

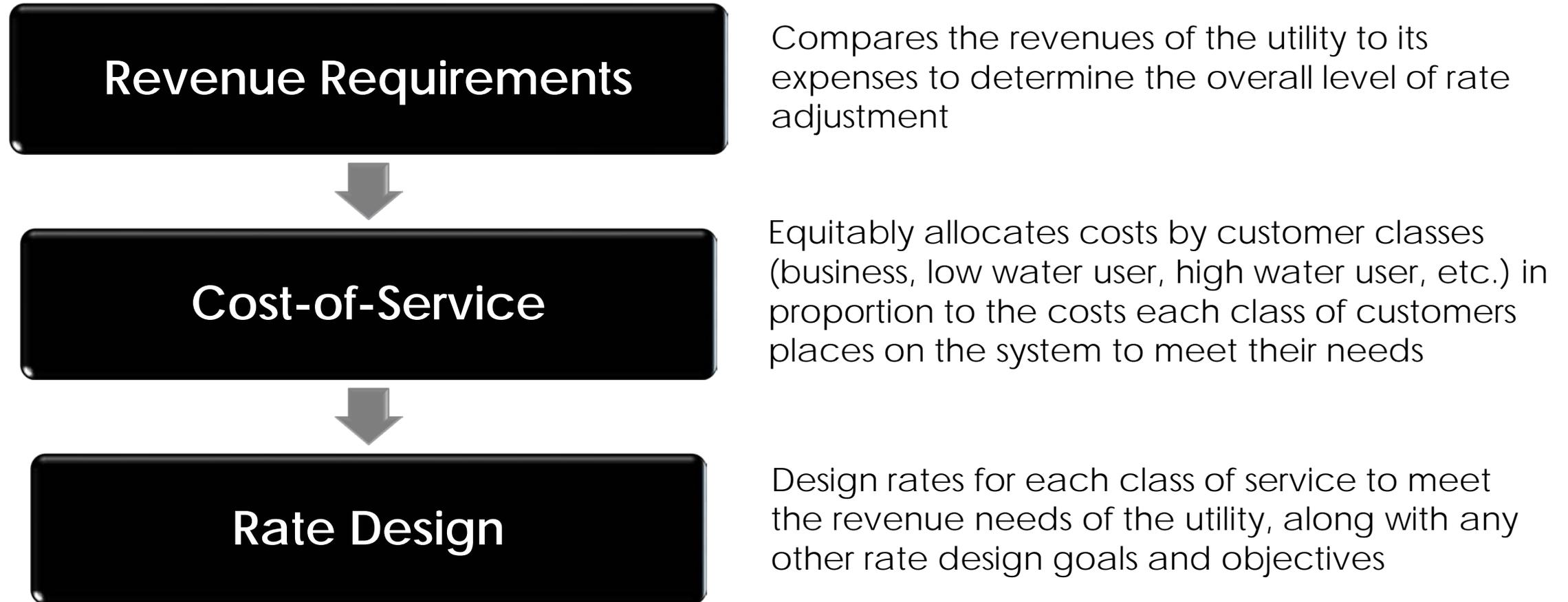
Rate Study Findings Board Presentation

North Marin Water District

Agenda

1. Rate studies overview & scope
2. Review financial plans
 - Novato Enterprise (potable)
 - Recycled Water Enterprise
3. Rate design & structure

The Rate Setting Process



Rate Study Framework

1. Look for opportunity to improve the existing rate structure while retaining the same basic structure
 - ✓ Make it simpler, easier to understand, and in line with industry standards
2. Treat potable water and recycled water as separate enterprises
 - ✓ Finances are already separated
 - ✓ Keeping the funds separate promotes transparency in rate setting
3. Ensure equity among all ratepayers and conformance to the "cost of service" requirements of Proposition 218
 - ✓ All utilities change over time and require cost of service updates

Novato Potable Water Financial Plan

Novato Enterprise Reserves

Cash Reserves

Fiscal year beginning July 1, 2019

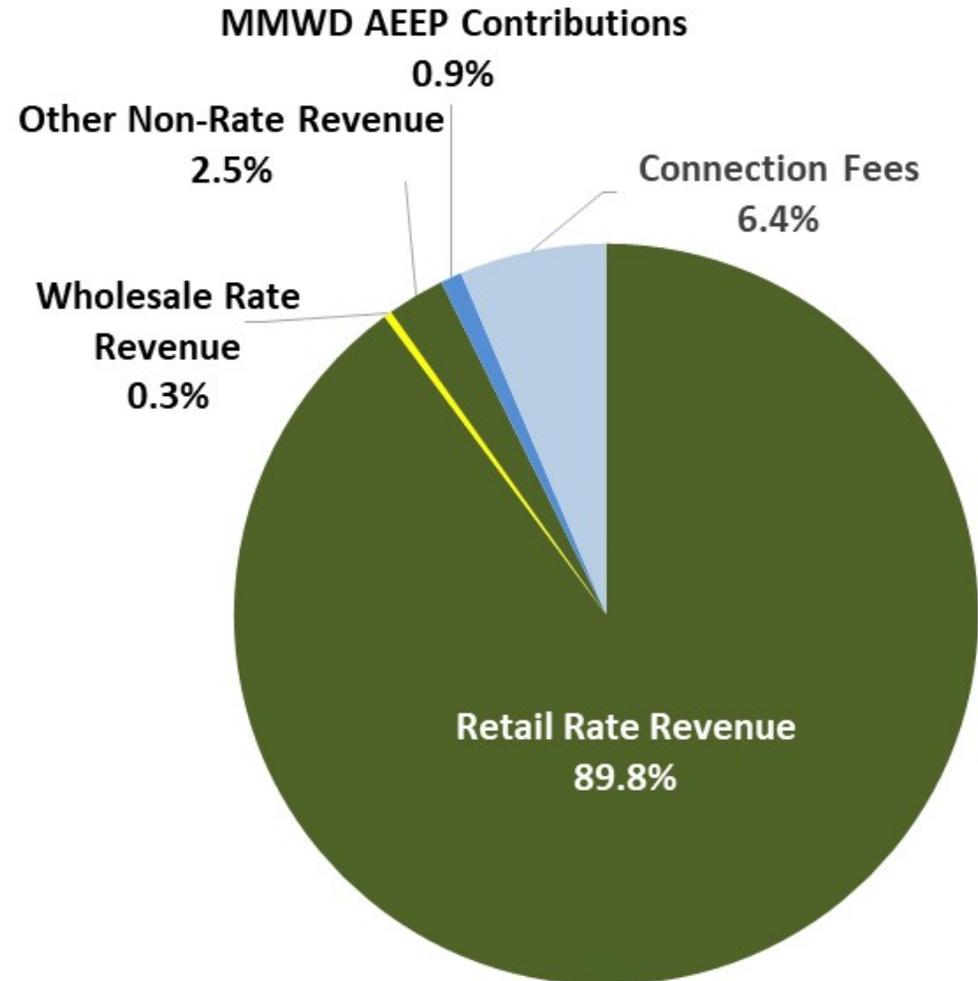
Cash	\$0
Self-Insured Workers' Compensation Fund	\$507,000
Retiree Medical Benefits Fund	\$4,124,000 *
Maintenance Accrual Fund	\$2,500,000
Operating Reserve Fund	\$2,332,000
Liability Contingency Reserve	\$1,142,000
Total Unrestricted:	\$10,605,000
Restricted:	\$1,628,000
Total Reserves:	\$12,233,000
<u>Long-term Receivable from Recycled Water:</u>	<u>\$7,659,000</u>

* No longer funded since District is no longer self-insured

Novato Enterprise Revenue

FY2019/20 Budget

Retail Rate Revenue	\$19,734,000*
Wholesale Rate Revenue	\$75,000
Non-Rate Revenue	
Interest Earnings	\$150,000
Connection Fees	\$1,400,000
Operating Revenue	\$116,000
Other Charges	\$234,000
Miscellaneous	\$50,000
MMWD AEEP Contributions	\$205,000
Total: \$21,964,000	



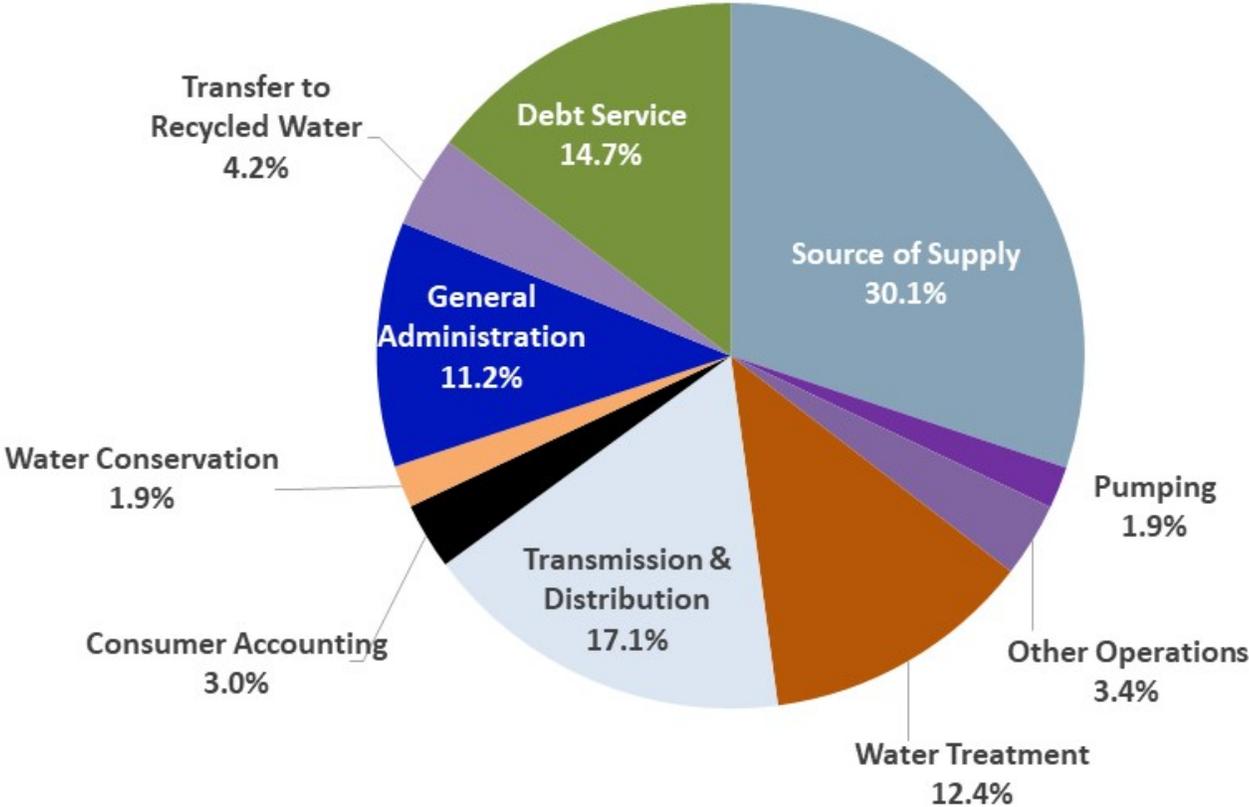
* 2.4 billion gallons sold. Price per gallon = \$0.008

Novato Enterprise Operating Expenses & Debt Service

FY2020/21 Budget Forecast

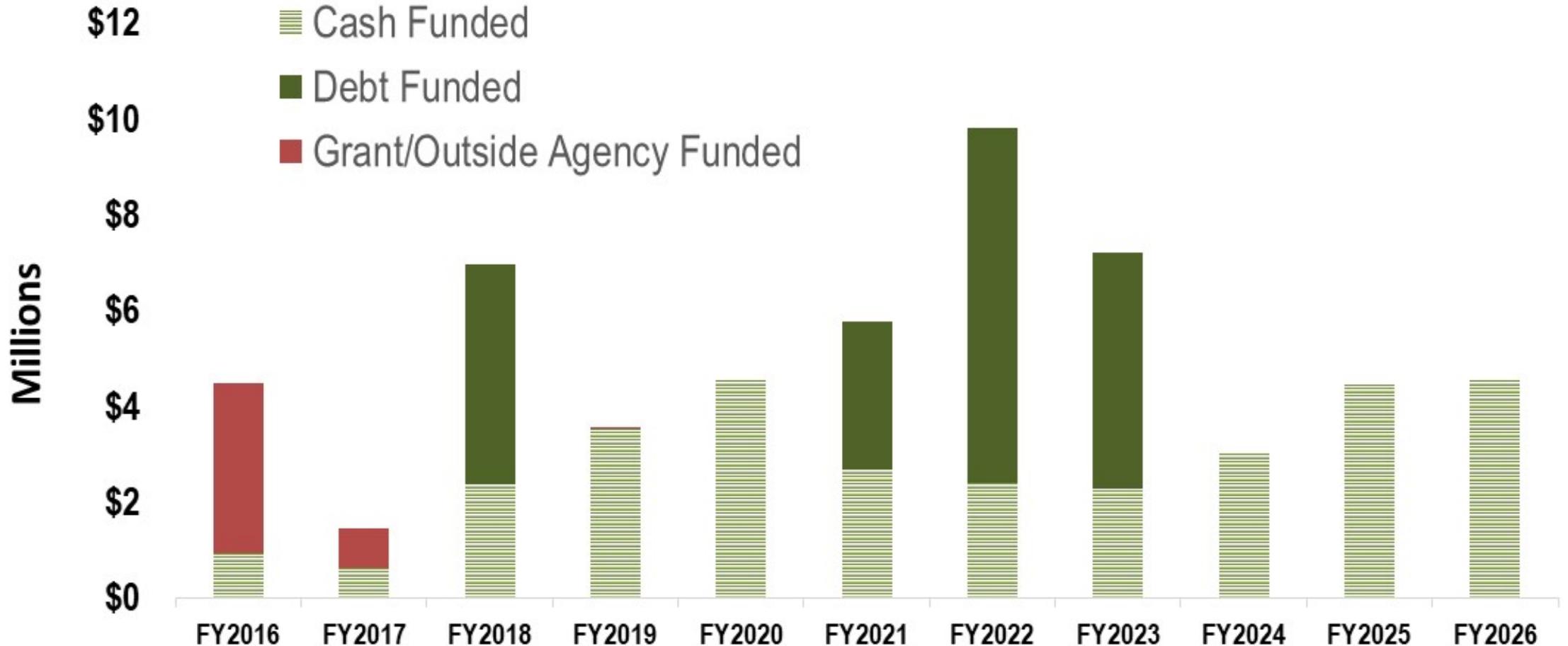
Source of Supply	\$6,244,000
Pumping	\$396,000
Other Operations	\$706,000
Water Treatment	\$2,569,000
Transmission & Distribution	\$3,535,000
Consumer Accounting	\$631,000
Water Conservation	\$402,000
General Administration	\$2,325,000
Affordability Program	\$86,000*
Transfer to Recycled Water	\$870,000
Debt Service	\$3,036,000

Total Budget: \$20,800,000



* Under development, to be proposed

Novato Enterprise Capital Spending



Average PayGo: \$2.7 million

Capital Spending

PROJECT TYPE	5-Year Forecast
PIPELINE REHABILITATION	
Various pipeline replacement projects	\$6,796,000
PREVENTATIVE MAINTENANCE	
Pipe leak and rust detection	\$650,000
Asset management software	\$163,000
FACILITY IMPROVEMENTS	
Administration Building	\$15,240,000
Stafford Treatment Plant	\$140,000
STORAGE TANKS & PUMP STATIONS	
Tank construction and rehabillitation	\$3,822,000
Pump Station rehabillitation	\$955,000

Capital Spending

Administrative Building

- Reaching end of useful life
- Non-ADA compliant
- Need new laboratory facilities
- Taking advantage of historically low interest rates

Repair & Replacement

- Pro-actively addressing system deficiencies rather than deferring maintenance
- Some pipelines are up to 70 years old
- Funding projects with cash in order for continuous re-investment

Fire Flow Improvements

- Increase resilience during fire events
- Upsize existing water mains
- Increase size of storage tanks

Reserves

The following are established District reserve policies. In addition to protecting the District against unforeseen circumstances, these policies also contribute towards the District's credit rating.

Minimum Reserves:
\$12.0 million



These reserves should always *plan* to be fully funded:

Operating Reserve (\$5.6 million)

Other Post Employment Benefit (OPEB) Liability Reserve (\$4.4 million)

Liability Contingency Reserve (\$2.0 million)

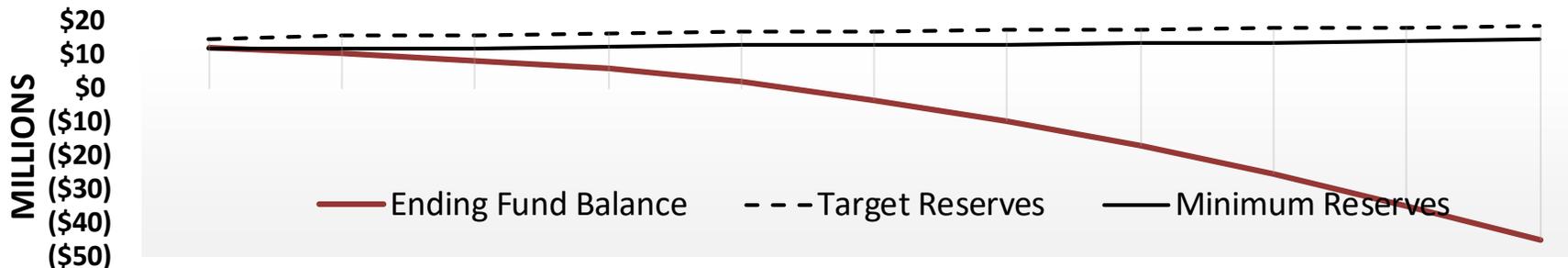
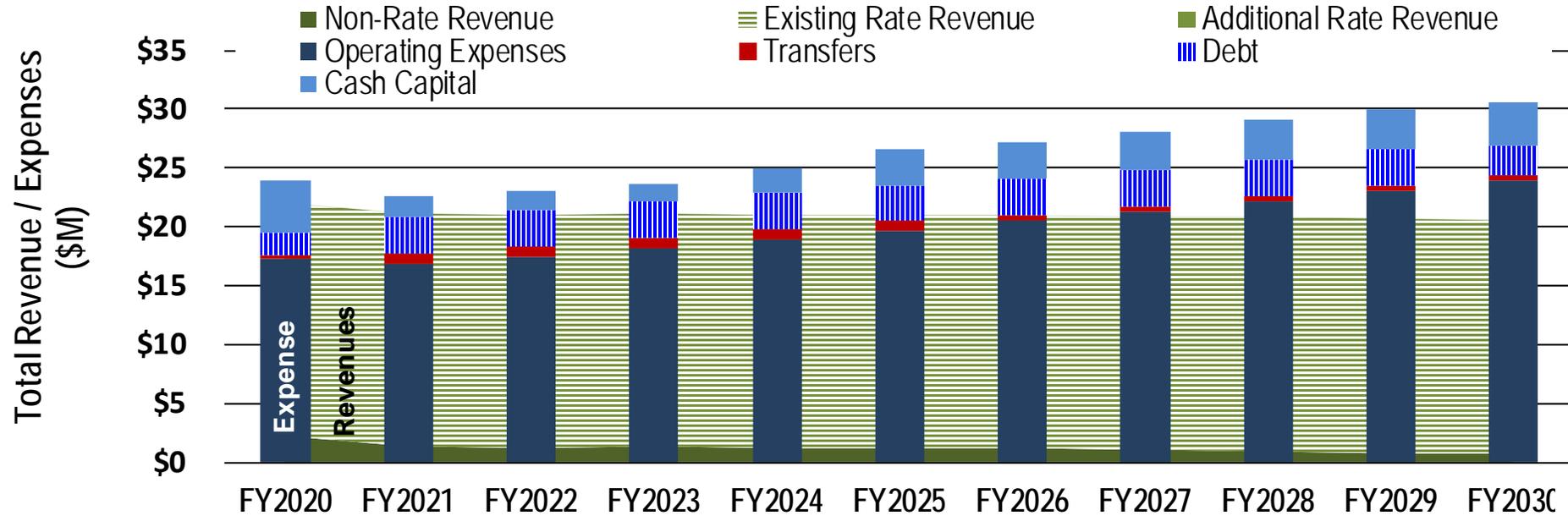
Target Reserves:
\$16.0 million



This reserve is designed to occasionally be drawn down:

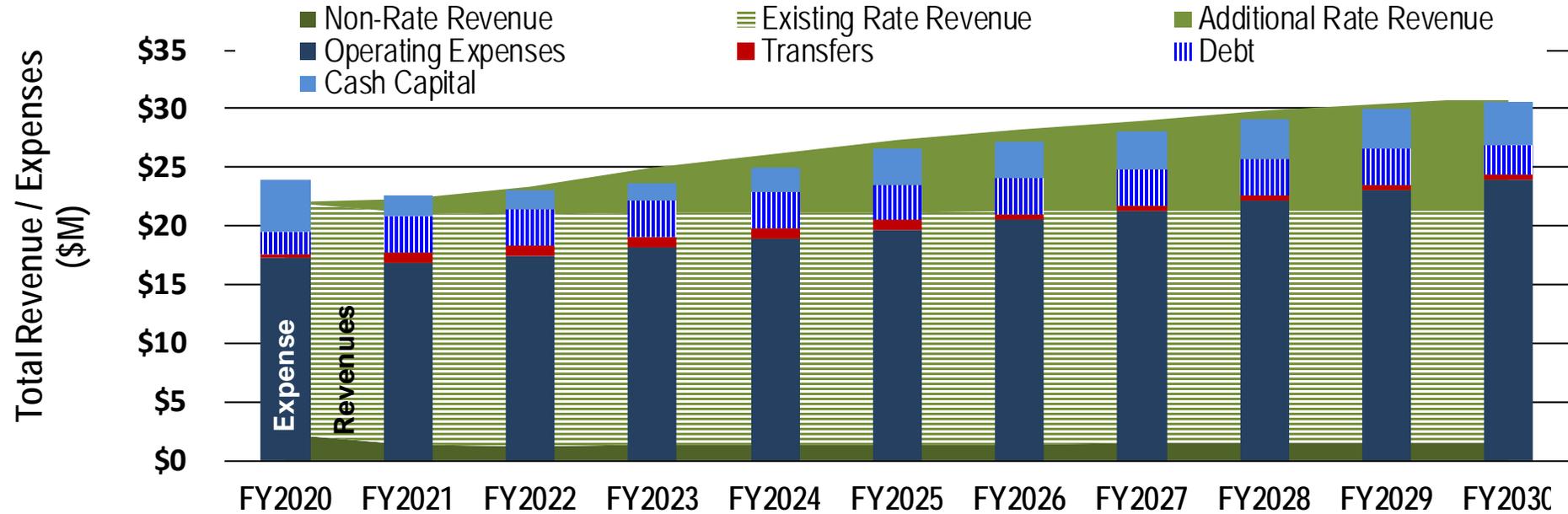
Maintenance Accrual Fund (\$4.0 million)

Novato Enterprise Financial Forecast – No rate increases



	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
Proposed Revenue Increases:	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Debt Coverage Ratio:	2.1	1.2	1.0	0.9	0.7	0.5	0.4	0.2	-0.1	-0.3	-0.8
Net Debt Proceeds:	\$0.0M	\$3.1M	\$7.4M	\$4.9M	\$0.0M						

Novato Enterprise Financial Forecast



	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
Proposed Revenue Increases:		6.0%	6.0%	6.0%	5.0%	5.0%	3.0%	3.0%	3.0%	2.0%	2.0%
Debt Coverage Ratio:	2.1	1.5	1.6	1.8	1.9	2.2	2.2	2.3	2.3	2.2	2.6
Net Debt Proceeds:	\$0.0M	\$3.1M	\$7.4M	\$4.9M	\$0.0M						

Rate increase drivers:

Operating costs

- Operating costs have increased by an average of 6.3% per year over the past 4 years
- Going forward we assume most costs will escalate at 3% but water purchase costs (30% of the operating budget) will increase by 6%.

Increased capital spending and facility re-investment

- The average pay-go expenditure over the past 4 years was \$1.9 million
 - The average pay-go expenditure over the next 5 years is forecasted to ramp up to \$3.9 million
 - Debt service will increase by \$1.13 million in 2021
-

Unless changes are made:

- Expenses will continue to rise above revenues
- Debt coverage ratio will fall below mandated levels
- Cash reserves will fall below safe levels
- District will be unable to fund needed facility upgrades and replacements
- Quality water service could be impacted

Recycled Water Enterprise Financial Plan

Recycled Water Reserves

Cash Reserves

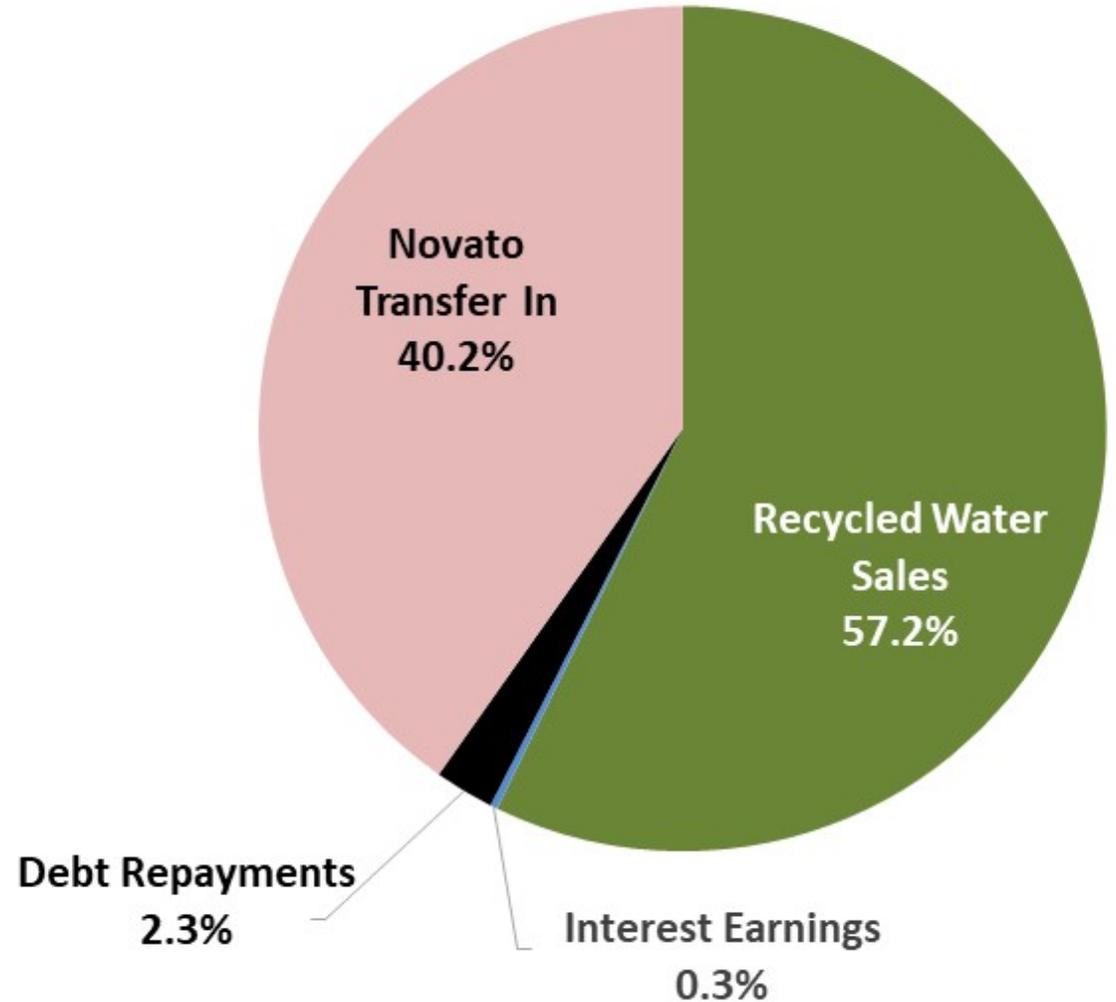
Fiscal year beginning July 1, 2019

Cash	\$230,000
Operating Reserve Fund	\$174,000
Total Unrestricted:	\$404,000
Restricted	\$2,416,000
Capital Replacement & Expansion Fund	\$1,867,000
Total Reserves:	\$4,687,000

Recycled Water Revenue

FY2020/21 Budget Forecast

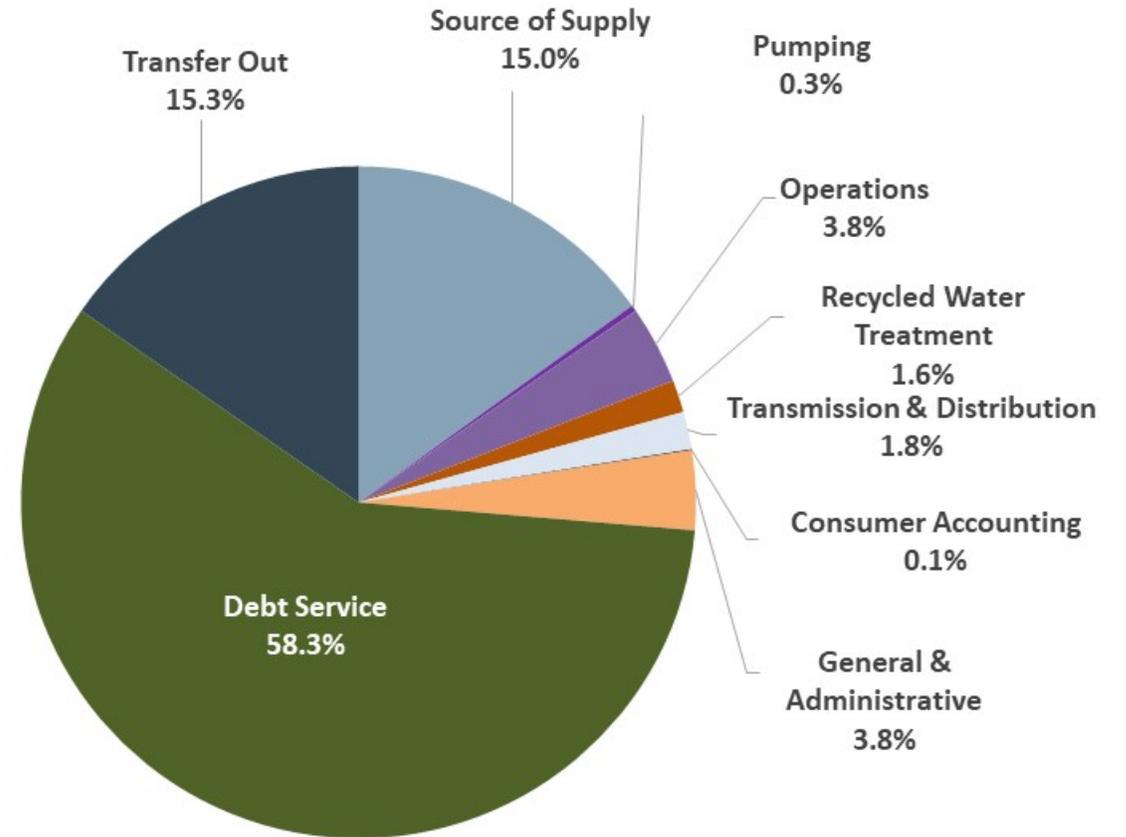
Recycled Water Sales	\$1,237,000
Non-Rate Revenue	
Miscellaneous	\$0
Interest Earnings	\$6,000
Debt Repayments	\$49,000
Novato Transfer In	\$870,000
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Total:	\$2,162,000



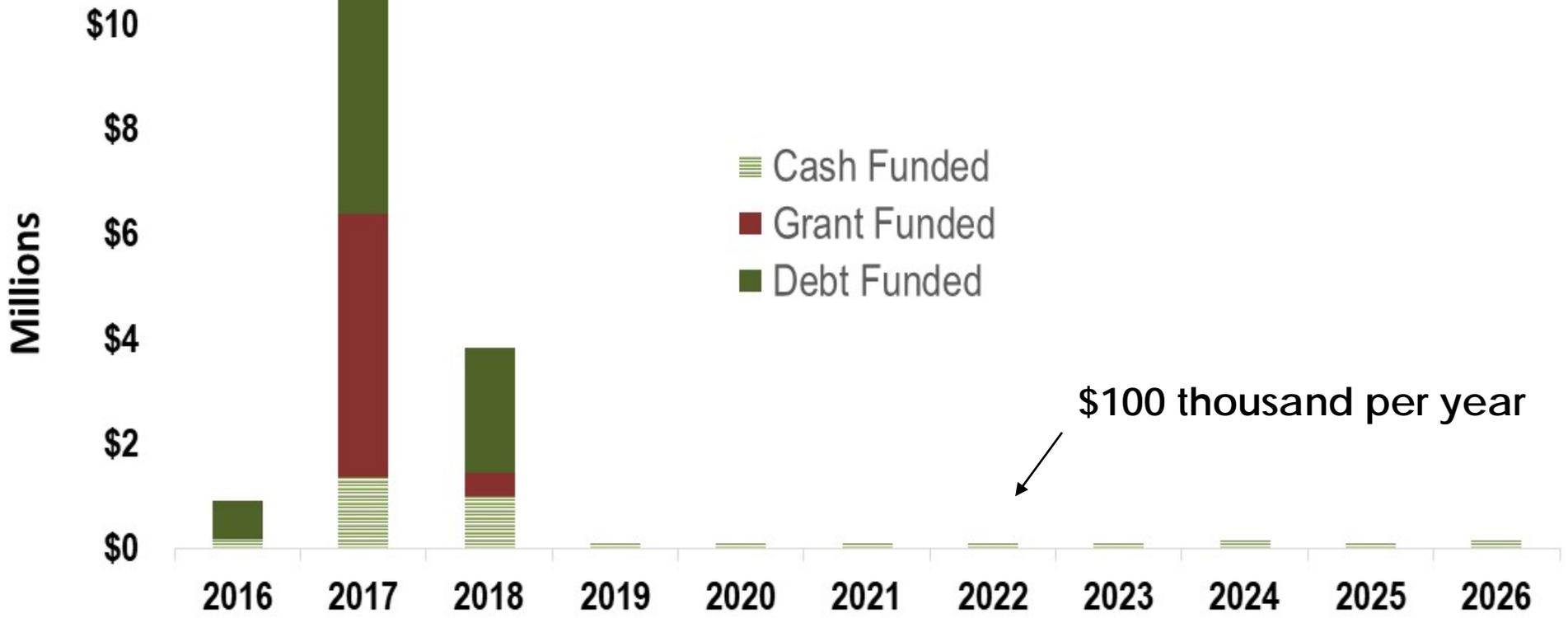
Recycled Water Operating Expenses & Debt Service

FY2020/21 Budget Forecast

Source of Supply	\$300,000
Pumping	\$6,000
Operations	\$75,000
Recycled Water Treatment	\$31,000
Transmission & Distribution	\$36,000
Consumer Accounting	\$1,000
General & Administrative	\$76,000
Debt Service	\$1,163,000
Transfer Out	\$306,000
Total Budget:	\$1,994,000



Recycled Water Capital Spending



Recycled Water Reserves

In addition to protecting the District against unforeseen circumstances, strong reserve policies also contribute towards the District's credit rating.

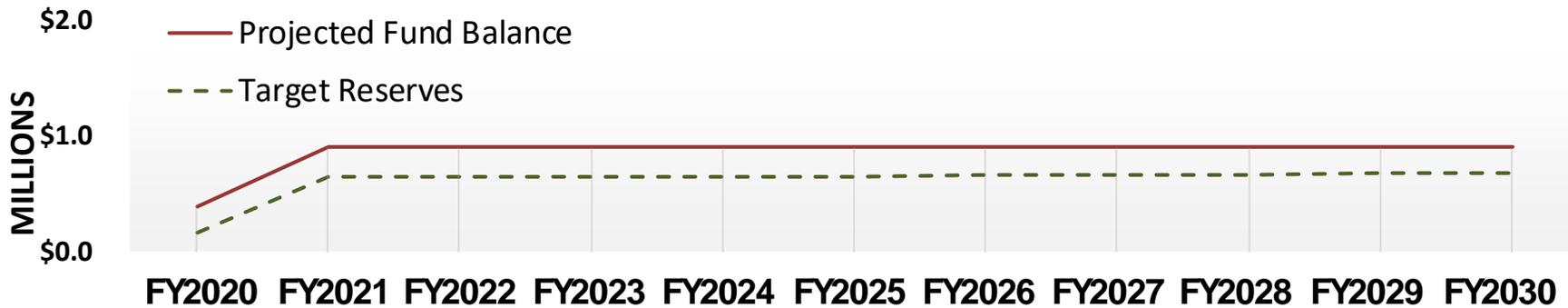
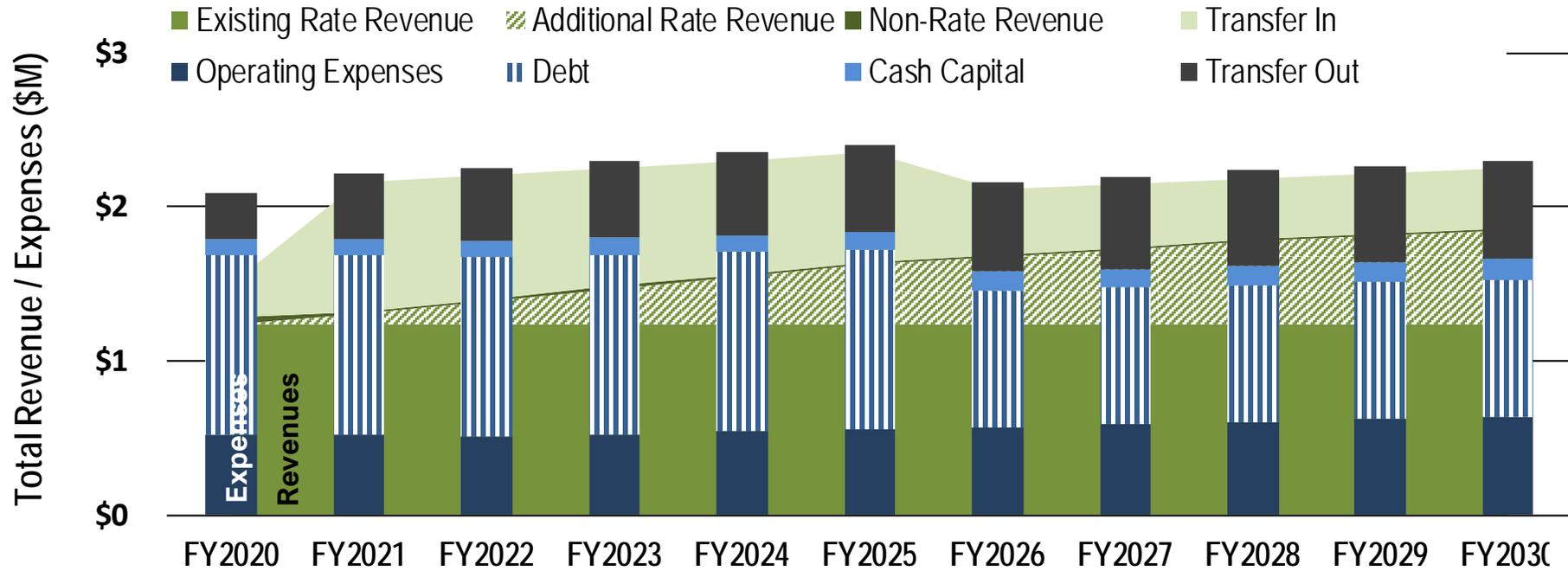
Operating Reserve (established District reserve policy)

- Reserve in the event of unexpected changes to cash flow or operating costs
- Current target: 4 months (approximately \$175 thousand)

Capital Reserve Fund (proposed District reserve policy)

- Supports volatility of capital spending and provides emergency funds in the event of asset failure.
- Proposed target: equal to current annual depreciation expense (\$474 thousand)

Recycled Water Fund Financial Forecast



	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
Proposed Revenue Increases:		6.0%	6.0%	6.0%	5.0%	5.0%	3.0%	3.0%	3.0%	2.0%	2.0%
Combined DCR:	2.11	1.48	1.49	1.61	1.82	1.94	2.15	2.24	2.25	2.26	2.19
Net Debt Proceeds:	\$0.0M										

Cost of Service Study and Rate Structure Redesign

Existing Rates

- ❑ Water Usage “Quantity” Rate:
 - ✓ 3 Tiers for Residential
 - Allocation increases with dwelling units
 - ✓ Seasonal rates for Commercial (Non-Residential)
 - ✓ Raw water rate
 - ✓ Recycled Water rate
 - ✓ Elevation Surcharge
 - ✓ Drought Surcharge*

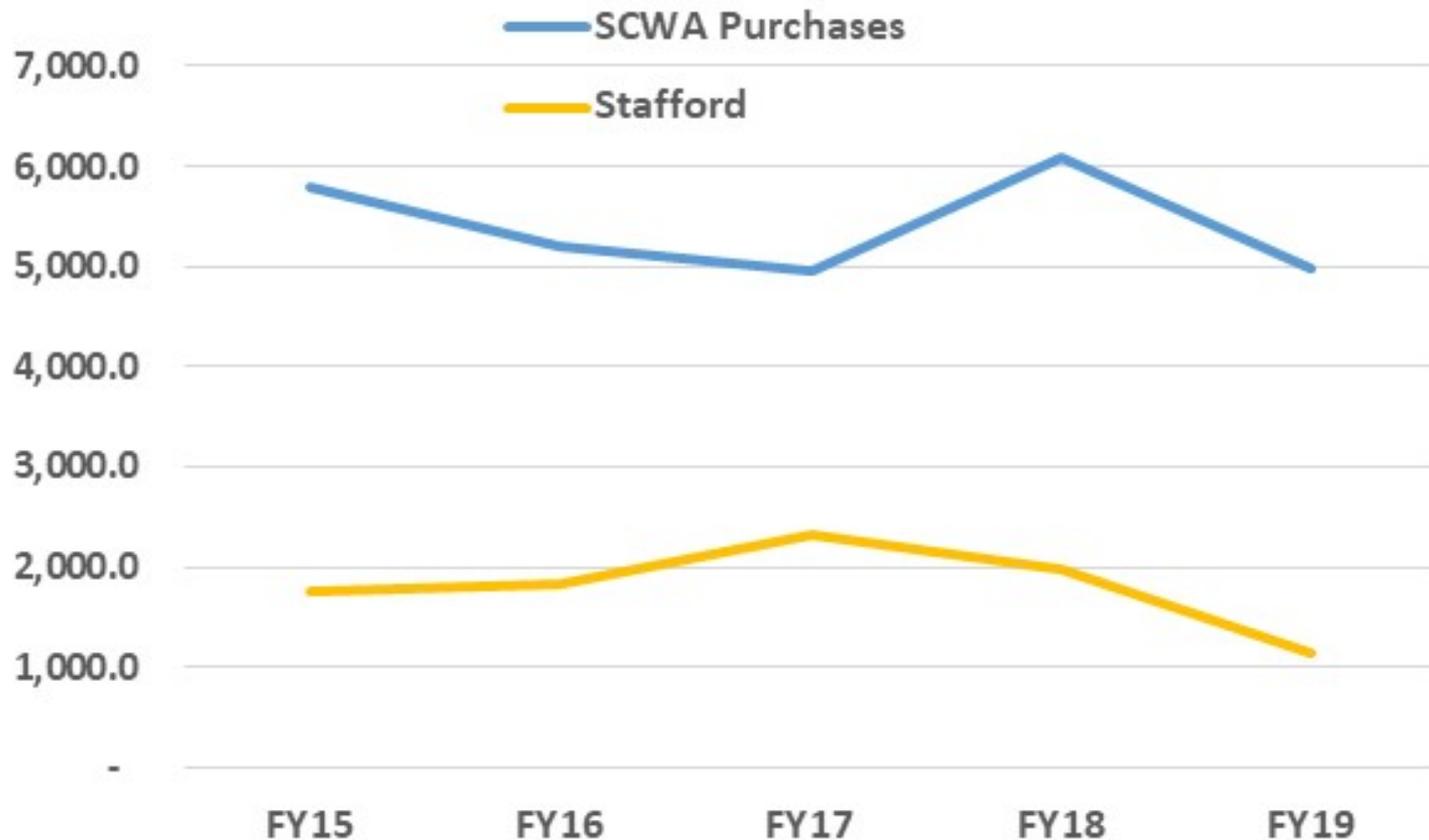
- ❑ Fixed Service Charge by Meter size

- ❑ Other Charges
 - ✓ Fire Service
 - ✓ AMI Opt-Out*
 - ✓ Backflow*

* Not part of the current study

Structuring tiered usage rates based on SCWA & Stafford water costs

- ✓ Tier prices will be based on the difference in cost between SCWA vs. Stafford
- ✓ Tier allocation will be based on the availability of water from those two sources.



Average Unit Cost*:

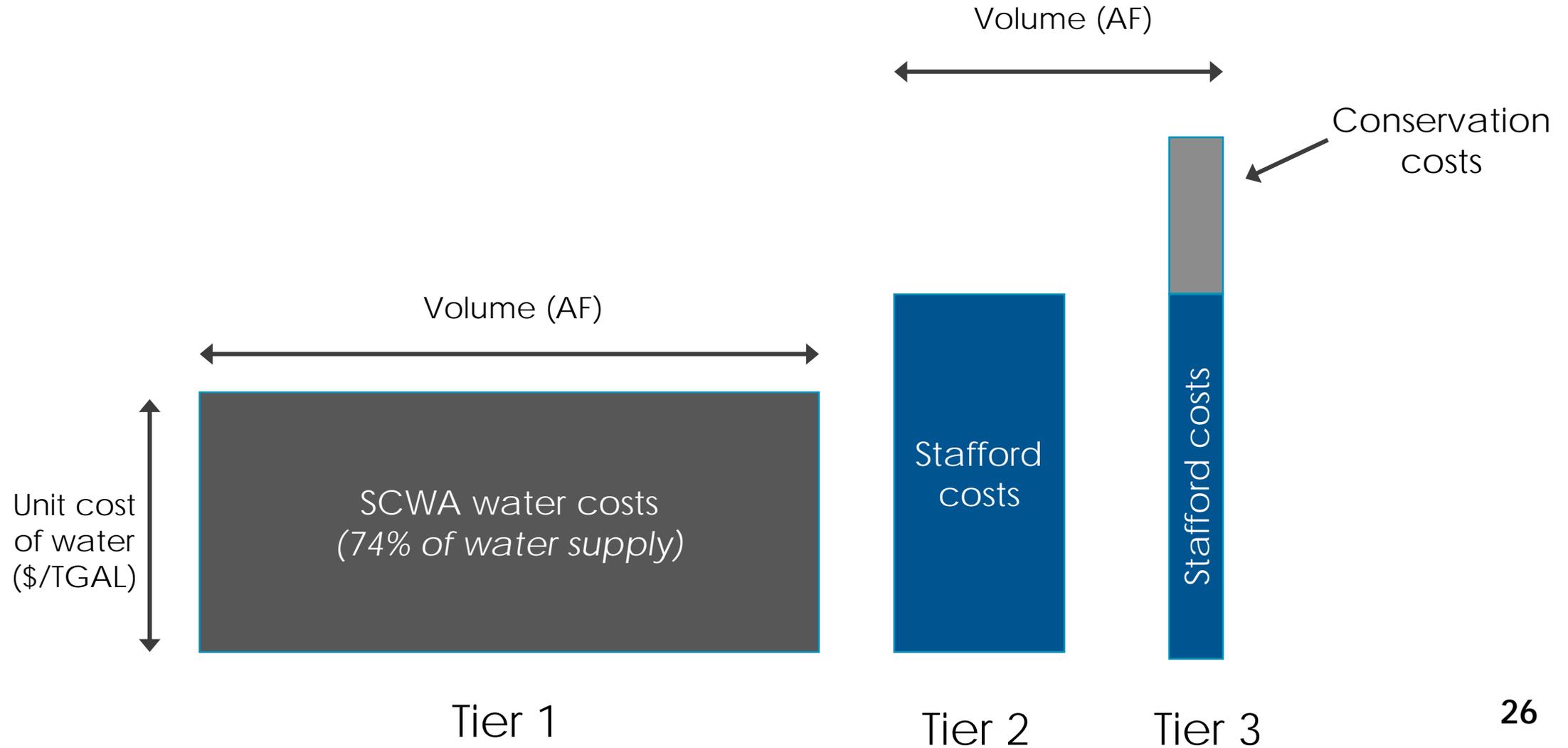
SCWA Purchases: \$2,709/ AF

Stafford Treatment: \$3,285 / AF

Relative Cost: 121%

* During past three years

Proposed Basis for Tiered Water Rates



Elevation Zone Charge

Proposed Approach: Use the known cost relationship to pump a different elevations to allocate current pumping costs (which includes operating costs, G&A, debt & capital)

	Elevation Range (ft)	Average Elevation (ft)	Water Usage (TGAL)	Cost per TGAL	Current Charge (per TGAL)	Proposed Surcharge (per TGAL)
Zone A:	0 - 60	40	1,067,197	\$0.33	(na)	(na)
Zone B:	60 - 200	132	1,078,367	\$1.09	\$0.73	\$0.76
Zone C:	200+	294	205,599	\$2.43	\$2.01	\$2.10
		Total:	2,351,164			
		Total Pumping Costs:	\$2,016,066			

Proposed Meter Equivalency Schedule

- Current rate structure uses a hybrid of a “meter cost ratio” and a “hydraulic capacity ratio.”
- The proposed meter equivalency schedule uses only the hydraulic capacity ratio (which is the industry standard) and results in a “steeper” ratio.

Fiscal impact: more fixed costs will be allocated to larger meters

Meter Size	Rating (gpm)	Proposed Equivalency Schedule	Existing Equivalency Schedule	Increase
5/8"	20	1.00	1.00	0%
3/4"	30	1.50	1.14	32%
1"	50	2.50	2.00	25%
1 1/2"	100	5.00	2.44	105%
2"	160	8.00	3.80	110%
3"	320	16.00	7.53	112%
4"	500	25.00	12.09	107%
6"	1,000	50.00	25.30	98%
8"	1,300	65.00	37.72	72%

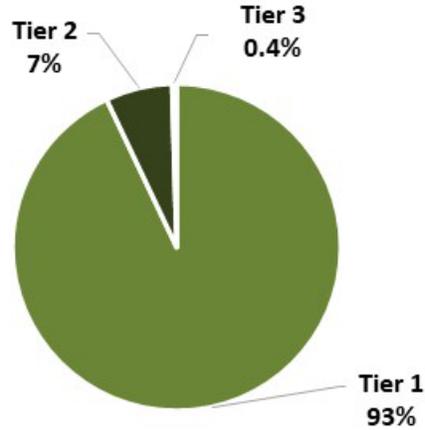
Source: Table VI.2-5 AWWA meter Standards, *AWWA M1 Manual*, 6th Ed.

Fixed vs. Variable Revenue

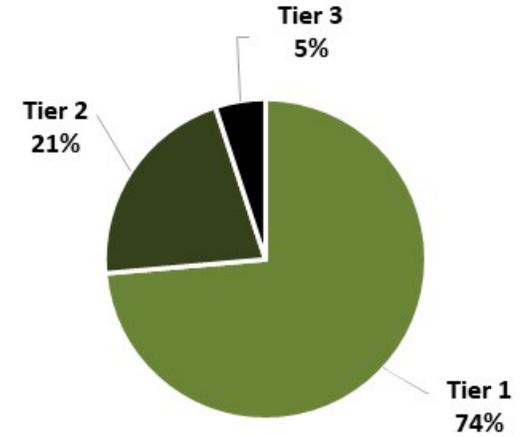
	<u>Fixed Revenue</u>		<u>Variable Revenue</u>	
	Current	Proposed	Current	Proposed
Novato	\$4,657,000	\$5,686,000	\$14,845,000	\$15,093,000
	24%	27%	76%	73%
Raw	\$0	\$0	\$157,000	\$188,000
	0%	0%	100%	100%
Recycled Water	\$65,000	\$91,000	\$1,146,000	\$1,200,000
	5%	7%	95%	93%

Tier Sizing

Current Usage By Tier



Proposed Usage By Tier



Tier Allocation (gal/day)

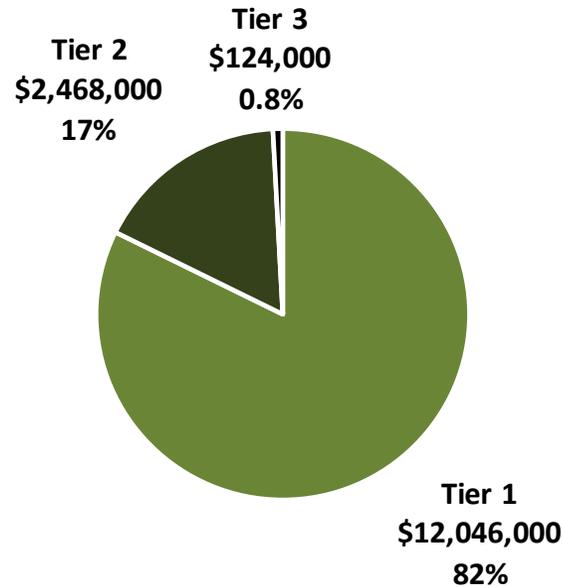
Current:

- Tier 1: 0 to 615
- Tier 2: 615 to 1845
- Tier 3: Above 1845

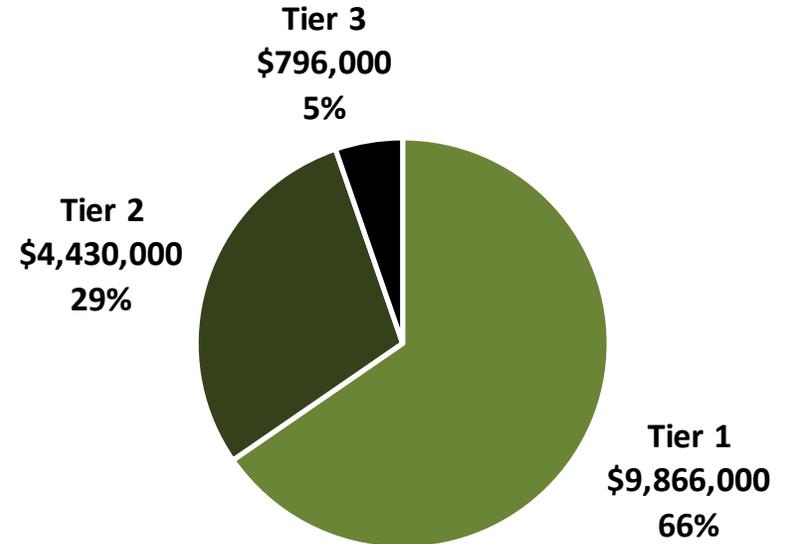
Proposed:

- Tier 1: 0 to 262
- Tier 2: 262 to 720
- Tier 3: Above 720

Current Revenue By Tier



Proposed Revenue By Tier



Proposed Rates (Year 1)

Tier Allocation (gal/day)

Current:
 Tier 1: 0 to 615
 Tier 2: 615 to 1845
 Tier 3: Above 1845

Proposed:
 Tier 1: 0 to 262
 Tier 2: 262 to 720
 Tier 3: Above 720

Summer Rates:
 July, August and September
Winter Rates:
 October through June

QUANTITY CHARGE per TGAL	PROPOSED			CURRENT			CHANGE					
	Winter	Summer		Winter	Summer		Winter		Summer			
Commercial Zone A	\$5.50	\$7.67		\$5.97	\$6.42		-\$0.47	-8%	\$1.25	19%		
Commercial Zone B	\$6.26	\$8.43		\$6.62	\$7.07		-\$0.36	-5%	\$1.36	19%		
Commercial Zone C	\$7.60	\$9.77		\$8.05	\$8.50		-\$0.45	-6%	\$1.27	15%		
	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3	Tier 1		Tier 2		Tier 3	
Residential Zone A	\$5.50	\$6.23	\$7.67	\$5.42	\$8.64	\$15.05	\$0.08	1%	-\$2.41	-28%	-\$7.38	-49%
Residential Zone B	\$6.26	\$6.99	\$8.43	\$6.07	\$9.29	\$15.70	\$0.19	3%	-\$2.30	-25%	-\$7.27	-46%
Residential Zone C	\$7.60	\$8.33	\$9.77	\$7.50	\$10.72	\$17.13	\$0.10	1%	-\$2.39	-22%	-\$7.36	-43%
Recycled Water	\$6.24			\$5.97			\$0.27	5%				
Raw Water	\$2.93			\$2.46			\$0.47	19%				
Temporary Meter	\$6.99			\$8.88			-\$1.89	-21%				

SERVICE CHARGE Potable Water	PROPOSED	CURRENT	CHANGE	
	5/8"	\$41.46	\$34.15	\$7.31
1" Fire*	\$41.46	\$38.80	\$2.66	6.9%
1"	\$74.06	\$68.30	\$5.76	8.4%
1.5"	\$128.38	\$83.30	\$45.08	54.1%
2"	\$193.57	\$129.90	\$63.67	49.0%
3"	\$367.41	\$257.20	\$110.21	42.8%
4"	\$562.98	\$413.00	\$149.98	36.3%
6"	\$1,106.23	\$864.00	\$242.23	28.0%
8"	\$1,432.18	\$1,288.00	\$144.18	11.2%

Recycled Water	PROPOSED	CURRENT	CHANGE	
	5/8"	\$48.78	\$34.15	\$14.63
1"	\$61.68	\$68.30	-\$6.62	-9.7%
1.5"	\$123.35	\$83.30	\$40.05	48.1%
2"	\$197.36	\$129.90	\$67.46	51.9%
3"	\$394.72	\$257.20	\$137.52	53.5%
6"	\$1,233.50	\$864.00	\$369.50	42.8%

* Upsized due to fire requirements

Bill Impacts - Residential

	Meter Size	Bimonthly Water Usage (TGAL)		Bi-Monthly Bill			
				Current	Proposed	Change	
Single Family	5/8"	Low	8.0	\$77.51	\$85.46	10.3%	56% of all accounts
		Median	14.0	\$110.03	\$118.46	7.7%	
		High	50.0	\$347.33	\$351.28	1.1%	
	1" Fire	Low	8.0	\$82.16	\$85.46	4.0%	14% of all accounts
		Median	14.0	\$114.68	\$118.46	3.3%	
		High	50.0	\$351.98	\$351.28	-0.2%	
	1"	Low	20.0	\$176.70	\$187.18	5.9%	1% of all accounts
		Median	34.0	\$252.58	\$274.40	8.6%	
		High	50.0	\$381.48	\$383.87	0.6%	

		Average Water		Current	Proposed	Change
		Meter Size	Usage (TGAL)			
	4 Units	1"	35.3	\$259.63	\$268.21	3.3%
Multi-Family	8 Units	1"	61.1	\$399.46	\$410.11	2.7%
	16 Units	1.5"	148.3	\$872.09	\$889.71	2.0%
19% of all accounts	62 Units	2"	265.4	\$1,506.77	\$1,533.76	1.8%

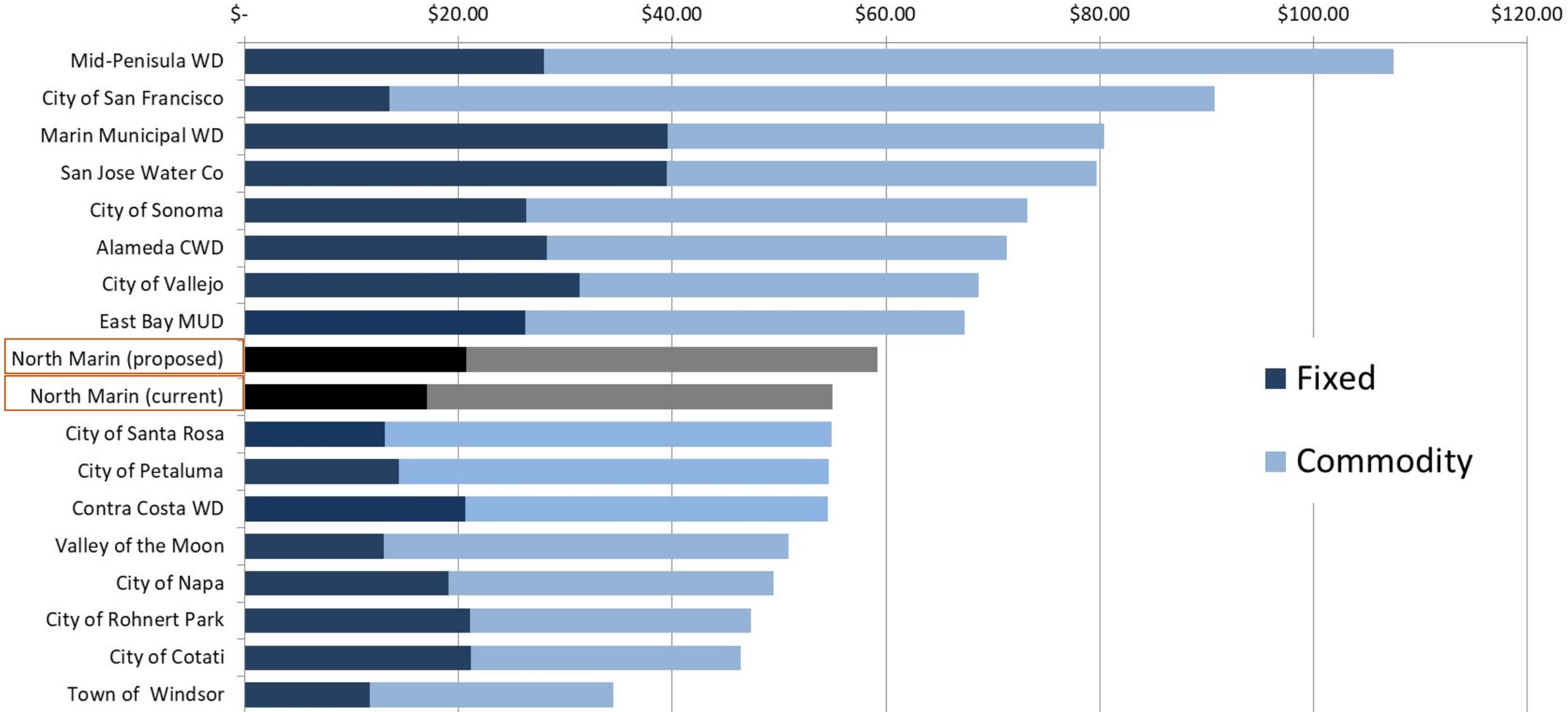
Bill Impacts - Commercial

Meter Size	Average Water Usage (TGAL)	<u>Summer Month</u> ¹ (average use by meter size)			<u>Winter Month</u> ²			<u>Annual Total</u>			Percent of Accounts
		Current	Proposed	Change	Current	Proposed	Change	Current	Proposed	Change	
5/8"	9.9	\$103	\$118	14.7%	\$67	\$68	0.6%	\$915	\$963	5.4%	2.7%
1"	21.6	\$207	\$240	15.8%	\$162	\$161	-1.0%	\$2,083	\$2,166	4.0%	1.9%
1.5"	52.8	\$422	\$534	26.3%	\$290	\$319	9.9%	\$3,881	\$4,474	15.3%	1.2%
2"	86.3	\$684	\$855	25.1%	\$553	\$583	5.5%	\$7,027	\$7,815	11.2%	0.8%
3"	279.6	\$2,052	\$2,512	22.4%	\$1,489	\$1,502	0.9%	\$19,553	\$21,052	7.7%	0.1%
4"	510.3	\$3,689	\$4,477	21.4%	\$2,463	\$2,452	-0.5%	\$33,235	\$35,496	6.8%	0.03%

¹ Summer Rates: July, August and September

² Winter Rates: October through June

Monthly Water Bill Survey for Single Family Homes with Median Usage (7,000 gallons per month)



Fire Connections

Fire service charges are for commercial connections with fire sprinklers.

The charges are calculated based on the District's costs for maintaining the fire service lines.

- Costs in FY2019: \$155 thousand
- 427 service lines

Service Size	No. of Accounts	Cost Ratio*	Maintenance Charge	Administrative Charge	Total Proposed Charge	Current Charge
1	58	1	\$4.24	\$10.00	\$14.24	\$17.08
2	14	2.1	\$8.78	\$10.00	\$18.78	\$17.08
4	127	10.0	\$42.40	\$10.00	\$52.40	\$31.57
6	177	15.0	\$63.60	\$10.00	\$73.60	\$61.60
8	48	20.7	\$87.83	\$10.00	\$97.83	\$94.20
10	3	27.9	\$118.11	\$10.00	\$128.11	\$123.17
427						