rate
June 30, 2016	2018-19	7.375%
June 30, 2017	2019-20	7.25%
June 30, 2018	2020-21	7.00%

Lowering the discount rate means plans will see increases in both the normal costs (the cost of pension benefits accruing in one year for active members) and the accrued liabilities. These increases will result in higher required employer contributions.

In addition, active members hired after January 1, 2013, under the Public Employees' Pension Reform Act (PEPRA) may also see their contribution rates rise.

The benefits of reducing the discount rate include:

- Strengthening long-term sustainability of the fund
- Reducing negative cash flows; additional contributions will help to offset the cost to pay pensions
- Reducing the long-term probability of funded ratios falling below undesirable levels
- Improving the likelihood of CalPERS investments earning our assumed rate of return
- Reducing the risk of contribution increases in the future from volatile investment markets

Results

Employer contribution increases as a result of the discount rate changes are estimated below by Normal Cost and required Unfunded Accrued Liability (UAL) payment. The Total Employer Contribution is the sum of the Normal Cost Rate applied to reported payroll plus the Unfunded Accrued Liability payment. The Normal Cost portion of the Employer Contribution is expected to increase by the listed percentages of payroll. Increases to the UAL payments are provided as relative increases to be applied to the projected UAL payments in the June 30, 2015, valuation report.

Valuation Date	Fiscal Year Impact	Normal Cost		UAL Payments	
		Misc. Plans	Safety Plans	Misc. Plans	Safety Plans
6/30/2016	2018-19	0.25% - 0.75%	0.5% - 1.25%	2% - 3%	2% - 3%
6/30/2017	2019-20	0.5% - 1.5%	1.0% - 2.5%	4% - 6%	4% - 6%
6/30/2018	2020-21	1.0% - 3.0%	2.0% - 5.0%	10% - 15%	10% - 15%
6/30/2019	2021-22	1.0% - 3.0%	2.0% - 5.0%	15% - 20%	15% - 20%
6/30/2020	2022-23	1.0% - 3.0%	2.0% - 5.0%	20% - 25%	20% - 25%
6/30/2021	2023-24	1.0% - 3.0%	2.0% - 5.0%	25% - 30%	25% - 30%
6/30/2022	2024-25	1.0% - 3.0%	2.0% - 5.0%	30% - 40%	30% - 40%

The changes to the Unfunded Accrued Liability (UAL) due to changes of actuarial assumptions are amortized over a fixed 20-year period with a 5-year ramp up at the beginning and a 5-year ramp down at the end of the amortization period. The 5-year ramp up means that the payments in the first four years of the amortization schedule are 20 percent, 40 percent, 60 percent and 80 percent of the ultimate payment, which begins in year five. The 5-year ramp down means that the reverse is true and the payments in the final four years are ramped down by the above percentages. A new ramp is established with each change to the discount rate. There will be three ramps established in the first three years. As a result of the 5-year ramp up and effective date of the increase, it will be seven years until the full impact of the discount rate change is completely phased in. The shaded rows above are the expected increases beyond the five year projection quoted in your June 30, 2015, valuation report.

To illustrate how this table can be used as a guide to include the change in the discount rate in the calculation of pension contributions, a Miscellaneous plan with a current normal cost of 15 percent of payroll can expect an increase to 15.25 percent to 15.75 percent of payroll in the first year (Fiscal Year 2018-19), and 16 percent to 18 percent in the fifth year (Fiscal Year 2022-23). For the UAL payment, a plan with a projected payment of \$500,000 in Fiscal Year 2018-19 and \$600,000 in Fiscal Year 2022-23 can expect the revised payment to be \$510,000 - \$515,000 ($\$500,000 \times 2.00\% / \$500,000 \times 3.00\%$) for Fiscal Year 2018-19, and \$720,000 - \$750,000 ($\$600,000 \times 20\% / \$600,000 \times 25\%$) for Fiscal Year 2022-23. These estimated increases incorporate both the impact of the discount rate change and the ramp up.

Please keep in mind the above table is a tool for you to calculate broad estimates and should only be used as a general guide. The annual valuation report that will be released this summer will provide updated projections for your specific plan.

If you have any questions about the information provided or how to apply it to your current valuations, please call our CalPERS Customer Contact Center at **888 CalPERS** (or **888-225-7377**) and ask to have your plan actuary contact you.

Scott Terando
Chief Actuary

Fiscal Policy & Insurance Committee

March 6, 2017

Item D



Fallbrook Public Utility District 2016 Rate Study

Finance Committee Rate Workshop

March 6, 2017

AGENDA

1. Financial Plan Development
 - a) Wastewater (WW)
 - b) Water
 - c) Recycled Water (RW)
2. Wastewater Rate Discussion
3. Water Rate Design Discussion
 - a) Rate Structure Framework
 - b) Tier Definitions
 - c) Rate Justification Framework
 - d) Preliminary Rates and Impacts
4. Recycled Water Rate Discussion
5. Drought Rate Discussion

Financial Plan Development

FINANCIAL CHALLENGES

Managing a Water / Wastewater System

A FINANCIAL MODEL CAN BE A TOOL TO NAVIGATE THROUGH THESE CHALLENGES

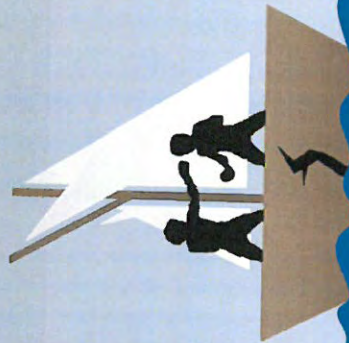
Properties of Utility System

- Capital intensive
- Highly fluctuating capital cost
- Unknown liability
- Increasing regulatory demand



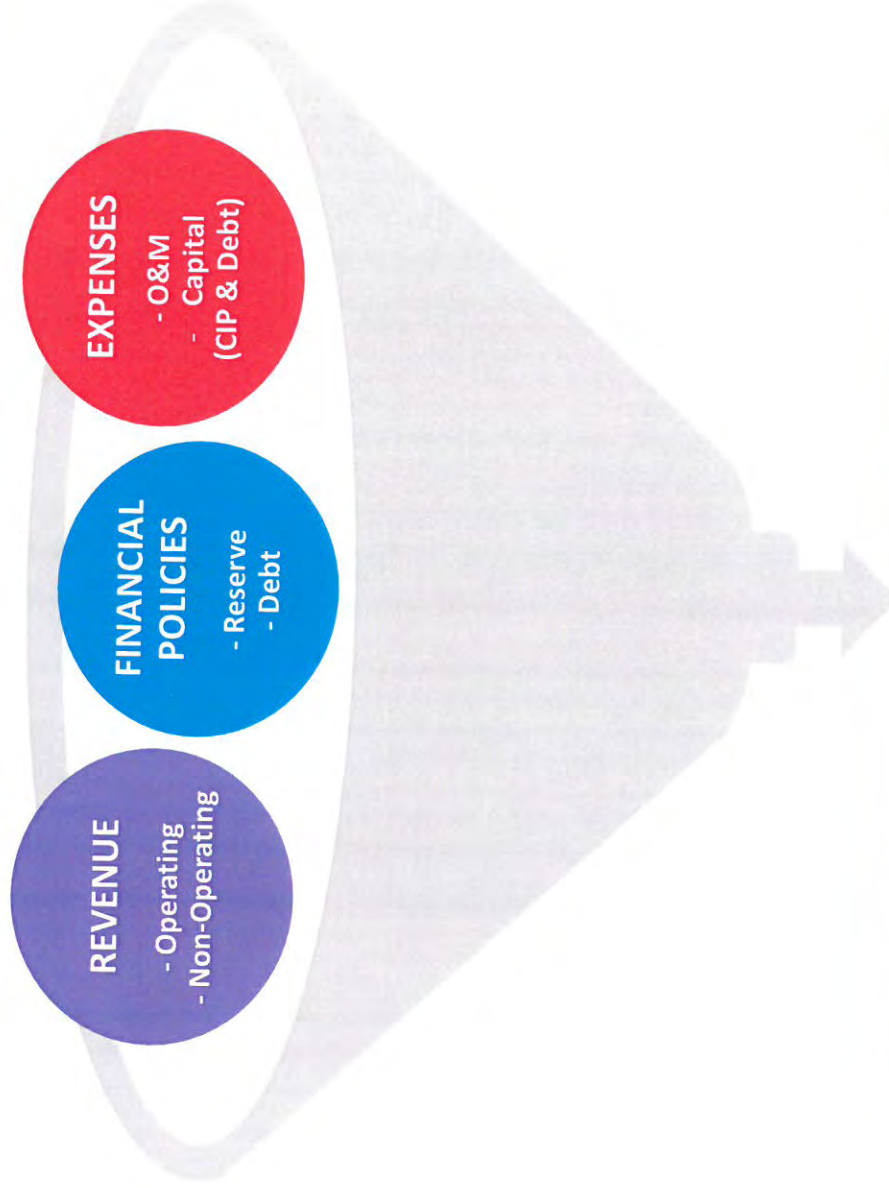
Political Acceptance on Rates

- Rate stability
- Affordability
- Equity
- Environmental stewardship





FINANCIAL PLAN OVERVIEW



Revenue Adjustment Schedule
Multi-Year Long-Term Financial Plan



REVISED FINANCIAL POLICY

ESTABLISHED DURING DEC 2016 FINANCE COMMITTEE WORKSHOP

Target Reserves	FY 2017
Water Working capital (MIN)	3 months of O&M including Water Costs \$4.929M
Water Rates stabilization**	2 yrs debt service of SMCUP \$0.00
Water Capital Fund	3 yrs of CIP * \$10.507M
Total Water Fund	As of Jul 2016 = \$11.888M
Recycled Water Working Capital (MIN)	3 months of O&M \$0.249M
Recycled Water Capital Fund	3 yrs of CIP * \$0.388M
Total RW Fund	As of Jul 2016 = \$0.749M
WW Working Capital (MIN)	3 months of O&M \$1.282M
WW Rate Stabilization	10% Revenues \$0.784M
WW Capital Fund	3 yrs of CIP * \$2.541M
Total WW Fund	As of Jul 2016 = \$2.444M
TOTAL WHOLE FPUD	As of Jul 2016 = \$15.082M

*CIP, excluding one time projects:

Water CIP excludes : Santa Margarita Conjointive Use

Recycled Water CIP excludes: East Line Extension & ' Construction '

** If SMCUP realization starts during the projection period (2017-2027)



FINANCIAL PLAN KEY ASSUMPTIONS

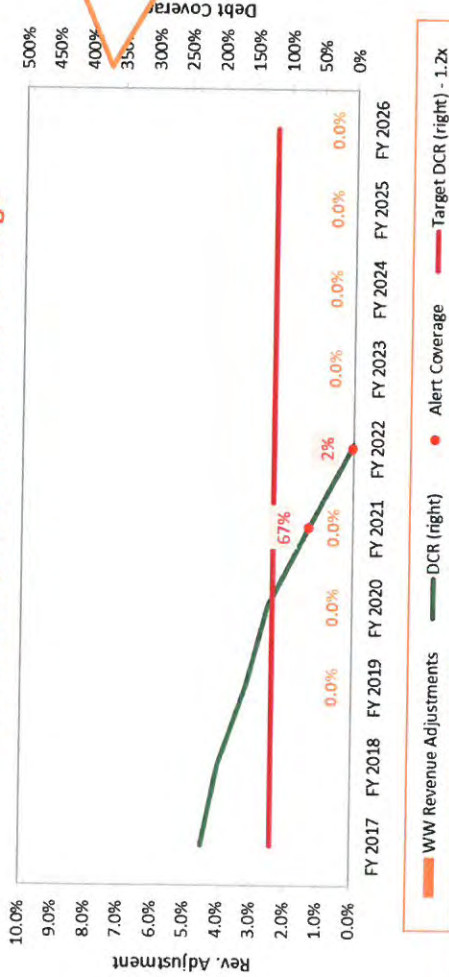
1. Increase Water Capital Improvement Charges (CIC) annually by ENR + 3% (~6% per year)
2. Increase WW Capital Improvement Charges (CIC) annually by ENR (~3% per year)
3. Continue to Pass-through MWD RTS and CWA IAC costs via MWD RTS and CWA IAC rates
4. Water Sales Projections: 8,661 AF in FY 2017 to 8,779 AF in FY 2026
5. RW Sales Projections: 750AF in FY 2017 to 1,050 AF in FY 2020
6. RW also fund a portion (30%) of WRP Debt Service
7. **New Rates effective every January**



WW FINANCIAL PLAN

STATUS QUO – NO REV INCREASE

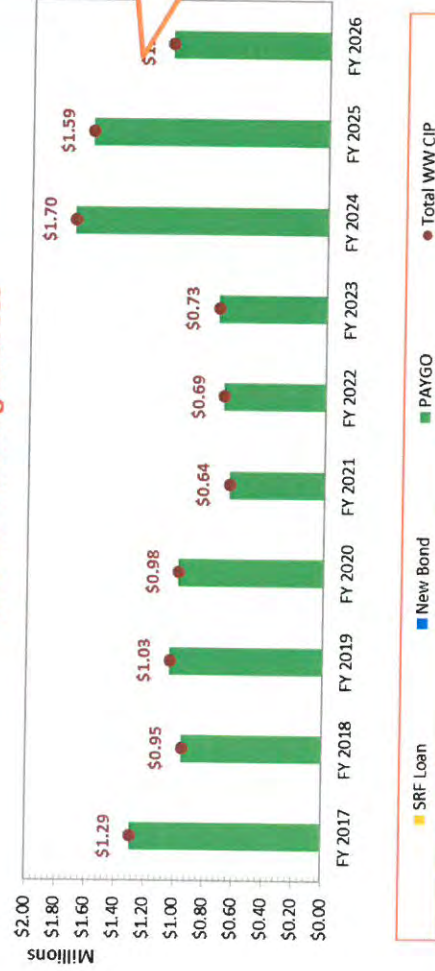
WW Rev. Adjustment and Debt Coverage



WW Revenue Adjustments and Debt Coverage

- Orange bars – No Revenue Adjustment (left axis)
- Red line – Target debt coverage 120% (right axis)
- Green line – Projected debt coverage for Whole FPUD (right axis)
- Red dot – Alert coverage when falling below target

WW CIP Funding Sources



WW CIP & Funding Sources

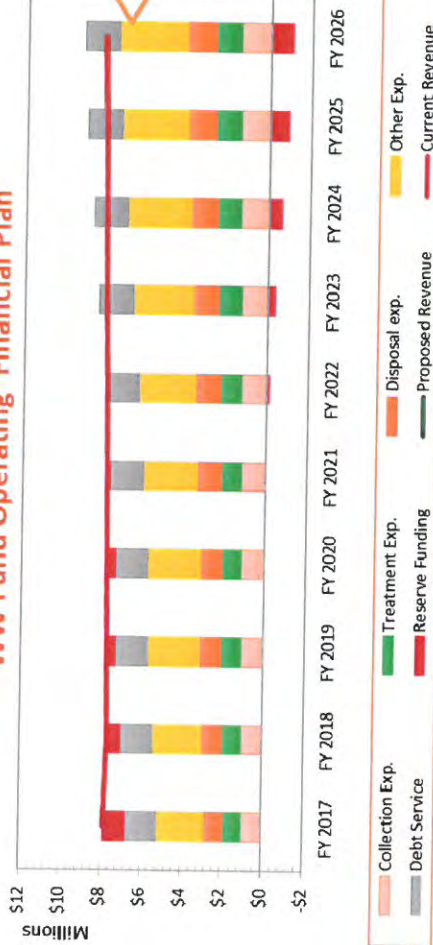
- Yellow bar – SRF Loan
- Blue bar – New Bond
- Green bar – PAYGO
- Brown dot – Total WW CIP



WW FINANCIAL PLAN

STATUS QUO – NO REV INCREASE

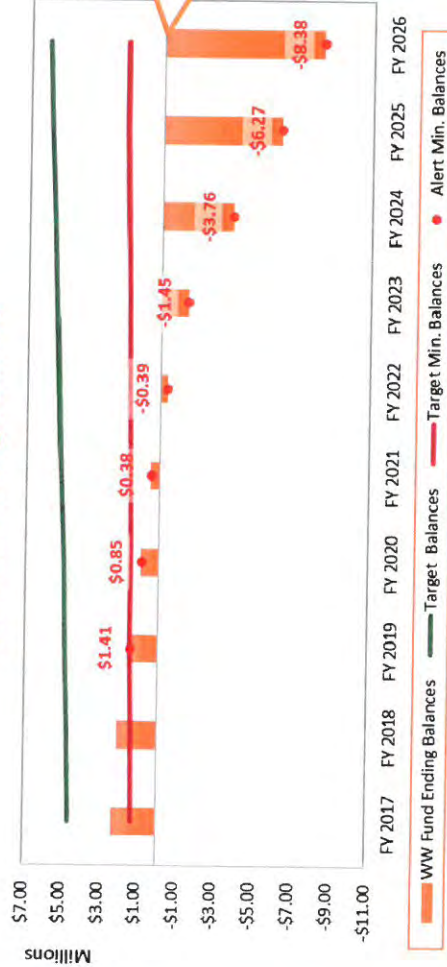
WW Fund Operating Financial Plan



Operating Financial Plan

- Lines – revenues
 - **Red** – current rates
 - **Green** – proposed rates (no revenue adjustments → same as current)
- Stacked bars - Expenses
 - **Light Orange** – Collection Expenses
 - **Green** – Treatment Expenses
 - **Dark Orange** – Disposal Expenses
 - **Yellow** – Other Expenses
 - **Grey** – Debt Service
 - **Red** – Reserve Funding (+) or Funding from Reserve (-)

WW Fund Ending Balances



Projected Reserve Balances

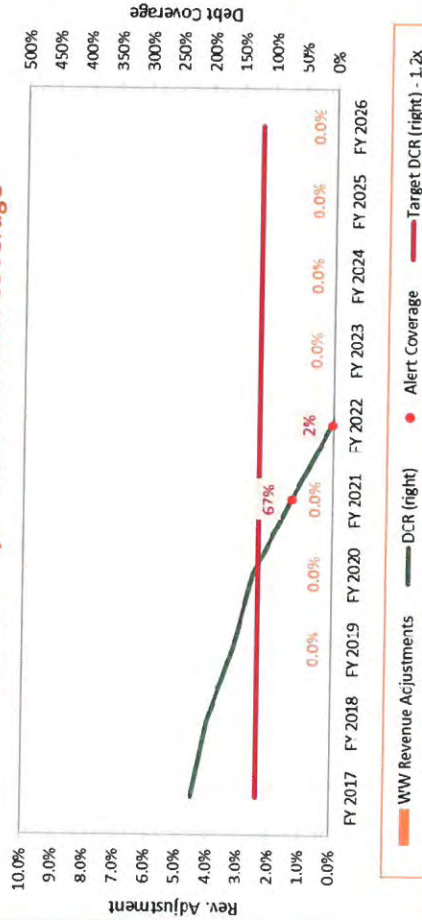
- **Orange** bars – Projected ending fund balances
- **Green** line – Target balances
- **Red** line – Minimum target balances (3 months of O&M)
- **Red** dot – alert balances when ending balances fall below target levels



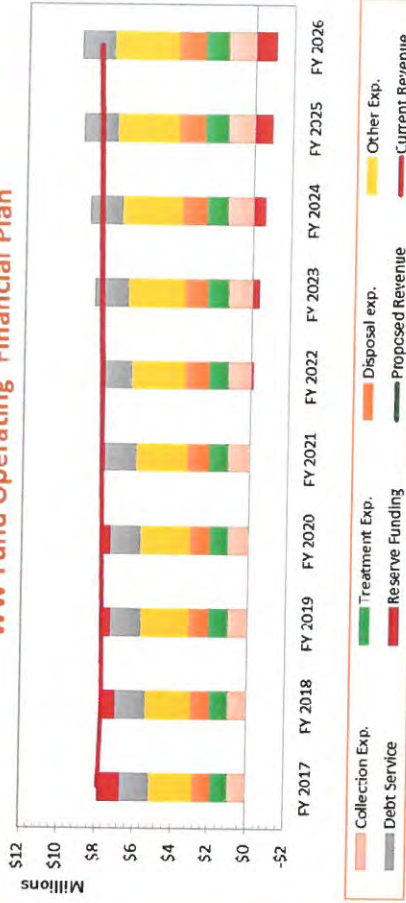
WW FINANCIAL PLAN

STATUS QUO – NO REV INCREASE

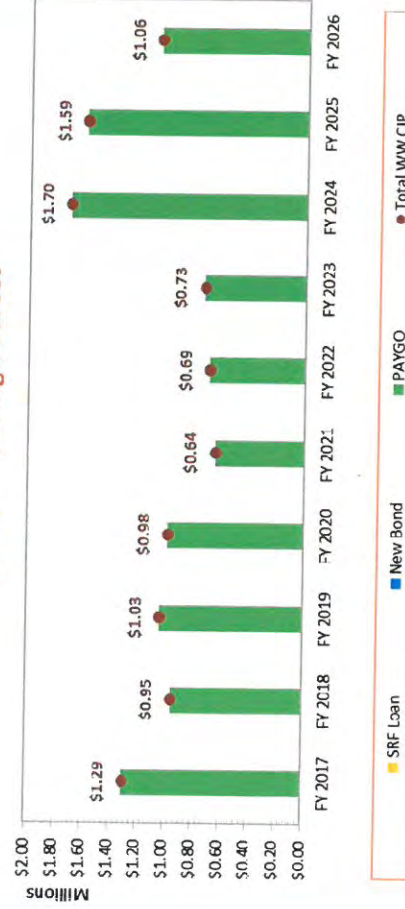
WW Rev. Adjustment and Debt Coverage



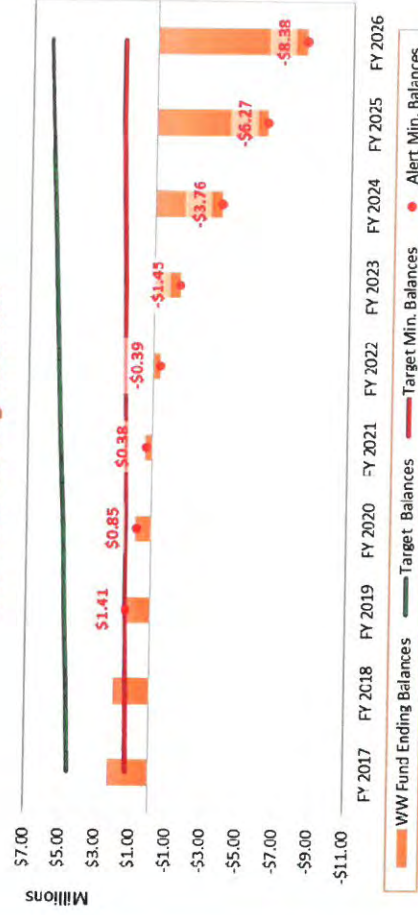
WW Fund Operating Financial Plan



WW CIP Funding Sources



WW Fund Ending Balances

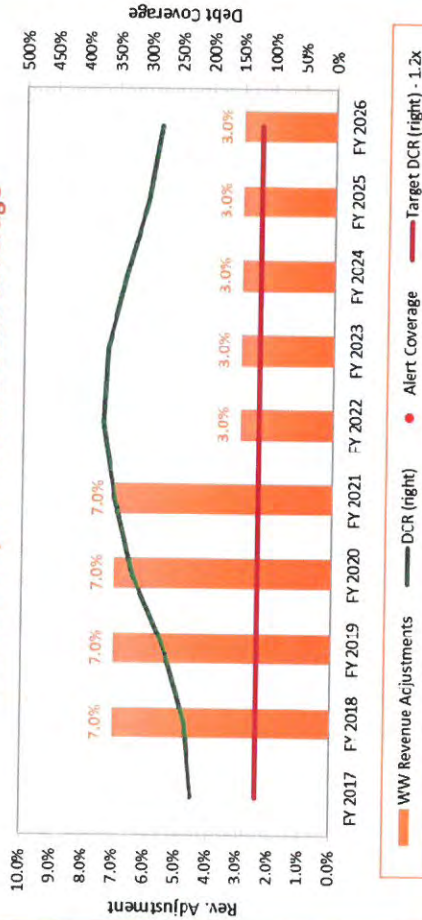




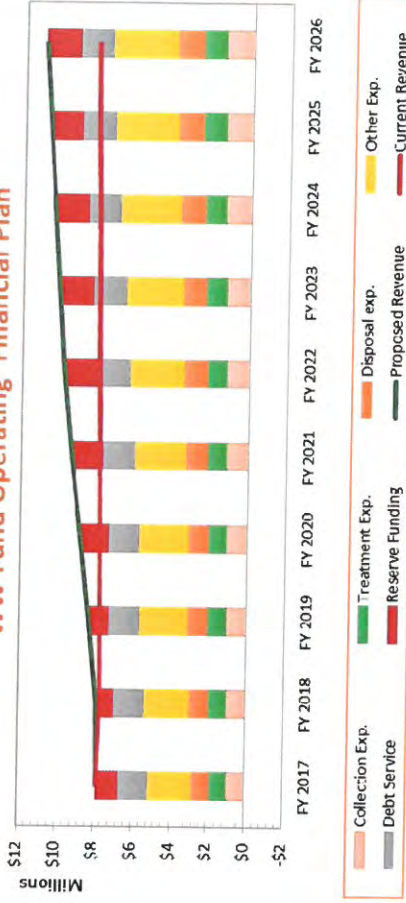
WW FINANCIAL PLAN

PROPOSED — RATE INCREASES IN JANUARY

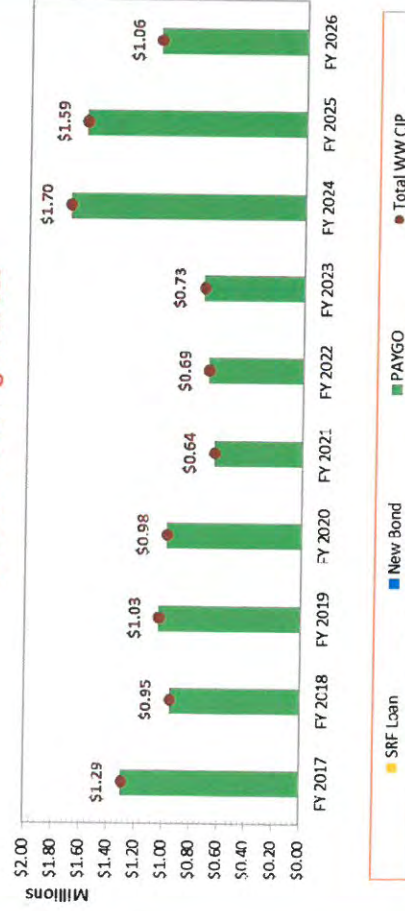
WW Rev. Adjustment and Debt Coverage



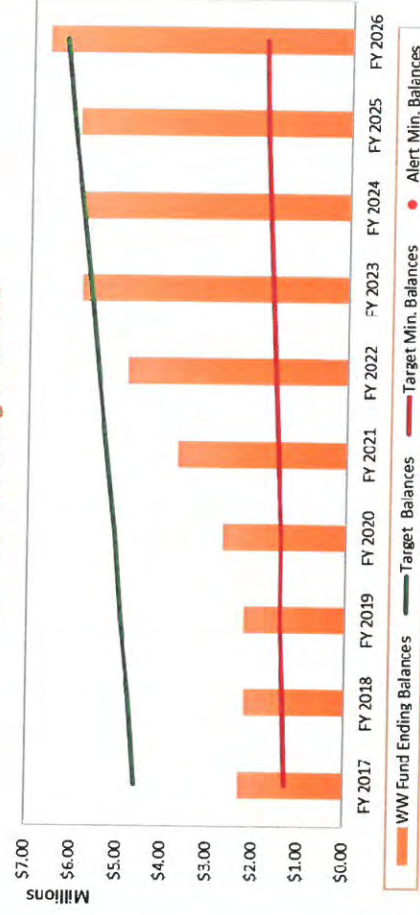
WW Fund Operating Financial Plan



WW CIP Funding Sources



WW Fund Ending Balances

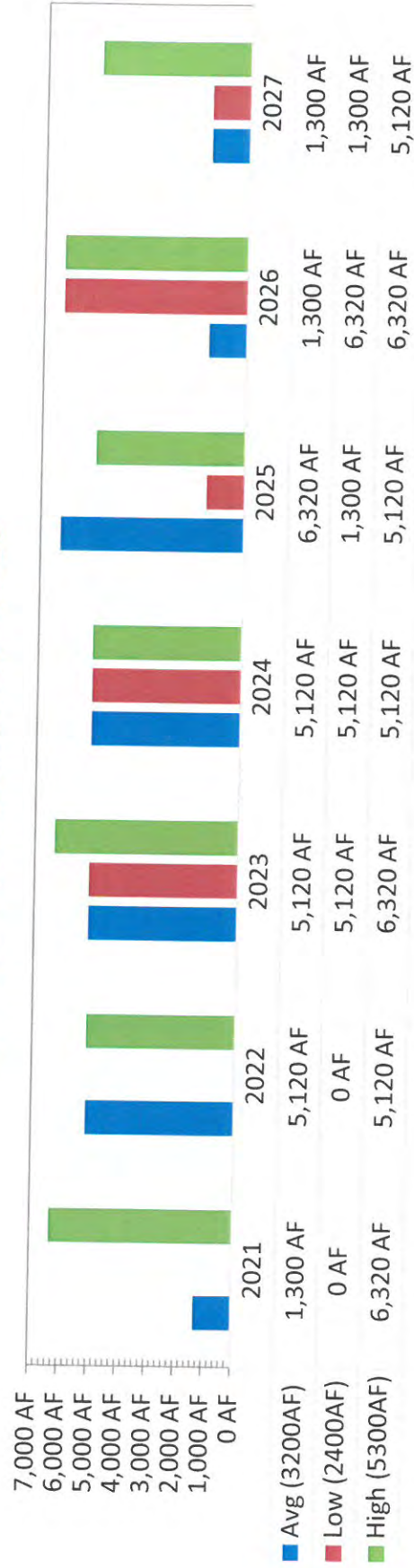




WATER FINANCIAL PLAN SCENARIOS

	Pass-through	SMCUP Production	New SRF Loan
1 Status Quo	RTS / IAC	N/A	None
2 Proposed No SMCUP	RTS / IAC	N/A	None
3 Proposed SMCUP Avg	RTS / IAC	Average (3,200 AF)	\$45M
4 Proposed SMCUP Low	RTS / IAC	Low (2,400 AF)	\$45M
5 Proposed SMCUP High	RTS / IAC	High (5,300 AF)	\$45M

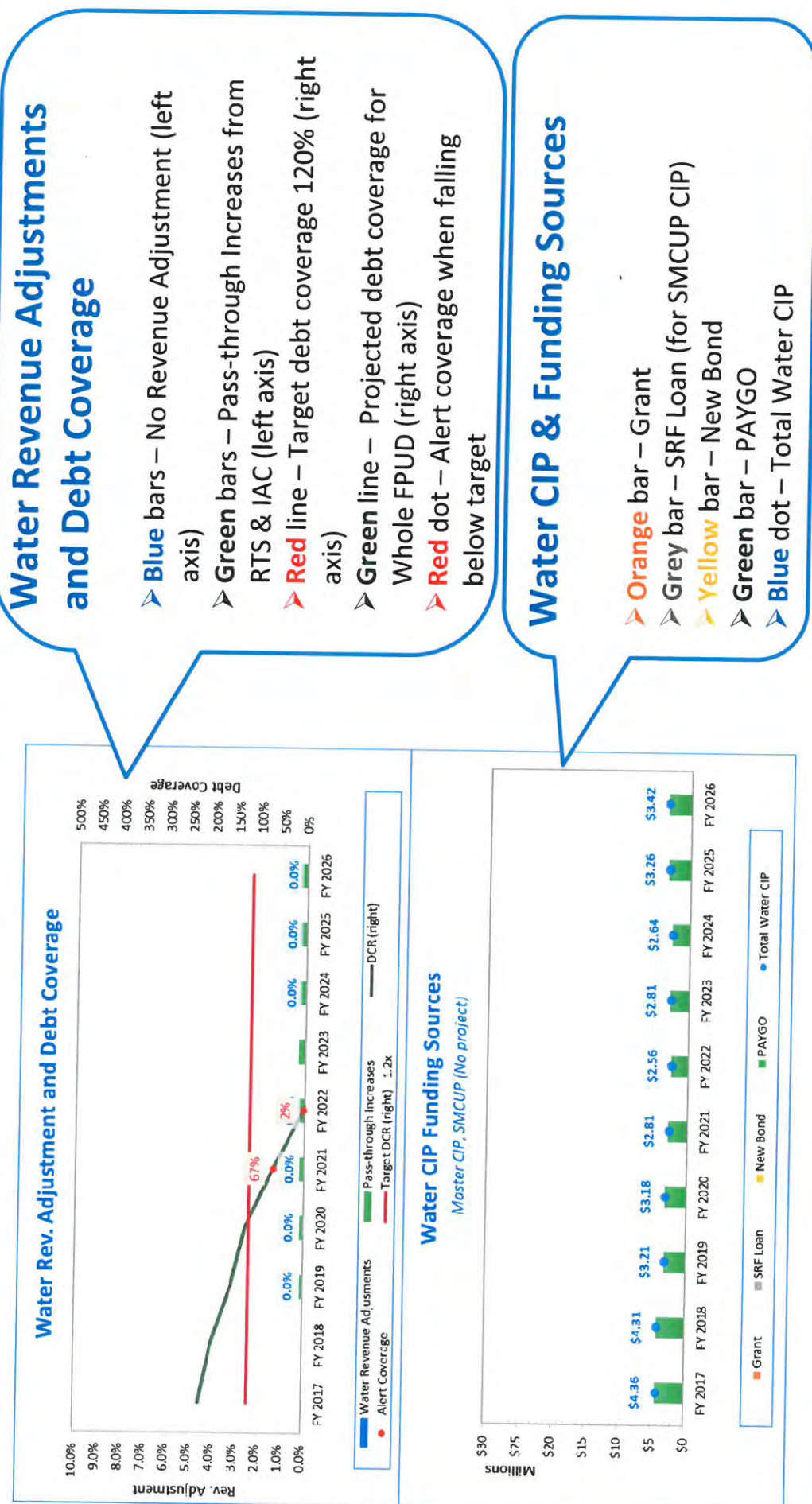
SMCUP Production Scenarios





WATER FINANCIAL PLAN

STATUS QUO – NO REV INCREASE AND NO SMCUP



Water Revenue Adjustments and Debt Coverage

- **Blue bars** – No Revenue Adjustment (left axis)
- **Green bars** – Pass-through Increases from RTS & IAC (left axis)
- **Red line** – Target debt coverage 120% (right axis)
- **Green line** – Projected debt coverage for Whole FPUD (right axis)
- **Red dot** – Alert coverage when falling below target

Water CIP & Funding Sources

- **Orange bar** – Grant
- **Grey bar** – SRF Loan (for SMCUP CIP)
- **Yellow bar** – New Bond
- **Green bar** – PAYGO
- **Blue dot** – Total Water CIP

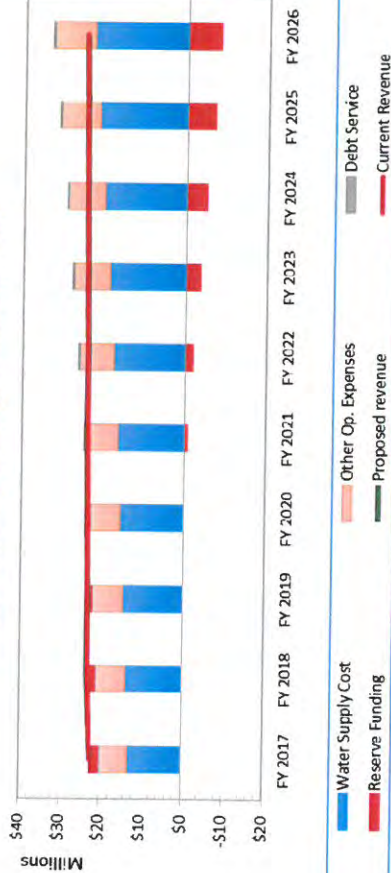




WATER FINANCIAL PLAN

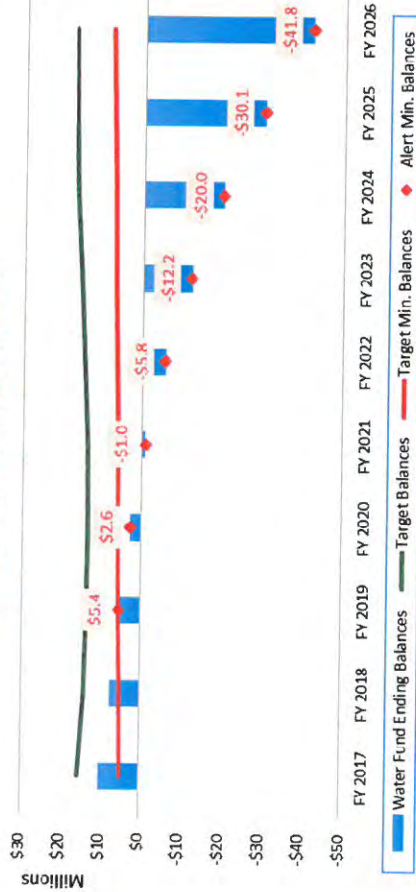
STATUS QUO – NO REV INCREASE AND NO SMCUP

Water Fund Operating Financial Plan



Note: Revenues incl. non-op. revenues (i.e. Capital improvement charge)

Water Fund Ending Balances



Operating Financial Plan

- Lines – revenues
 - **Red** – current rates with pass-through RTS/IAC costs
 - **Green** – proposed rates with pass-through RTS/IAC costs (no revenue adjustments → same as current)
- Stacked bars - Expenses
 - **Blue** – Water Supply Costs
 - **Orange** – Other Expenses
 - **Grey** – Debt Service
 - **Red** – Reserve Funding (+) or Funding from Reserve (-)

Projected Reserve Balances

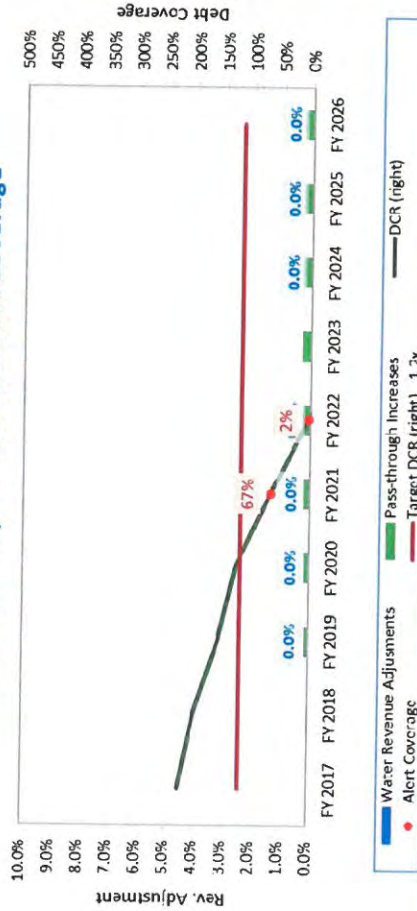
- **Blue** bars – Projected ending fund balances
- **Green** line – Target balances
- **Red** line – Minimum target balances (3 months of O&M)
- **Red** dot – alert balances when ending balances fall below target levels



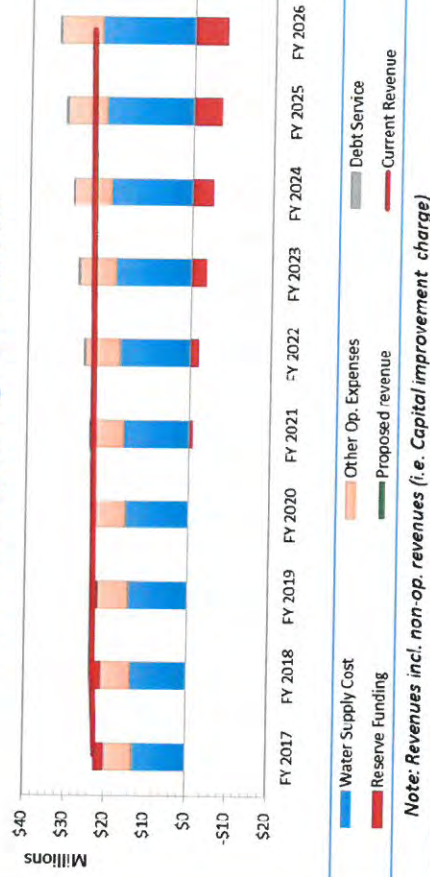
WATER FINANCIAL PLAN

STATUS QUO – NO REV INCREASE AND NO SMCUP

Water Rev. Adjustment and Debt Coverage



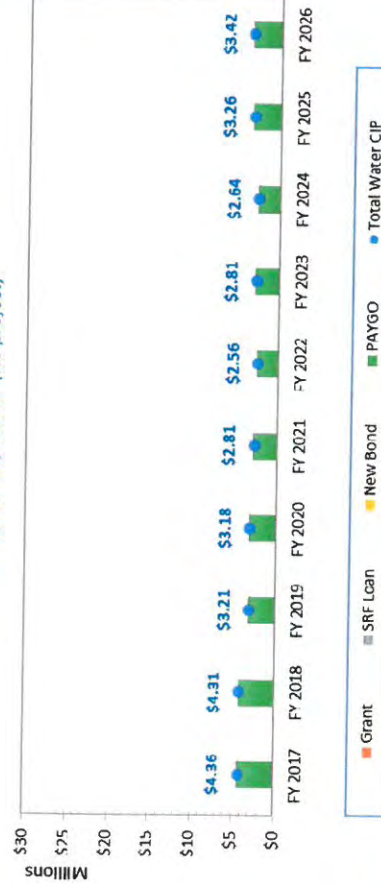
Water Fund Operating Financial Plan



Note: Revenues incl. non-op. revenues (i.e. Capital improvement charge)

Water CIP Funding Sources

Master CIP, SMCUP (No project)



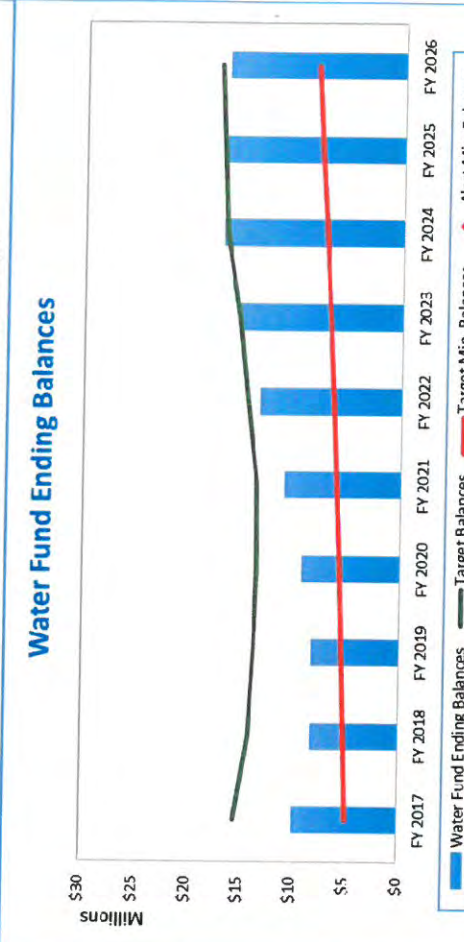
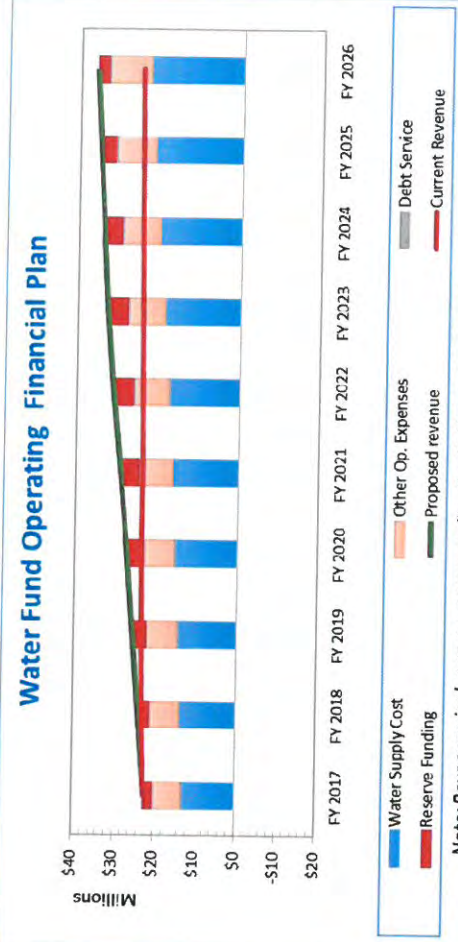
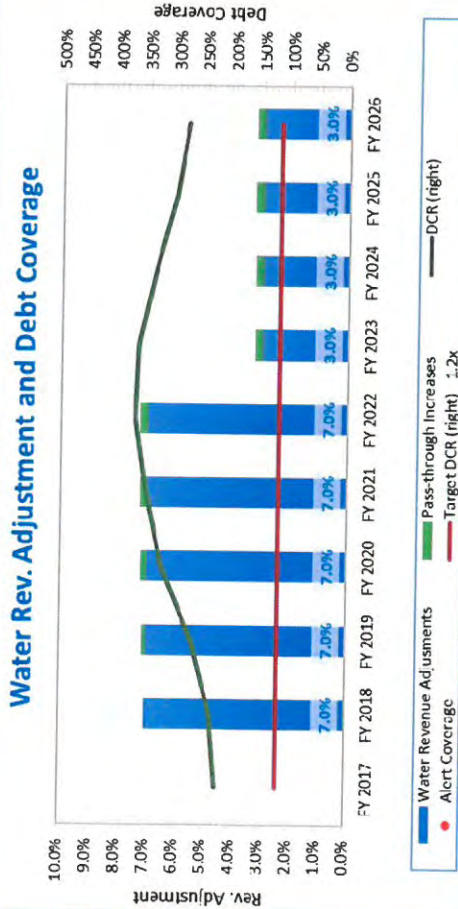
Water Fund Ending Balances





WATER FINANCIAL PLAN

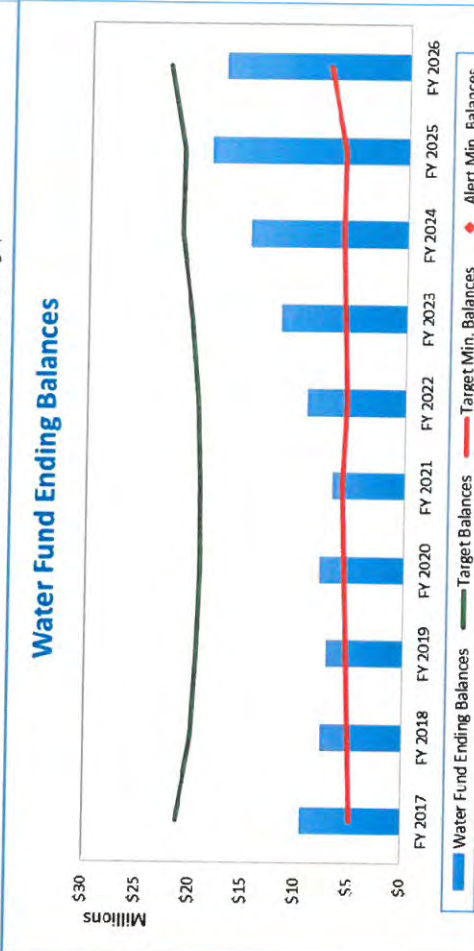
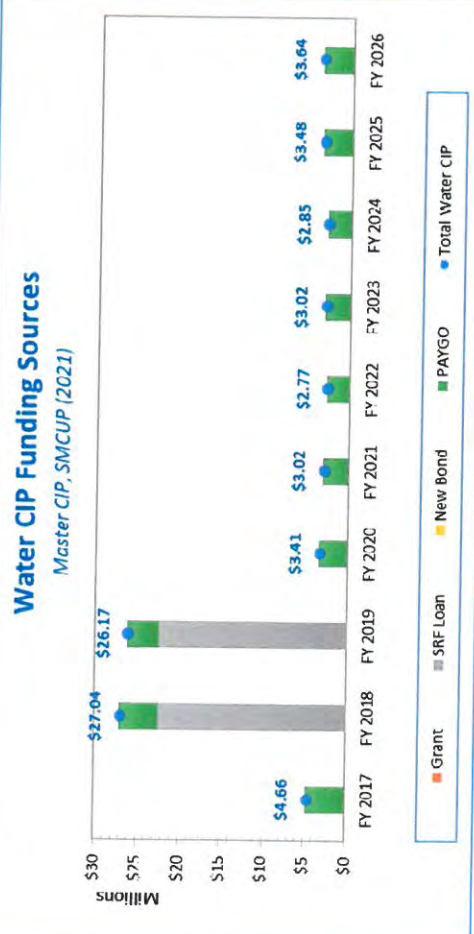
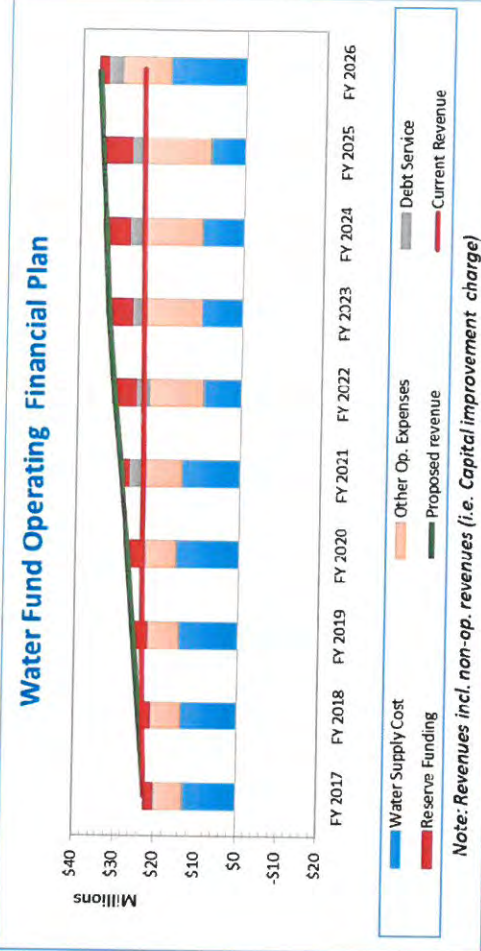
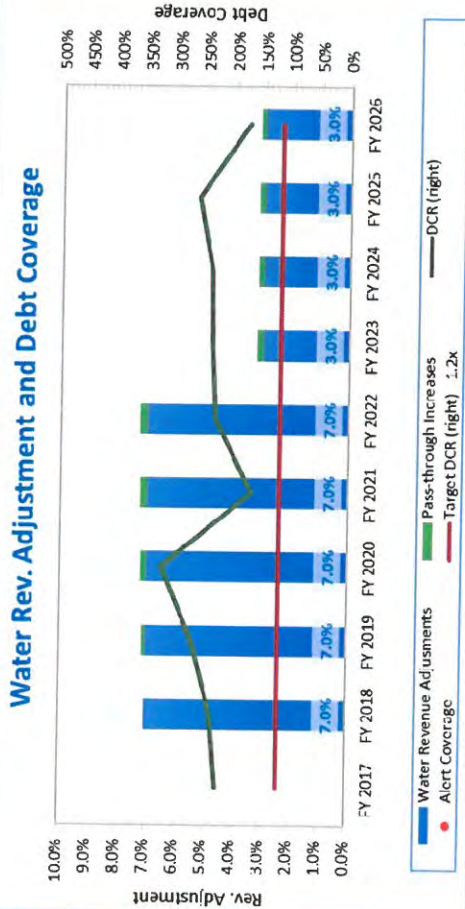
SCENARIO 1 – PROPOSED REV INCREASE AND NO SMCUP





WATER FINANCIAL PLAN

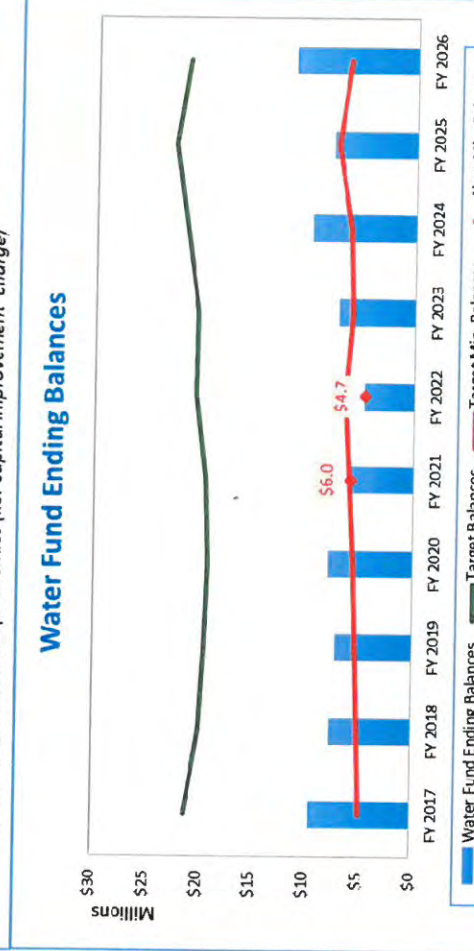
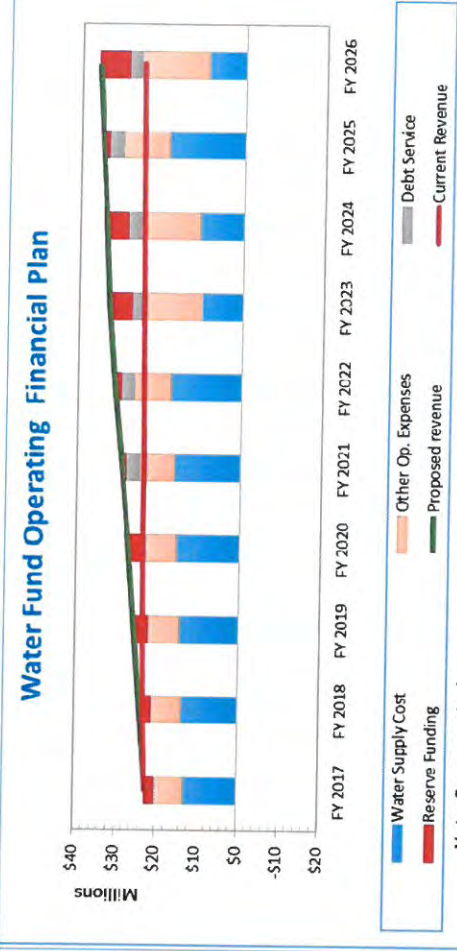
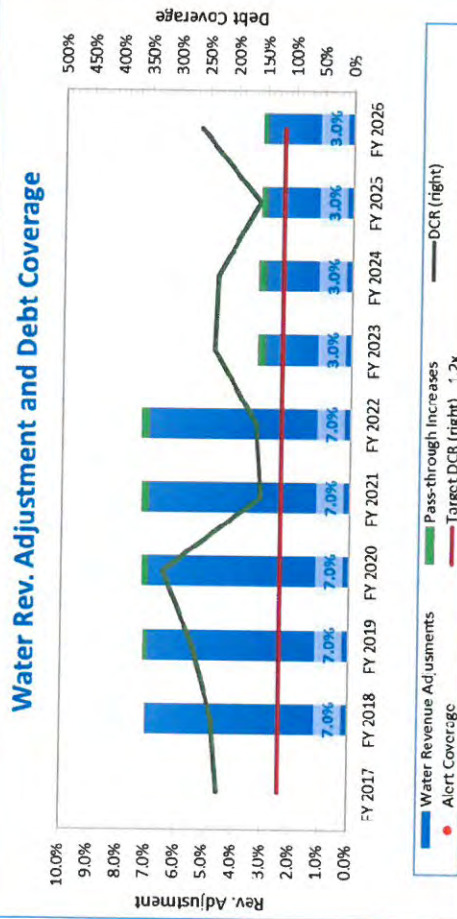
SCENARIO 2 – PROPOSED REV INCREASE AND SMCUP AVERAGE SCENARIO





WATER FINANCIAL PLAN

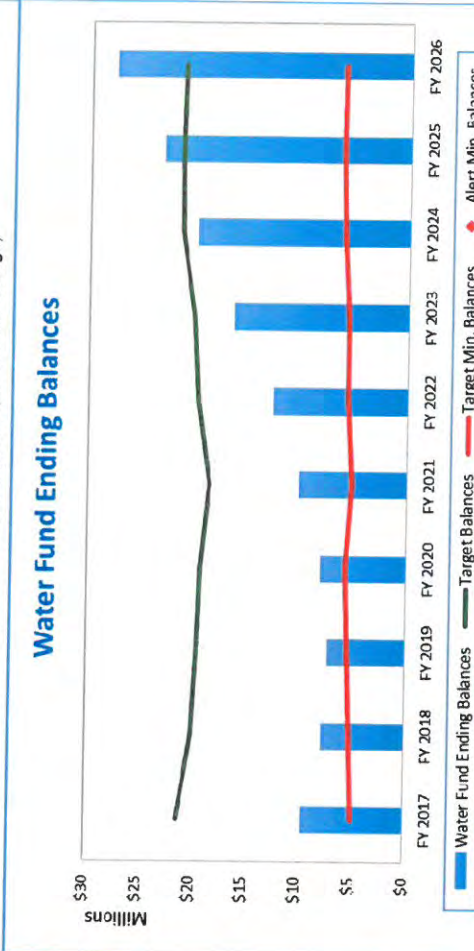
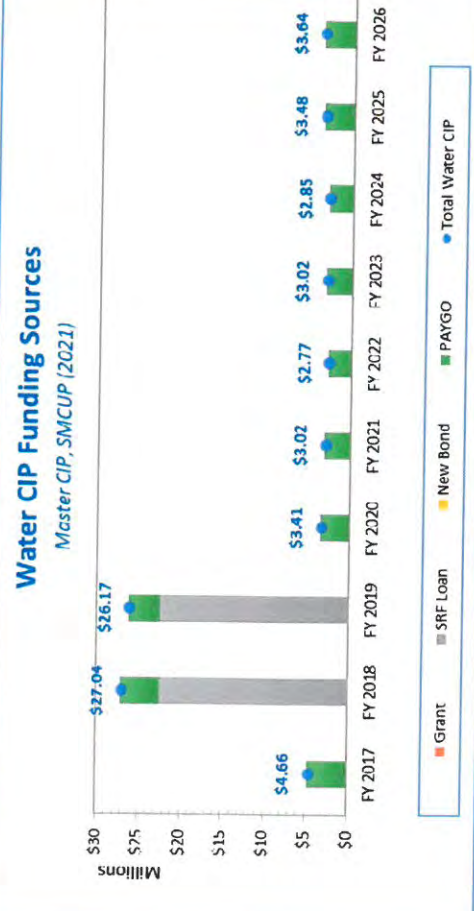
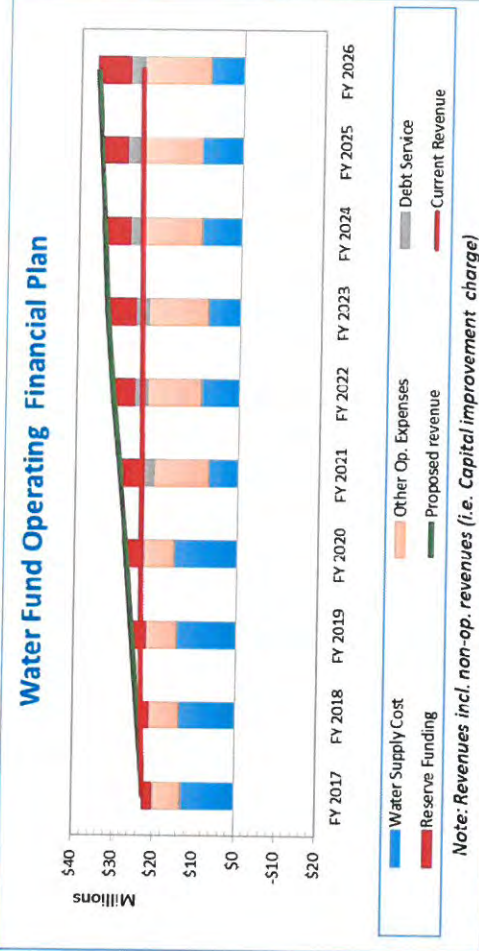
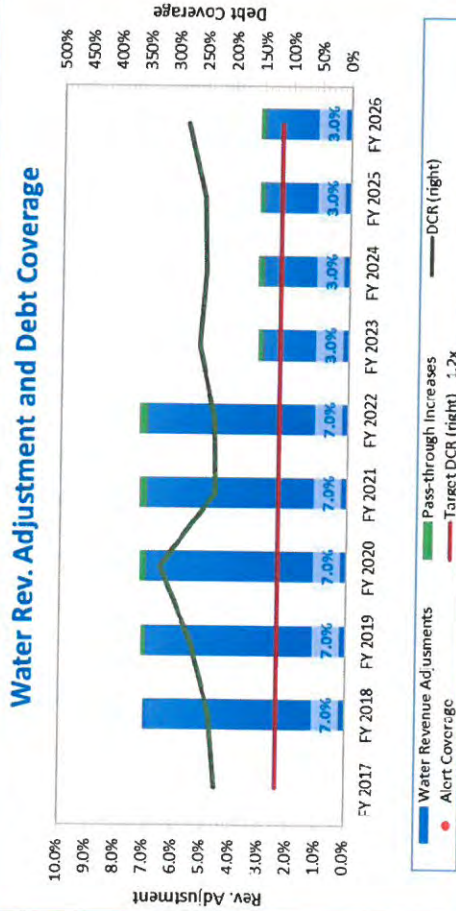
SCENARIO 3 – PROPOSED REV INCREASE AND SMCUP LOW SCENARIO





WATER FINANCIAL PLAN

SCENARIO 4 – PROPOSED REV INCREASE AND SMCUP HIGH SCENARIO

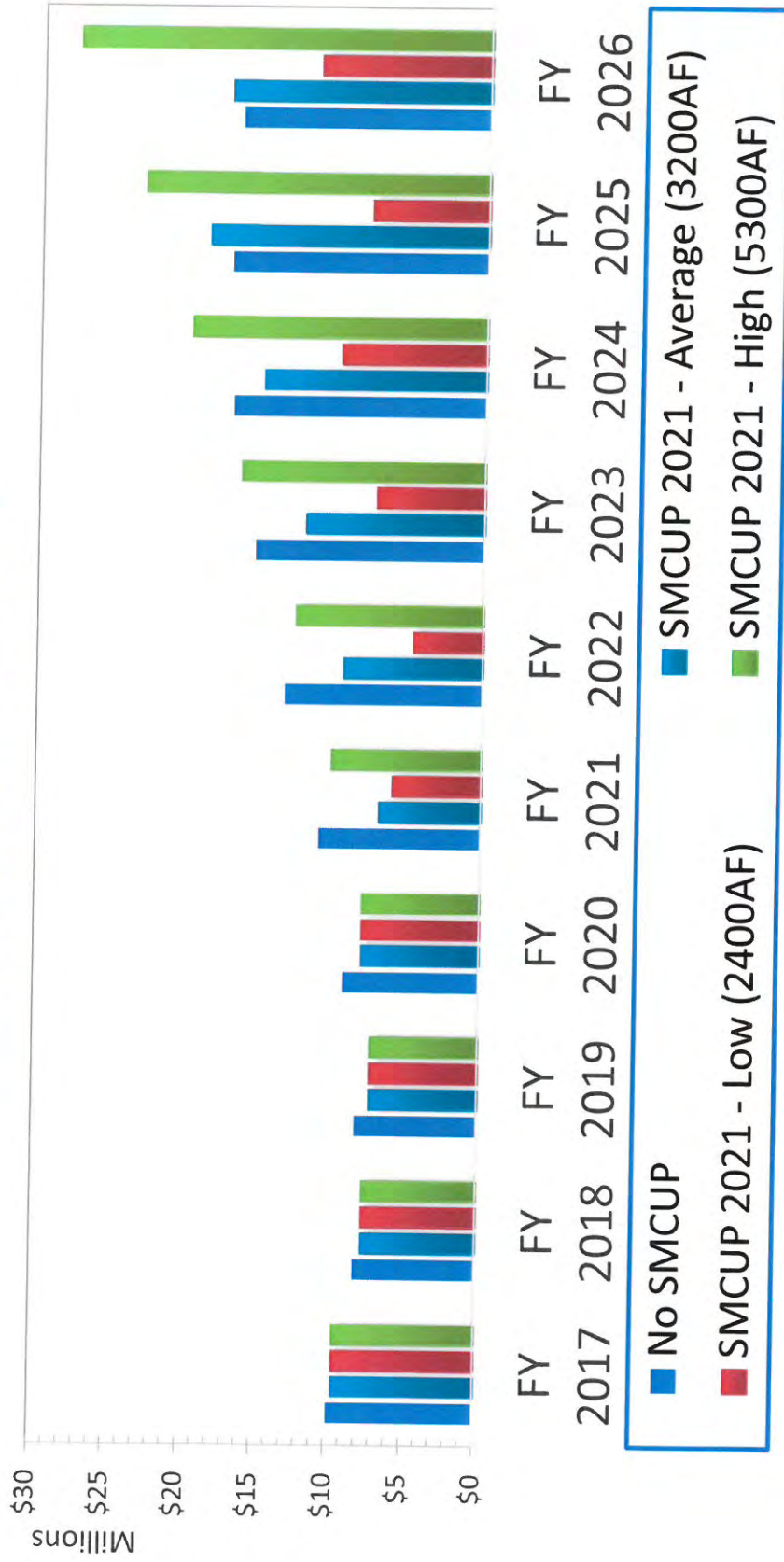




SMCUP PROJECT IMPACTS

Water Fund Ending Balances Comparison

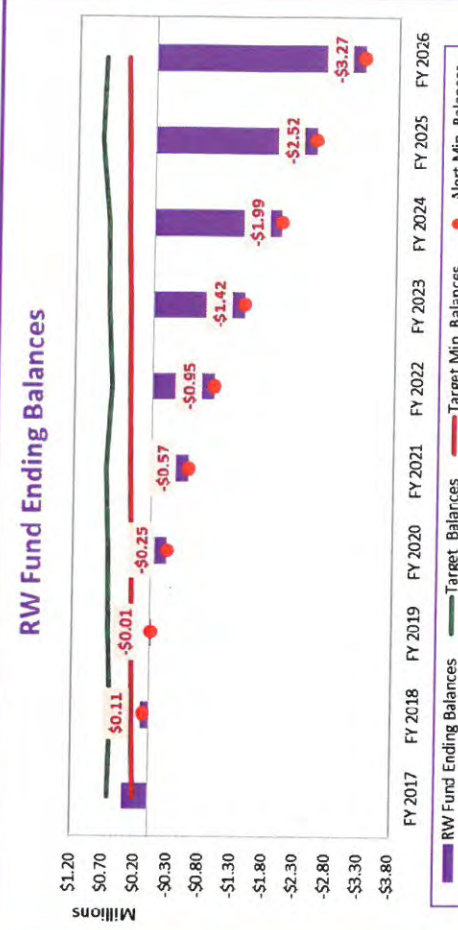
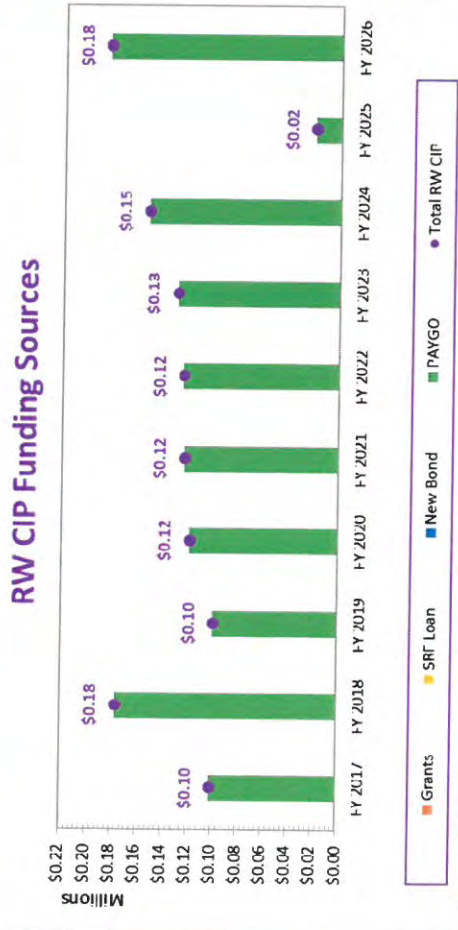
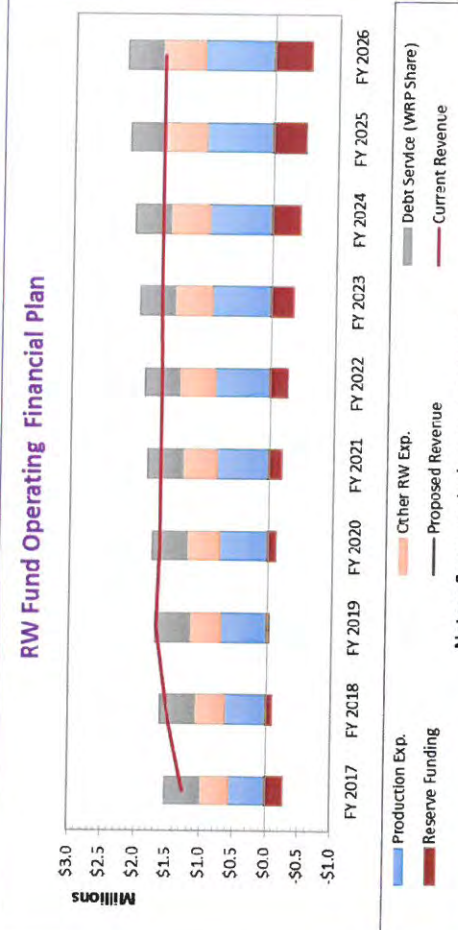
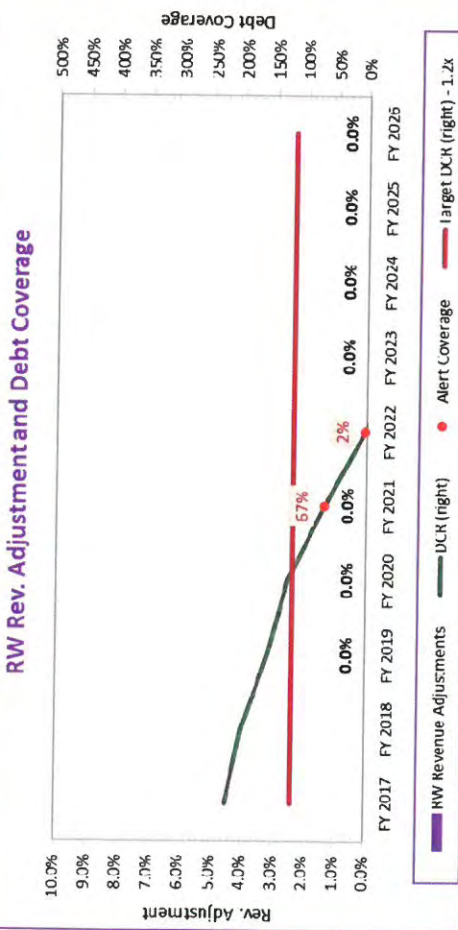
With Proposed Revenue Adjustments





RW FINANCIAL PLAN

STATUS QUO – NO REV INCREASE

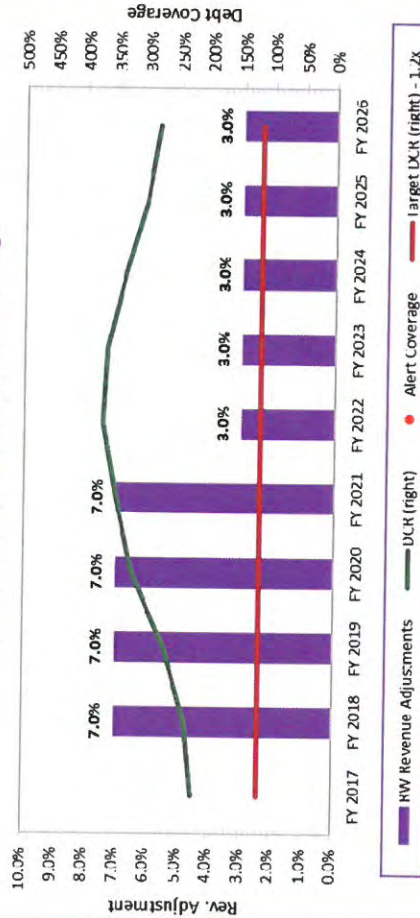




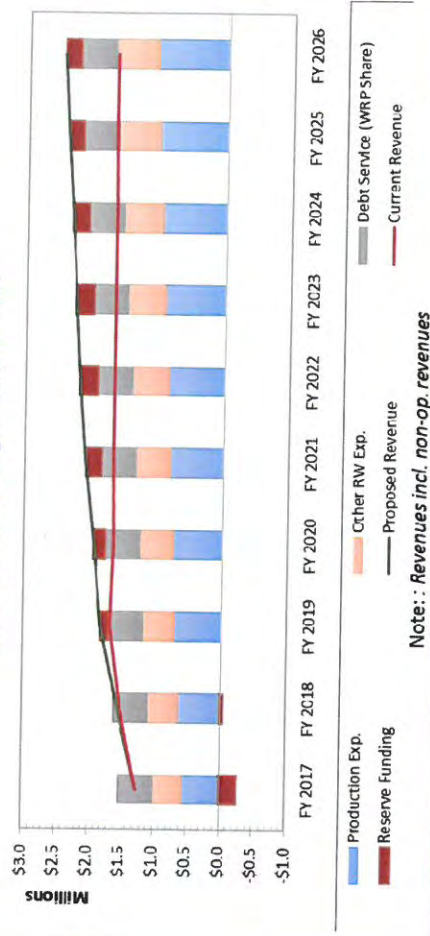
RW FINANCIAL PLAN

PROPOSED — RATE INCREASES IN JANUARY

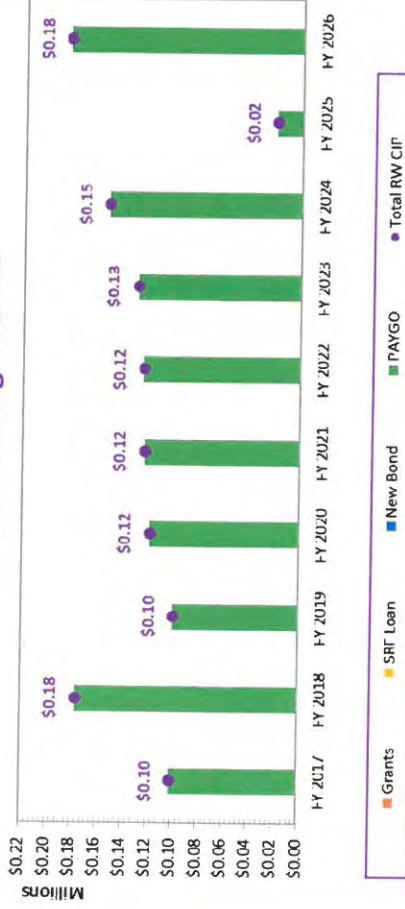
RW Rev. Adjustment and Debt Coverage



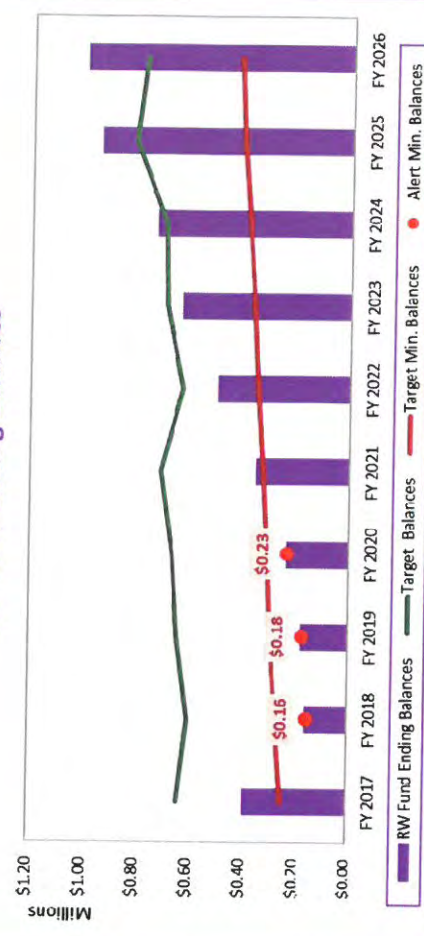
RW Fund Operating Financial Plan



RW CIP Funding Sources



RW Fund Ending Balances



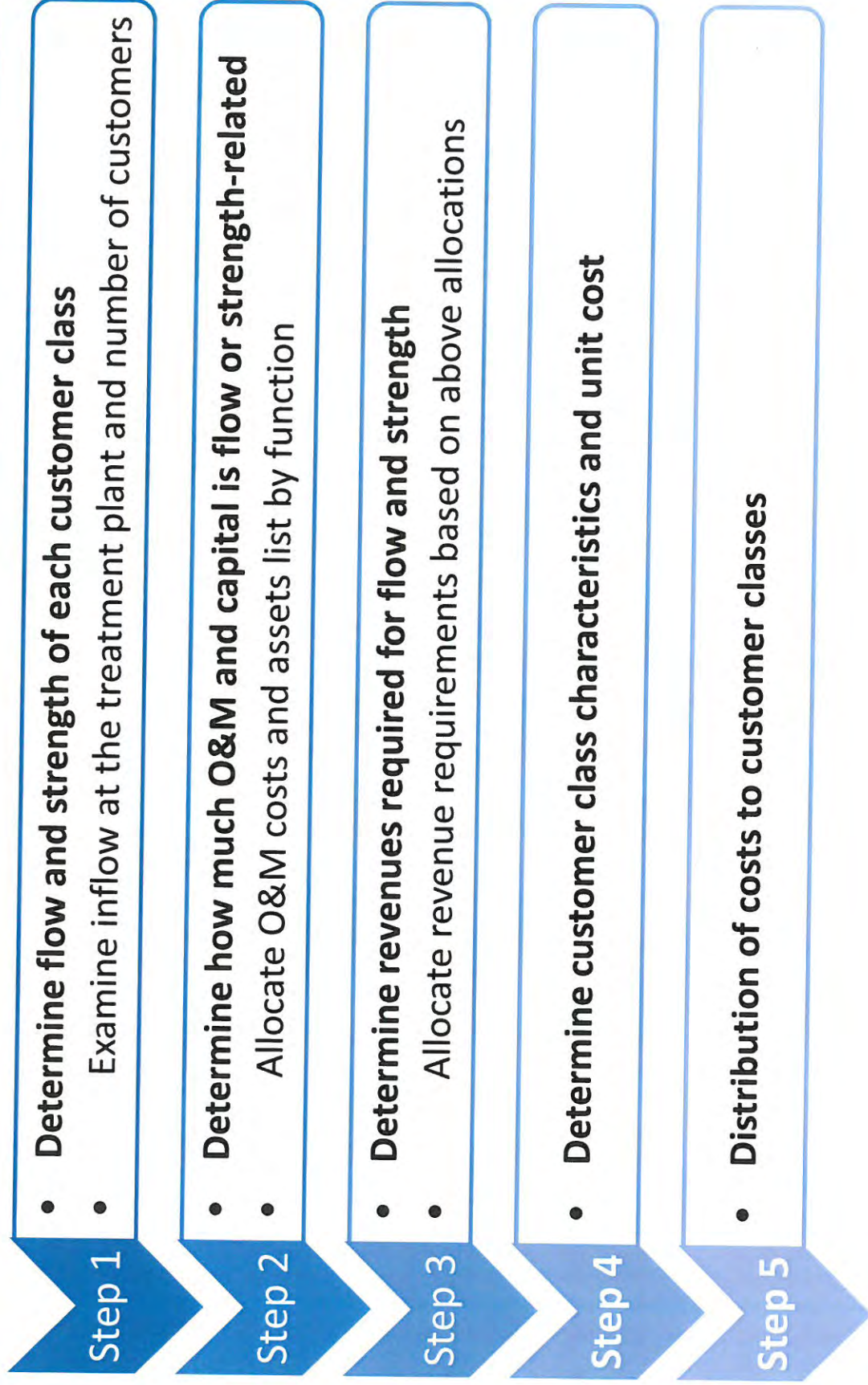


PROPOSED 10-YEAR REVENUE ADJUSTMENTS

Fiscal Year	Effective Date	Water + Pass-through MWD RTS & CWA IAC Costs	RW	WW
FY 2018	Jan 2018	7%	7%	7%
FY 2019	Jan 2019	7%	7%	7%
FY 2020	Jan 2020	7%	7%	7%
FY 2021	Jan 2021	7%	7%	7%
FY 2022	Jan 2022	7%	3%	3%
FY 2023	Jan 2023	3%	3%	3%
FY 2024	Jan 2024	3%	3%	3%
FY 2025	Jan 2025	3%	3%	3%
FY 2026	Jan 2026	3%	3%	3%

WW Rate Discussion

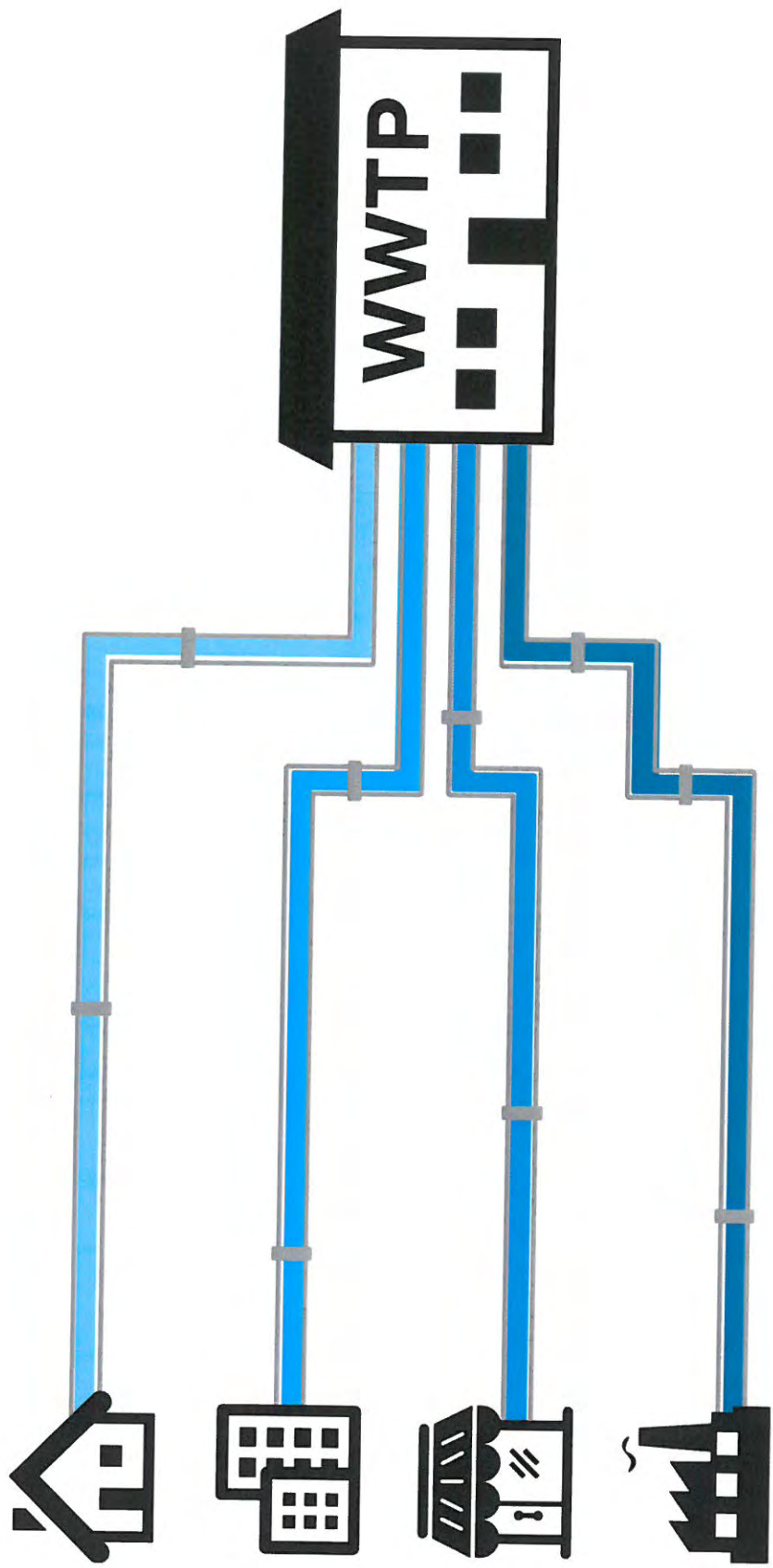
WW COST OF SERVICE ANALYSIS





WW COST OF SERVICE ANALYSIS

Step 1: Determine flow & strength of customers





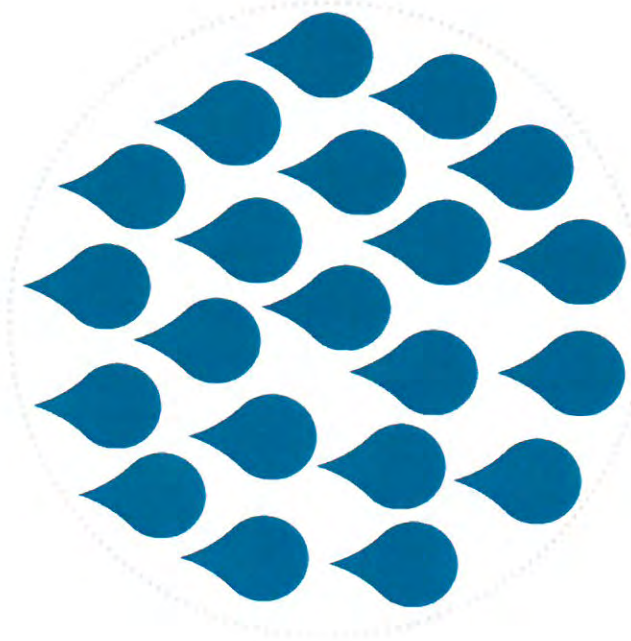
PLANT BALANCE RESULTS & RECOMMENDATIONS

FY 2016 Data (Jul 2015 – Jun 2016)	Current Return To Sewer (RTS)	Billed WW Flows (RTS x Min Winter Use)	Revised RTS	Revised Billed WW Flows (RTS x Min Winter Use)
Ag Domestic (AT)	90%	572	100%	636
Commercial Ag (CB)	90%	238	100%	264
Multi Family (M)	90%	146,459	100%	162,732
Single Family (D)	90%	224,357	100%	249,286
Single Family (LD)	90%	8,176	100%	9,084
Total Billed Residential Flows (1)		379,801 kgal (51 GPCD)		422,002 kgal (57 GPCD)
Residential Flows from Plant Balance (2)		438,744 kgal (59GPCD)		438,744 kgal (59GPCD)
(2) / (1)		116% Billed << Estimated		104%

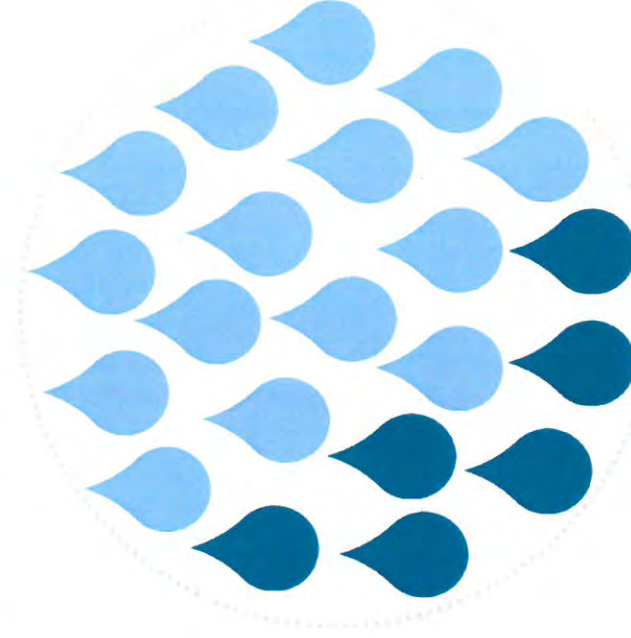


WW COST OF SERVICE ANALYSIS

Step 2: Clarify O&M costs & assets by function



COLLECTION



TREATMENT PLANT



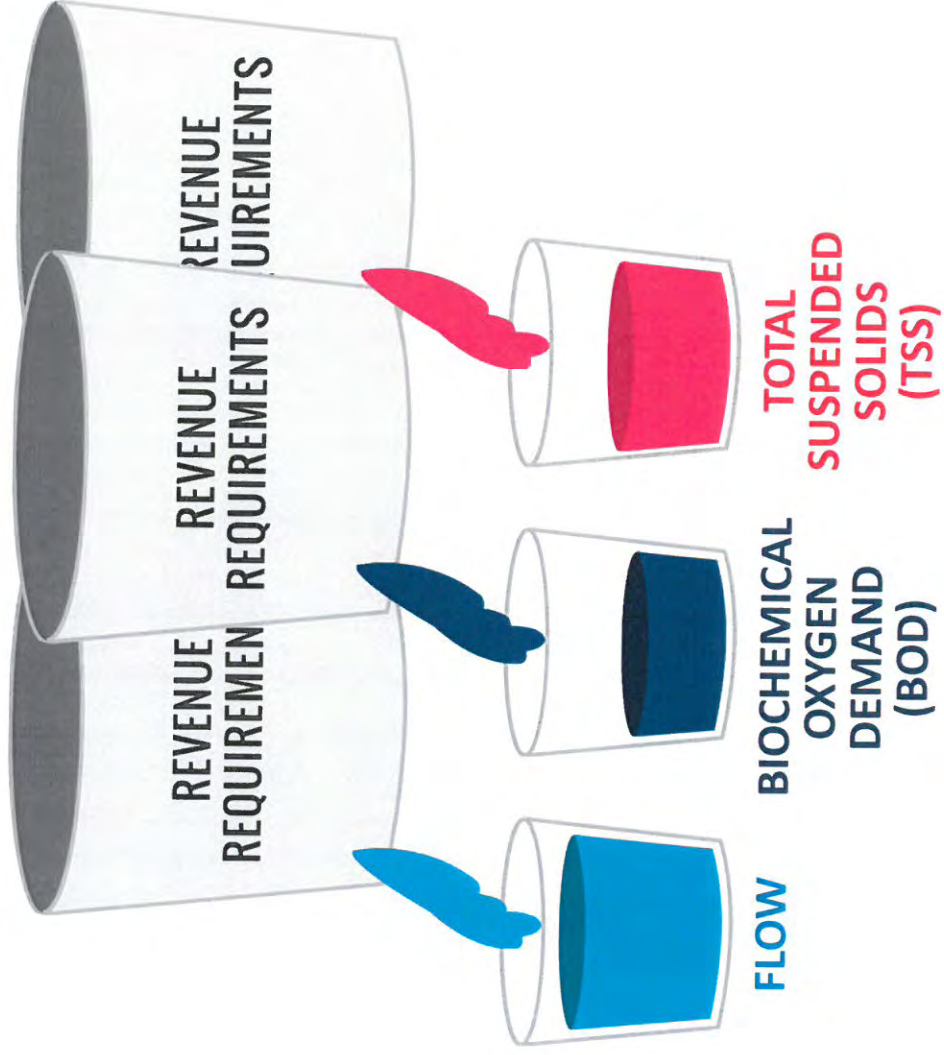
Flow



Strength

WW COST OF SERVICE ANALYSIS

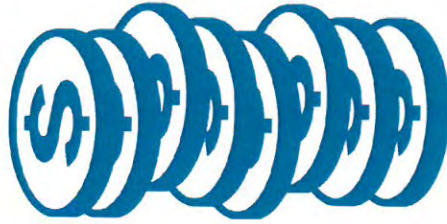
Step 3: Allocation of revenue requirements





WW COST OF SERVICE ANALYSIS

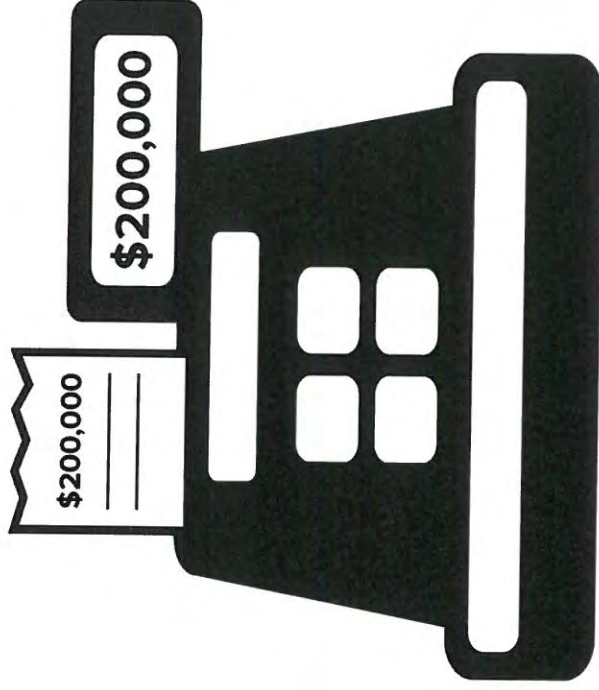
Steps 4 and 5: Cost of each customer class



Flow



Strength



OFFICE / SCHOOL



WW REV REQUIREMENT ALLOCATION TO RATE COMPONENTS

Cost Categories	FY 2018	Fixed Charges			Flow Rates		% from Fixed Charges
		CIC	WW Services	Flow	Strength	Flow	
Flows	\$2,633,782					\$2,633,782	
BOD	\$310,263						\$310,263
TSS	\$1,128,581						\$1,128,581
WW Services	\$1,917,243					\$958,621	50%
CIC	\$1,123,364	\$1,123,364					
Total Rev Req	\$7,113,232	\$1,123,364	\$958,621	\$3,592,404		\$1,438,843	



WW RATE FRAMEWORK

	Residential	Non-Residential Low Strength	Non-Residential Medium Strength	Non-Residential High Strength
Fixed Service Charges (FSC)	\$ Per EDU	\$ Per EDU	\$ Per EDU	\$ Per EDU
Capital Improvement Charges (CIC)*	\$ Per EDU	\$ Per EDU	\$ Per EDU	\$ Per EDU
Volumetric Rates (\$ / kgal billed WW flows**)	x	x	xx	xxx

* CIC = Current CIC (\$1.84/EDU* (1 + ENR CCI%)) (Increase ~3% per year)

** Residential billed WW flows = 100% x Minimum Winter Use
 Non-Residential billed WW flows = RTS x Water Usage



PRELIMINARY WW RATES

	CIC (\$/EDU)	Fixed WW Service Charges (\$/EDU)	Volumetric Rates (\$/kgal)	Current Volumetric Rates (\$/kgal)
Ag Domestic	\$11.16	\$9.52	\$9.92	\$8.77
Commercial Ag Domestic	\$11.16	\$9.52	\$9.92	\$8.77
Single Family	\$11.16	\$9.52	\$9.92	\$8.77
Single Family (Large)	\$11.16	\$9.52	\$9.92	\$8.77
Multi Family	\$11.16	\$9.52	\$9.92	\$8.77
Government	\$11.16	\$9.52	\$9.85	\$8.77
School	\$11.16	\$9.52	\$9.85	\$8.77
Church	\$11.16	\$9.52	\$9.85	\$8.77
Commercial - Low Strength	\$11.16	\$9.52	\$9.85	\$8.77
Commercial - Medium Strength	\$11.16	\$9.52	\$12.15	\$13.27
Commercial - High Strength	\$11.16	\$9.52	\$15.15	\$22.28
Standby Services	\$11.16	\$9.52		



WW RESIDENTIAL CUSTOMER IMPACT

(3/4-INCH DOMESTIC)

Sample Single Family WW Bill Impacts

3/4 inch meter



Water Rates Design Discussion



WATER RATE STRUCTURE

ESTABLISHED DURING DEC 2016 FINANCE COMMITTEE WORKSHOP

Customer Class	Current Rate Structure	Proposed to Evaluate	Why?
Residential (D, LD, M)	Inclining 3 Tiers	Revised Inclining 3 Tiers	Simplify & justify tier definitions
Agriculture SAWR	Uniform	Uniform	All Ag use supplied by SAWR water
Ag Domestic (AT, CB)	3 Tiers	2-Tiers	Tier 1 – Indoor Domestic Use Tier 2 – Agriculture Use
Commercial (C, CA)/ Government (G)	Uniform	Uniform	Heterogeneous use
Irrigation (I)	Uniform	Uniform	Use varied significantly with irrigable areas and weather



PROPOSED RESIDENTIAL TIER DEFINITIONS

APPLIED TO ALL RESIDENTIAL CLASSES BY DWELLING UNIT

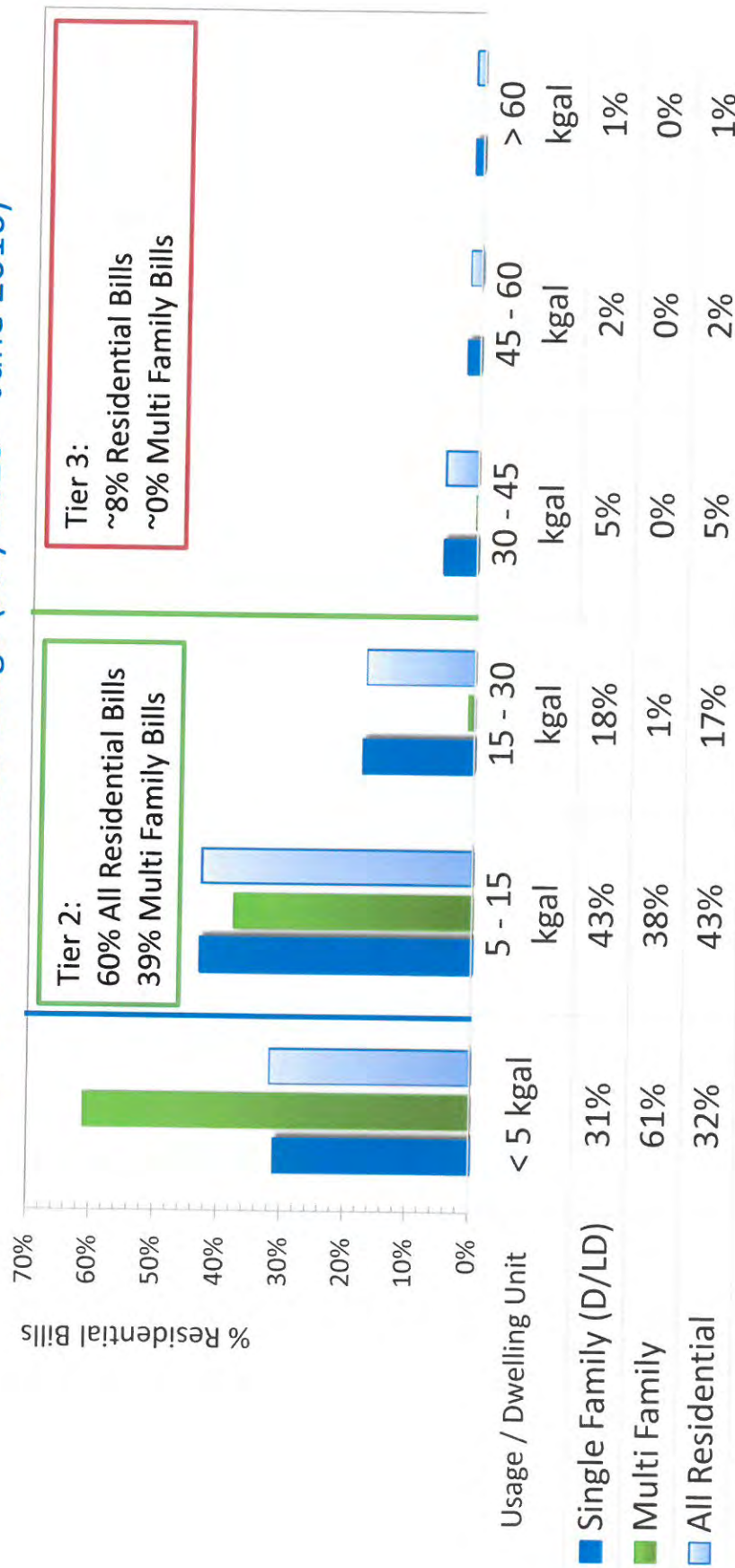
	Current Rate Structure	Proposed to Evaluate	Basis
Tier 1	0 – 5 kgal	0 – 5 kgal	Efficient Indoor Use Benchmark: 55GPCD x 3 PPH x 30 days
Tier 2	D / LD: 6 – 30 kgal M: 6 – 18 kgal	6 – 30 kgal	Average Efficient Monthly Outdoor Use Benchmark for 0.25 acre = 25 kgal / month
Tier 3	Above Tier 2	Above Tier 2	Above Average Efficient Use



RESIDENTIAL BILL FREQUENCY

Residential Bill Frequency

FY 2016 Residential Usage (July 2015 – June 2016)



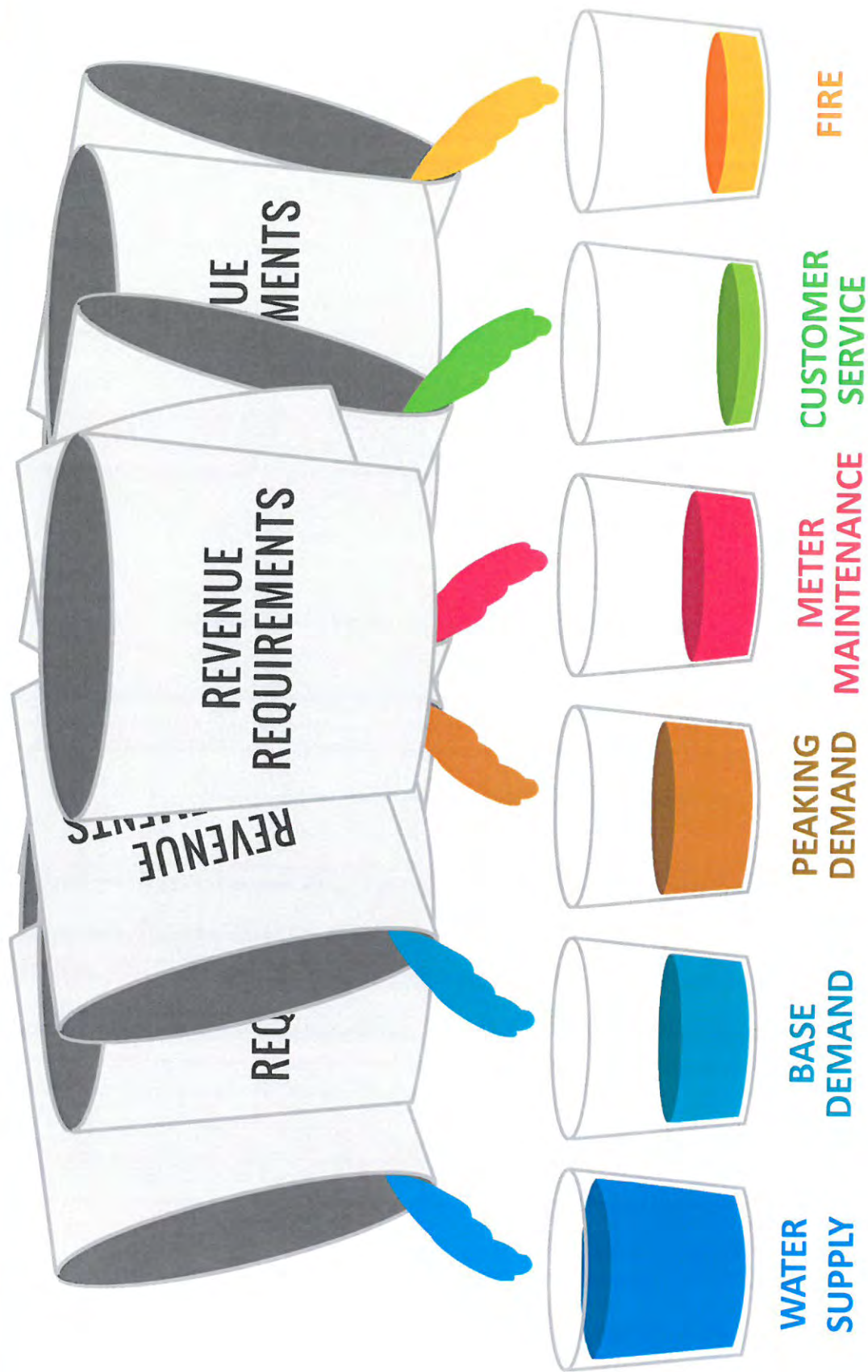


PROPOSED AG DOMESTIC TIER DEFINITIONS

	Current Rate Structure	Proposed to Evaluate	Basis
Tier 1	0 – 5 kgal	0 – 5 kgal	Efficient Indoor Use Benchmark: 55GPCD x 3 PPH x 30 days
Tier 2	6 – 20 kgal	Above 5 kgal → Ag Use	Assumed all use for outdoor Ag irrigation
Tier 3	Above Tier 2 → Ag Use		



COST OF SERVICE ALLOCATION PROCESS





WATER REVENUE REQUIREMENTS

Cost Categories	FY 2018	CIC	MWD / ICA	Fixed Service Charges (FSC)	Water Usage Rates	% in Fixed Service Charges
Power	\$263,153					
MWD RTS & CWA IAC	\$820,102		\$820			
Other Water Supply	\$10,487,016					
Base Fixed	\$3,785,266					
Peaking	\$3,170,086					
Water Reliability	\$1,479,091					
Billing & CS	\$981,300					
Meters & Services	\$1,694,890			\$1,694,890		
Conservation	\$163,438			\$0	\$163,438	
Rev Offset	-\$899,914			\$0	-\$899,914	0%
Fire Protection	\$0			\$5,193	\$0	100%
CIC (water)	\$1,272,836	\$1,272,836				
CIC Pumping	\$39,952	\$39,952				
Monthly Discount	-\$437,136			-\$437,136		100%
Total Revenue Requirements	\$22,825,286	\$1,312,787	\$820,102	\$7,808,529	\$12,883,867	
% Proposed	43% Fixed	6%	4%	34%	56%	38%
% Current	35% Fixed	6%	4%	25%	65%	28%

Should Property Tax Use to Offset Fixed Service Charges or Water Usage Rates (Tier 1 Rates for Affordability)?



FIXED CHARGES FRAMEWORK

Meter Ratios	Capital Improvement Charge (CIC)		RTS		IAC		Billing & CS		Meters & Services		Capacity		Fire Protection		Backflow Inspection		Monthly discount	
	Current	AWWA Max Flow	AWWA Max Flow	AWWA Max Flow	Uniform	Meter Costs	AWWA Max Flow	Fire Capacity	BF Costs	Uniform								
Water customers	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Standby customers	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fire Connections					X									X				
Backflow device owner																X		

- Notes**

- CIC are as adopted, current CIC escalated by ENR + 3% to cover pipeline replacement costs
- RTS & IAC are pass-through costs
- Backflow device charges are to recover the Backflow Inspection costs



WATER USAGE RATES FRAMEWORK

Customer Class	Water Reliability	Delivery	Peaking (based on Peaking Factors)	Conservation	Rev Offset	Water Supply
Ag (SAWR) (AS)		X	XX			SAWR
Ag Domestic (SAWR) (AT)	Tier 1	X	X		X	Imported
	Tier 2	X	XX			SAWR
Commercial Ag (CA)		X	XX			Imported
Commercial	Tier 1	X	X		X	Imported
	Tier 2	X	XX			Imported
Commercial (C)	X	X	X	X		Imported
Irrigation Only (I)	X	X	X	X	X	Imported
Government (G)	X	X	XX	X	X	Imported
Domestic (D/LD/M)	Tier 1	X	X		X	Imported
	Tier 2	X	XX		X	Imported
	Tier 3	X	XXX	X	X	Imported

- **Water Reliability** to Recover the Emergency Storage and Water Supply Reliability Charges from MWD
 - Ag users are interruptible → no Water Reliability Rate and no Conservation Rate
- **Revenue Offset:**
 - Should property tax provide offset for Water Usage Rates or Fixed Service Charges?



PRELIMINARY RATES

SUBJECT TO CHANGES BASED ON POLICY DECISIONS FROM PRIOR SLIDES

Meter Size (inch)	Other Fixed Charges			Monthly Fixed Service Charges (FSC) <small>Excluding Monthly Discount = \$5/month</small>			Current FSC	
	CIC	MWD RTS	CWA IAC	Billing & CS	Meters & Services	Capacity		Total FSC
Water Services								
¾	\$10.01	\$2.62	\$2.89	\$8.90	\$10.26	\$38.27	\$57.43	\$41.59
1	\$13.77	\$4.37	\$4.82	\$8.90	\$17.10	\$63.79	\$89.79	\$54.12
1½	\$20.03	\$8.73	\$9.63	\$8.90	\$34.19	\$127.57	\$170.66	\$77.23
2	\$31.30	\$13.97	\$15.40	\$8.90	\$54.70	\$204.11	\$267.71	\$113.03
3	\$52.58	\$27.93	\$30.79	\$8.90	\$109.39	\$408.22	\$526.51	\$184.39
4	\$82.62	\$43.64	\$48.11	\$8.90	\$170.92	\$637.84	\$817.66	\$293.17
6	\$150.22	\$87.28	\$96.21	\$8.90	\$341.84	\$1,275.67	\$1,626.41	\$523.95
Standby Services								
¾	\$6.01	\$2.62		\$8.90	\$10.26		\$19.16	\$24.78
1	\$8.26	\$4.37		\$8.90	\$17.10		\$26.00	\$24.78
1½	\$12.02	\$8.73		\$8.90	\$34.19		\$43.09	\$24.78
2	\$18.78	\$13.97		\$8.90	\$54.70		\$63.60	\$24.78
3	\$31.55	\$27.93		\$8.90	\$109.39		\$118.29	\$24.78
4	\$49.57	\$43.64		\$8.90	\$170.92		\$179.82	\$24.78
6	\$90.13	\$87.28		\$8.90	\$341.84		\$350.74	\$24.78

Mar 6, 2017

Fairbrook Public Utility District 2016 Rate Study



PRELIMINARY RATES

SUBJECT TO CHANGES BASED ON POLICY DECISIONS FROM PRIOR SLIDES

Meter Size (inch)	Monthly Fixed Service Charges (FSC)			Total FSC	Current FSC
	Billing & CS	Fire Capacity	Backflow Inspection		
Private Fireline					
2	\$8.89	\$0.41		\$9.31	\$68.26
3	\$8.89	\$1.17		\$10.07	\$78.74
4	\$8.89	\$2.49		\$11.39	\$89.22
6	\$8.89	\$7.22		\$16.12	\$122.49
8	\$8.89	\$15.37		\$24.27	\$155.76
Backflow Devices					
¾			\$4.93	\$4.93	\$6.88
1			\$5.81	\$5.81	\$6.88
1 ½			\$10.73	\$10.73	\$9.94
2			\$12.88	\$12.88	\$9.94
3			\$25.75	\$25.75	\$11.27
4			\$40.23	\$40.23	\$15.92
6			\$80.45	\$80.45	\$19.06

	Proposed	Current
Elevation Charges	\$0.66 /kgal	\$0.33
CIC Pumping	\$0.10 / kgal	\$0.10



PRELIMINARY RATES

SUBJECT TO CHANGES BASED ON POLICY DECISIONS FROM PRIOR SLIDES

Customer Class	Water Reliability	Delivery	Peaking	Conservation	Rev Offset	Water Supply	Proposed	Current
Agriculture								
Ag (SAWR) (AS)		\$0.27	\$0.25			\$3.28	\$3.80	\$3.65
Ag Domestic (SAWR) (AT)	Tier 1	\$0.27	\$0.18		-\$0.56	\$3.93	\$3.82	\$5.21 - \$5.74
	Tier 2	\$0.27	\$0.25			\$3.28	\$3.80	\$3.65
Commercial Ag (CA)		\$0.27	\$0.25			\$3.93	\$4.45	\$4.97
Commercial Domestic Ag (CB)	Tier 1	\$0.27	\$0.18		-\$0.56	\$3.93	\$3.82	\$5.21 - \$5.74
	Tier 2	\$0.27	\$0.25			\$3.93	\$4.45	\$4.97
Non-Agriculture								
Commercial (C)	\$0.95	\$0.27	\$0.22	\$0.11	-\$0.56	\$3.93	\$4.92	\$5.21 - \$5.74
Irrigation Only (I)	\$0.95	\$0.27	\$0.17	\$0.11	-\$0.56	\$3.93	\$4.87	\$5.74
Government (G)	\$0.95	\$0.27	\$0.23	\$0.11	-\$0.56	\$3.93	\$4.93	\$5.74
Domestic (D/LD/M)	Tier 1	\$0.95	\$0.18		-\$1.34	\$3.93	\$3.99	\$5.21
	Tier 2	\$0.95	\$0.24			\$3.93	\$5.39	\$5.74
	Tier 3	\$0.95	\$0.32	\$1.14		\$3.93	\$6.61	\$6.32



CUSTOMER IMPACT ANALYSIS

Sample Water Bills For Domestic & Large Domestic Customers
3/4" meter, 1 DU, eligible for monthly discount



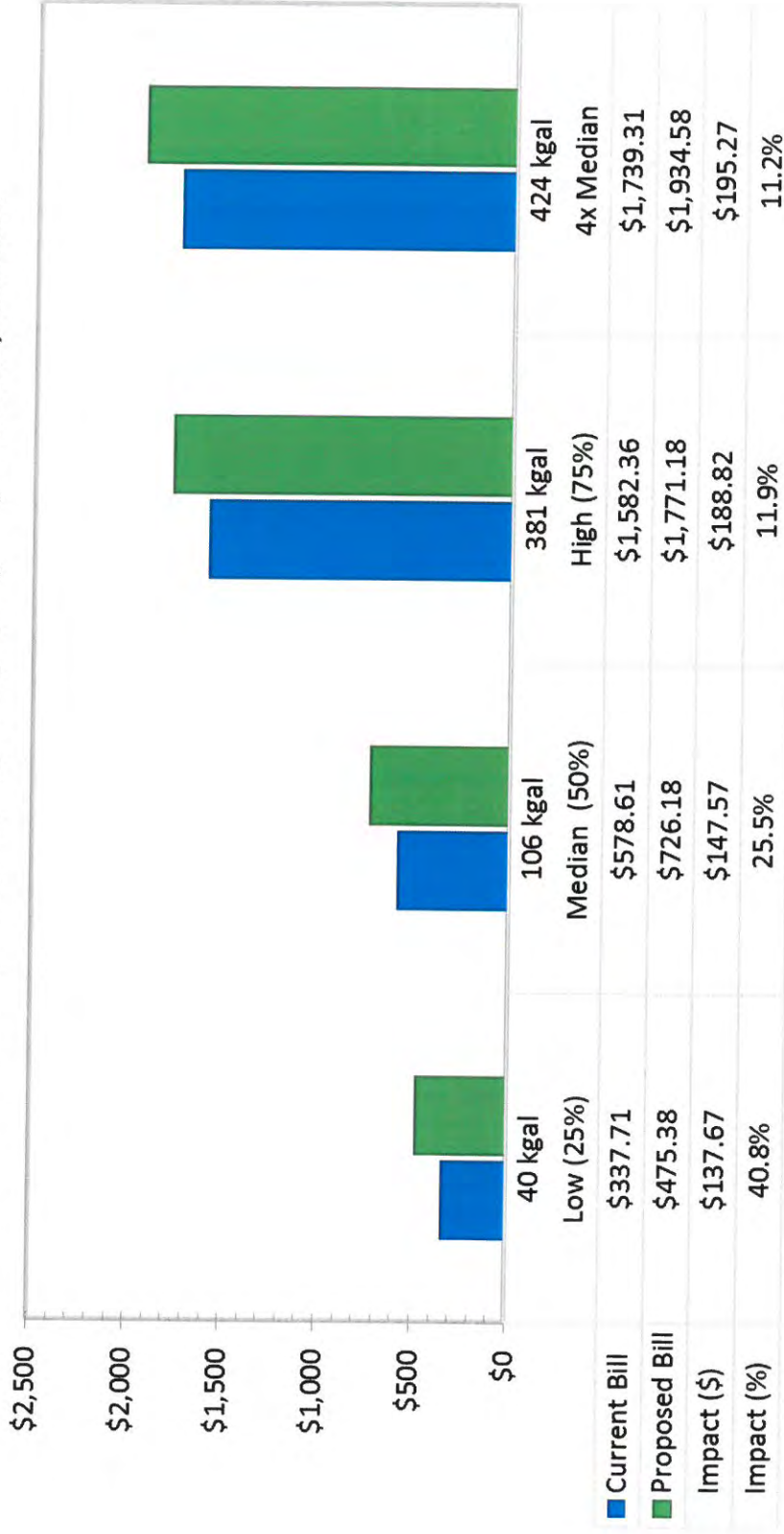


CUSTOMER IMPACT ANALYSIS

AG SAWR (AS) CUSTOMER – 2-INCH METER

Sample Water Bills For Ag (SAWR) Customers

2" meter, 1 DU, excl. pumping charge, eligible for monthly discount



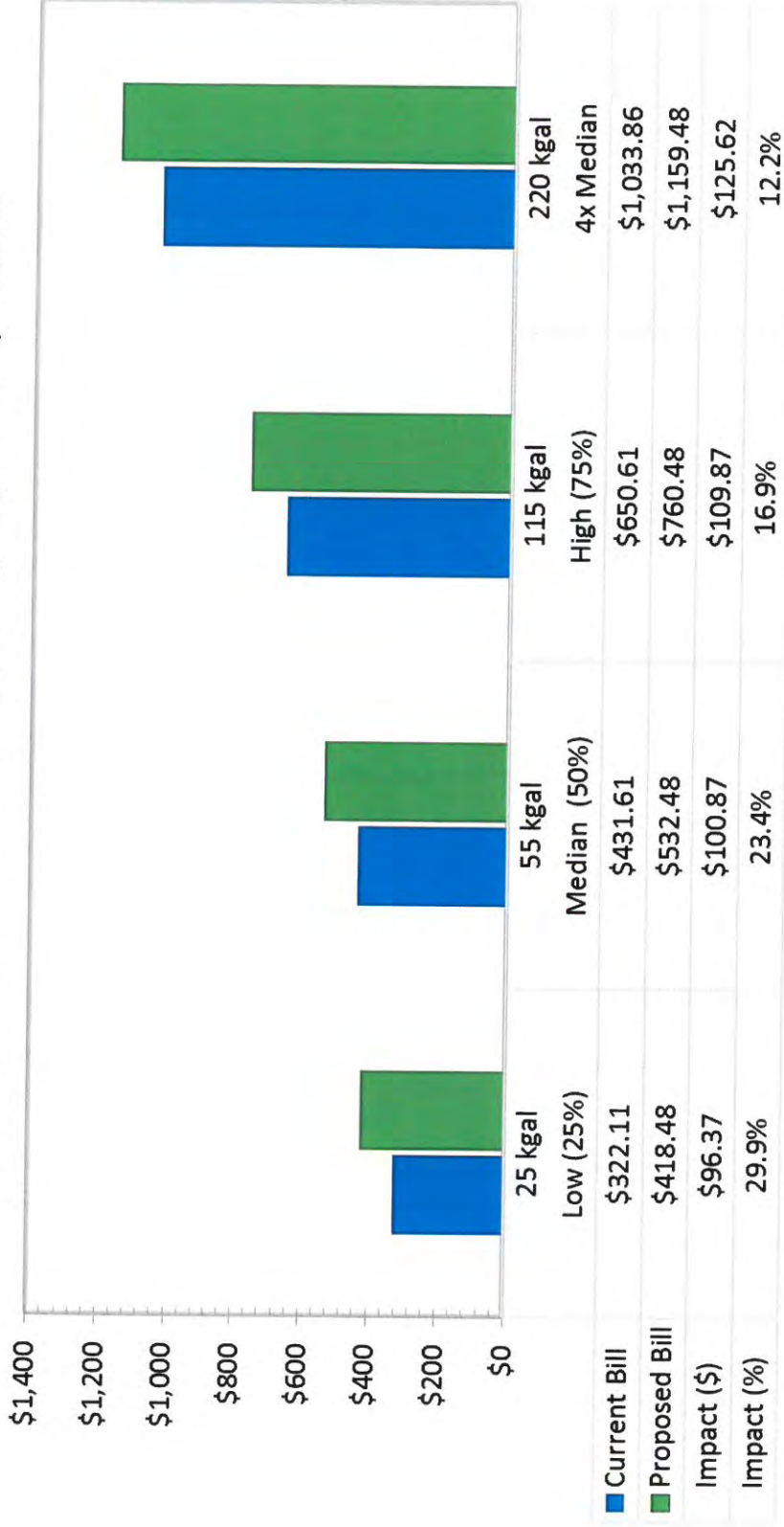


CUSTOMER IMPACT ANALYSIS

AG DOMESTIC SAWR (AT) CUSTOMER – 2-INCH METER

Sample Water Bills For Ag Domestic (SAWR)

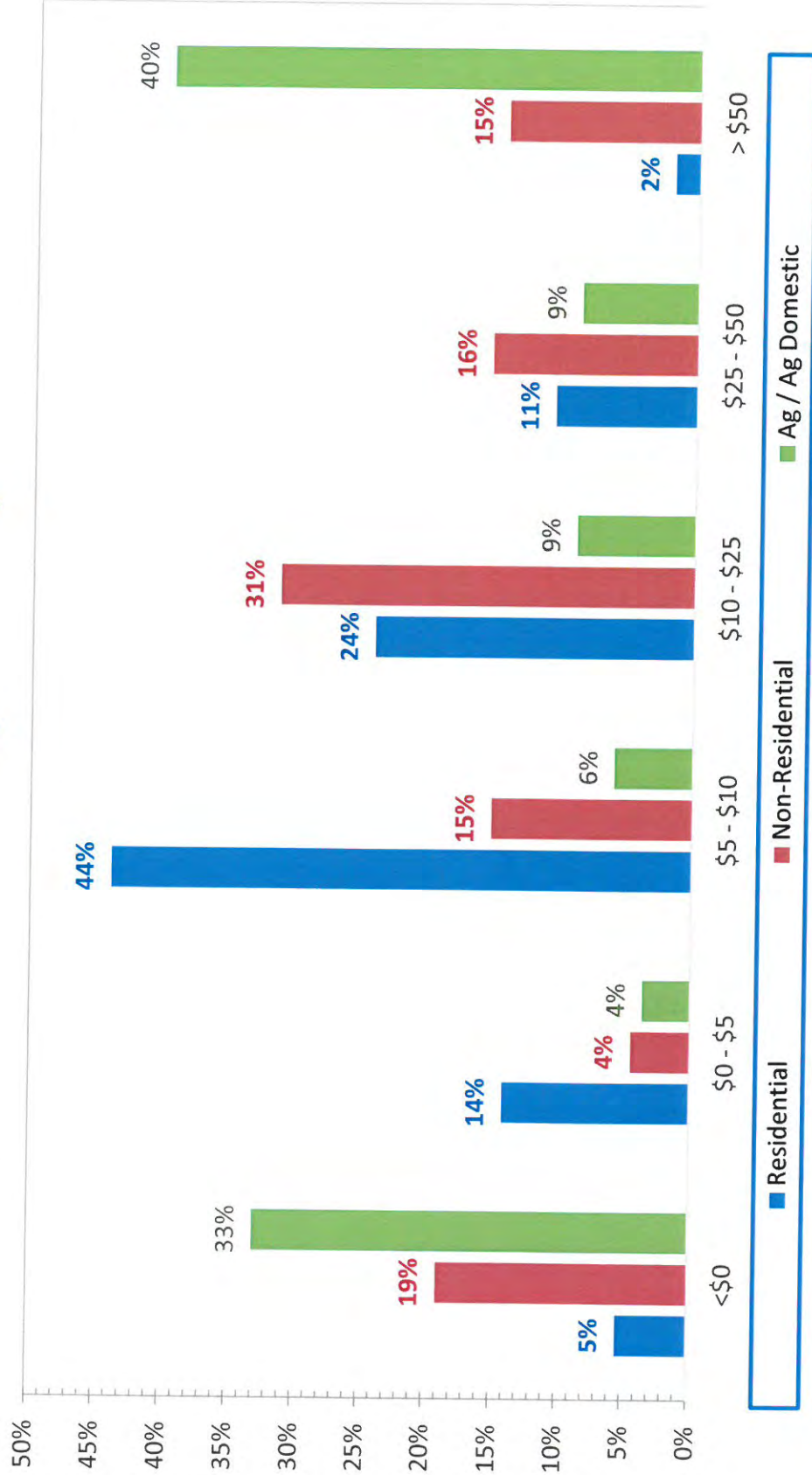
2" meter, 1 DU, excl. pumping charge, eligible for monthly discount





CUSTOMER IMPACT ANALYSIS

Customer Impact Analysis



RW Rate Discussion



RW RATE FRAMEWORK

- RW services pay the same monthly fixed service charges (FSC) as Water services
- RW usage rates recover the residual RW costs after accounting for FSC revenues
 - Property tax allocated to RW fund (\$31,827 in FY 2018) are dedicated to provide discount for non-revenue RW usage and Sport Park & Youth Baseball (SP&YB) for public benefits

	FY 2018	Non-Rev Sales Offset from Property Tax	SP&YB Sales Offset from Property Tax
RW System Costs, excl. Prop Tax Offset	\$1,399,161		
Less FSC Rev	-\$216,606		
Less CalTrans Contract Rev	-\$137,249		
RW Rev Req from RW Rates	\$1,041,707	-\$13,944	-\$17,883
RW Sales (with non-rev sales & Orange Grove rates @1.15 Regular RW)	793 AF	11AF	27AF
RW Unit Rate	\$1,314/AF \$4.04/ kgal	-\$1,314/AF -\$4.04/ kgal	-\$657/AF -\$2.02/kgal



PRELIMINARY RW RATES

SUBJECT TO CHANGES BASED ON WATER RATES DESIGN

Meter Size (inch)	Monthly Fixed Service Charges (FSC) Excluding Monthly Discount = \$5/month				
	Billing & CS	Meters & Services	Capacity	Total FSC	Current FSC
¾	\$8.90	\$10.26	\$38.27	\$57.43	\$41.59
1	\$8.90	\$17.10	\$63.79	\$89.79	\$54.12
1½	\$8.90	\$34.19	\$127.57	\$170.66	\$77.23
2	\$8.90	\$54.70	\$204.11	\$267.71	\$113.03
3	\$8.90	\$109.39	\$408.22	\$526.51	\$184.39
4	\$8.90	\$170.92	\$637.84	\$817.66	\$293.17
6	\$8.90	\$341.84	\$1,275.67	\$1,626.41	\$523.95



PRELIMINARY RW RATES

SUBJECT TO CHANGES BASED ON WATER RATES DESIGN

Proposed Rates	FY 2018	
	Proposed Rates	Current Rates
Caltrans (Contract)	\$3.51	\$3.51
Orange Groove (Contract)	\$4.65	\$4.55
Sports Park & Youth Baseball (SP&YB)	\$2.02	\$1.66
Non-Contract RW Sales	\$4.04	\$4.43
Non-revenue RW Sales	\$0.00	\$0.00
Potable Irrigation Rates	\$4.87	
Residential Tier 1	\$3.99	
Residential Tier 2	\$5.39	
Potable Irrigation Rates	83%	
Residential Tier 1	101%	
Average Residential Tiers 1 & 2	86%	

Drought Rate Discussion



DROUGHT LEVELS

Reduction from FY 2016 Usage	No Drought	Level 1	Level 2	Levels 3 & 4
	No Reduction	10%	20%	40%
Commercial Ag (CA, CB)	0%	10%	20%	40%
Residential (D, LD, M)	0%	10%	20%	40%
Commercial (C)	0%	10%	20%	40%
Irrigation (I)	0%	10%	20%	40%
Government (G)	0%	10%	20%	40%

- Ag (SAWR) and Ag Domestic (SAWR) have annual allocation set up by CWA, thus their usage are not included in the Drought Rate analysis
- Reduction will occur in upper tiers (Tier 3) first to meet Drought Stage reductions



DROUGHT STAGES REDUCTION GOALS

	No Drought	Level 1	Level 2	Levels 3 & 4
Reduction from FY 2016 Usage	No Reduction	10%	20%	40%
Commercial Ag (CA, CB)		25,058 kgal	50,116 kgal	100,233 kgal
Residential (D, LD, M)		138,132 kgal	276,263 kgal	552,526 kgal
Commercial (C)		14,638 kgal	29,276 kgal	58,552 kgal
Irrigation (I)		348 kgal	696 kgal	1,393 kgal
Government (G)		3,572 kgal	7,144 kgal	14,289 kgal
Total Reduction Goals		181,748 kgal	363,497 kgal	726,993 kgal



PRELIMINARY DROUGHT RATES

	No Drought	Level 1	Level 2	Levels 3 & 4
	No Reduction	10%	20%	40%
Projected Revenue Loss		\$1,090,882	\$2,046,490	\$3,883,524
Base Revenues from Residual Usage		\$7,723,904	\$6,768,296	\$4,931,262
Drought Rates as % of Water Usage Rates	0%	14.1%	30.2%	78.8%



PRELIMINARY DROUGHT RATES

	No Drought	Level 1	Level 2	Levels 3 & 4
	No Reduction	10%	20%	40%
Commercial Ag (CA)	\$4.45	\$0.63	\$1.35	\$3.51
Commercial Ag Domestic (CB)				
Tier 1	\$3.82	\$0.54	\$1.16	\$3.01
Tier 2	\$4.45	\$0.63	\$1.35	\$3.51
Residential (D, LD, M)				
Tier 1	\$3.99	\$0.57	\$1.21	\$3.15
Tier 2	\$5.39	\$0.77	\$1.63	\$4.25
Tier 3	\$6.61	\$0.94	\$2.00	\$5.21
Non-Residential (C,I,G)				
Commercial (C)	\$4.92	\$0.70	\$1.49	\$3.88
Irrigation Only (I)	\$4.87	\$0.69	\$1.48	\$3.84
Government (G)	\$4.93	\$0.70	\$1.50	\$3.89



THANK YOU

MSRB REGISTERED MUNICIPAL ADVISOR: RFC is a Registered Municipal Advisor with the MSRB and SEC under the Dodd-Frank Act and is fully qualified and capable of providing advice related to all aspects of utility financial and capital planning, including the size, timing, and terms of future debt issues. Any opinion, information, or recommendation included in this presentation, related to the size, timing, and terms of a future debt issue may be relied upon only for its intended purpose. This information is not intended as a recommendation to undertake a specific course of action related to the issuance of debt, or to indicate that a particular set of assumptions

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