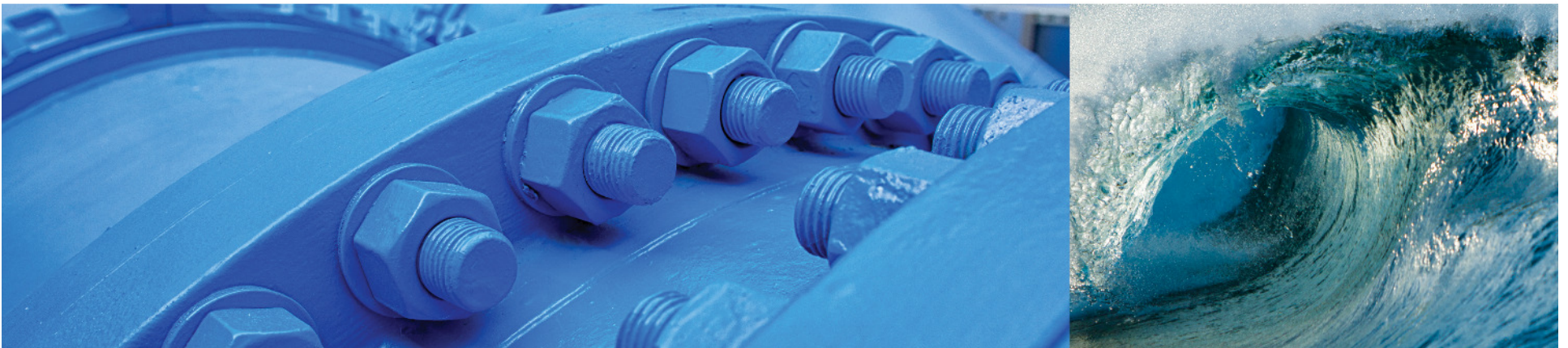
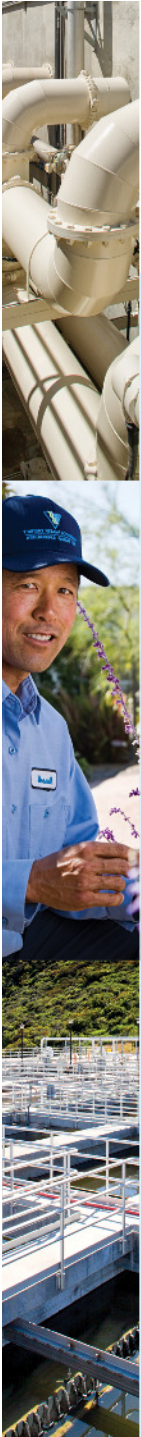




Public Hearing on Water and Sewer Rates

September 20, 2017





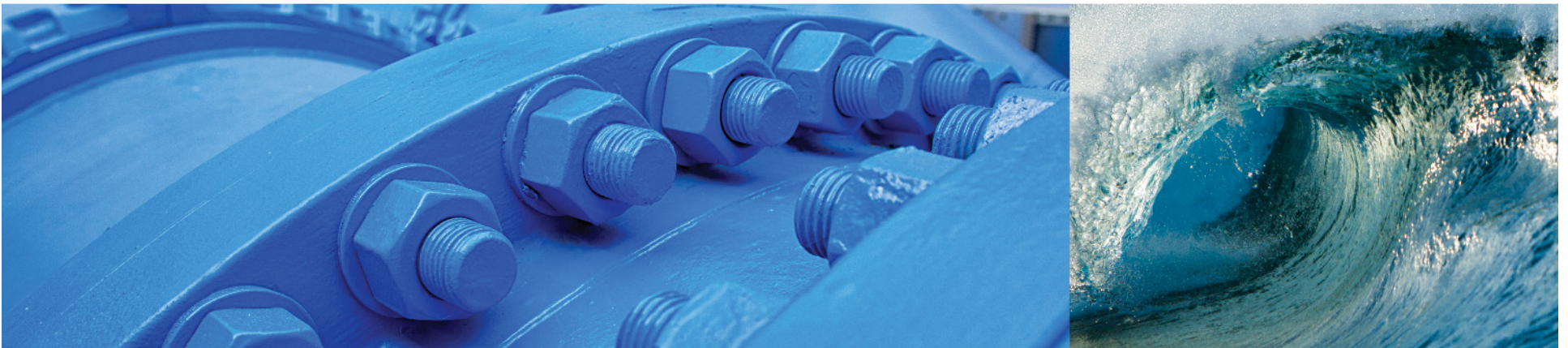
Agenda

- Discuss Proposed Rates
- Impacts to Reserves and Financial Performance
- Rate Protest Comments
- Cost of Service and Rate Structure Study
- Recommendation for 2018 and 2019 Rates



Proposed Rates

September 20, 2017 Rate Hearing  VALLECITOS
WATER DISTRICT
Water and Wastewater Specialists since 1953





Proposed Rates

Impact to Average Customer

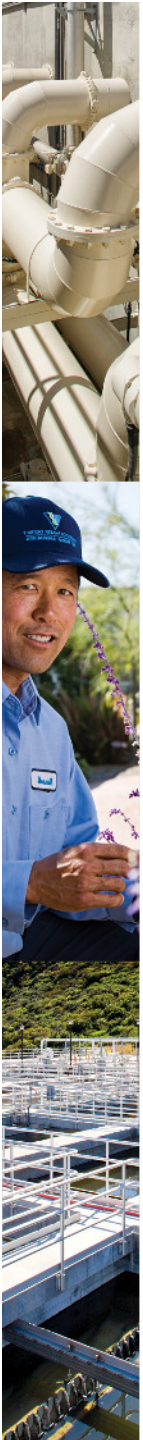
Average Single Family Residential Customer Bill*			
	Current	Jan 2018	Jan 2019
Total Water Bill	<u>\$ 79.78</u>	<u>\$ 84.54</u>	<u>\$ 89.48</u>
Increase over Prior Year		\$ 4.76 6.0%	\$ 4.94 5.8%
Sewer Bill	<u>\$ 38.99</u>	<u>\$ 38.99</u>	<u>\$ 38.99</u>
Increase over Prior Year		\$ - 0.0%	\$ - 0.0%
Total Water and Sewer Bill	<u>\$ 118.77</u>	<u>\$ 123.53</u>	<u>\$ 128.47</u>
Increase over Prior Year		\$ 4.76 4.0%	\$ 4.94 4.0%

*The average Single Family Residential Bill assumes a 5/8" meter using 13 units (9,724 gallons) of water per month and receives sewer service.



17,578 5/8" SFR, compared to 23,954 total customers – 73%

Proposed Rates – Ready-to-Serve Charge



Water Monthly Ready-to-Serve Charges			
Meter Size	Current	Effective January:	
		2018	2019
5/8"	\$ 31.42	\$ 33.25	\$ 35.32
3/4"	36.52	36.52	36.52
1"	55.29	55.29	55.29
1.5"	110.59	120.63	130.67
2"	178.11	194.35	214.68
3"	356.22	356.22	356.22
4"	552.94	552.94	552.94
6"	1,105.88	1,105.88	1,105.88
10"	2,549.36	2,549.36	2,549.36
Multiple Dwelling Unit	18.26	11.18	11.18
Temporary Meters	204.48	230.91	257.33
Fire Line per diameter inch	5.87	5.87	5.87 ⁵



Water Commodity Tier Structure in Units (748 gallons)							
Meter Size	Current				Effective January 2018		
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3
<1"	1 - 5	6 - 17	18 - 36	37 +	1 - 6	7 - 21	22 +
1"	1 - 5	6 - 60	61 - 214	215 +	1 - 16	17 - 78	79 +
1.5"	1 - 5	6 - 157	158 - 627	628 +	1 - 43	44 - 196	197 +
2"	1 - 5	6 - 242	243 - 806	807 +	1 - 85	86 - 335	336 +
>2"	1 - 5	6 - 1133	1134-3970	3,971 +	1 - 430	431-1,190	1,191 +
Agricultural	1 - 5	6 +				1 +	
Temporary Construction				1 +			1 +

Current	\$3.08	\$4.12		\$5.33			\$7.41
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42						
Proposed	\$3.38	\$4.43		\$8.47			

Water Commodity Rates per Unit			
	Current	Effective January:	
		2018	2019
Tier 1	\$ 3.08	\$ 3.38	\$ 3.66
Tier 2	4.12	4.43	4.60
Tier 3	5.33	8.47	8.87
Tier 4	7.41		



Proposed Rates

Total Rate Impact at Varying Use Levels

5/8" meter, water and sewer

Use Level	Current	CY 2018	CY 2019
Low	\$ 89.93	\$ 92.52	\$ 96.27
6 HCFs 4,448 gallons	Increase	\$ 2.59 2.9%	\$ 3.75 4.1%
Average	\$ 118.77	\$ 123.53	\$ 128.47
13 HCFs 9,724 gallons	Increase	\$ 4.76 4.0%	\$ 4.94 4.0%
High	\$ 156.57	\$ 158.97	\$ 165.27
21 HCFs 15,708 gallons	Increase	\$ 2.40 1.5%	\$ 6.30 4.0%
Very High	\$ 280.98	\$ 336.84	\$ 351.54
42 HCFs 31,416 gallons	Increase	\$ 55.86 19.9%	\$ 14.70 4.4%





Proposed Rates

Total Rate Impact at Varying Use Levels

5/8" meter, water and sewer

Use Level	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Low	\$ 89.93	\$ 92.52	\$ 96.27	\$ 99.93	\$ 104.22	\$ 108.55
6 HCFs	Increase	\$ 2.59	\$ 3.75	\$ 3.66	\$ 4.29	\$ 4.33
4,448 gallons		2.9%	4.1%	3.8%	4.3%	4.2%
Average	\$ 118.77	\$ 123.53	\$ 128.47	\$ 133.67	\$ 139.08	\$ 144.67
13 HCFs	Increase	\$ 4.76	\$ 4.94	\$ 5.20	\$ 5.41	\$ 5.59
9,724 gallons		4.0%	4.0%	4.0%	4.0%	4.0%
High	\$ 156.57	\$ 158.97	\$ 165.27	\$ 172.23	\$ 178.92	\$ 185.95
21 HCFs	Increase	\$ 2.40	\$ 6.30	\$ 6.96	\$ 6.69	\$ 7.03
15,708 gallons		1.5%	4.0%	4.2%	3.9%	3.9%
Very High	\$ 280.98	\$ 336.84	\$ 351.54	\$ 372.57	\$ 389.76	\$ 409.18
42 HCFs	Increase	\$ 55.86	\$ 14.70	\$ 21.03	\$ 17.19	\$ 19.42
31,416 gallons		19.9%	4.4%	6.0%	4.6%	5.0%



Water Rate Impact – RTS plus Commodity

Ag = Agricultural; Mf = Multi-Family

Low User

	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	\$ 50.94	\$ 53.53	\$ 57.28	\$ 60.94	\$ 64.06	\$ 66.78	\$ 2.59	5.1%	\$ 3.75	7.0%	6.4%
3/4"	56.04	56.80	58.48	60.94	64.06	66.78	0.76	1.4%	1.68	3.0%	4.2%
1"	116.01	109.37	113.85	118.17	123.91	129.61	(6.64)	-5.7%	4.48	4.1%	3.8%
1.5"	282.55	265.97	288.05	203.59	326.79	342.07	(16.58)	-5.9%	22.08	8.3%	-29.3%
2"	523.11	481.65	525.78	560.89	592.52	620.84	(41.46)	-7.9%	44.12	9.2%	6.7%
3"	2,122.62	1,809.62	1,930.02	2,046.12	2,163.72	2,276.11	(313.00)	-14.7%	120.40	6.7%	6.0%
Ag 1"	148.97	154.91	165.69	170.97	176.39	182.73	5.94	4.0%	10.78	7.0%	3.2%
Ag 1.5"	406.15	444.02	466.47	492.57	510.16	528.69	37.87	9.3%	22.45	5.1%	5.6%
Mf 1"	246.17	180.04	195.55	204.28	213.43	222.46	(66.13)	-26.9%	15.50	8.6%	4.5%
Mf 1.5"	610.01	461.62	494.60	527.39	553.08	576.78	(148.39)	-24.3%	32.98	7.1%	6.6%

Average User

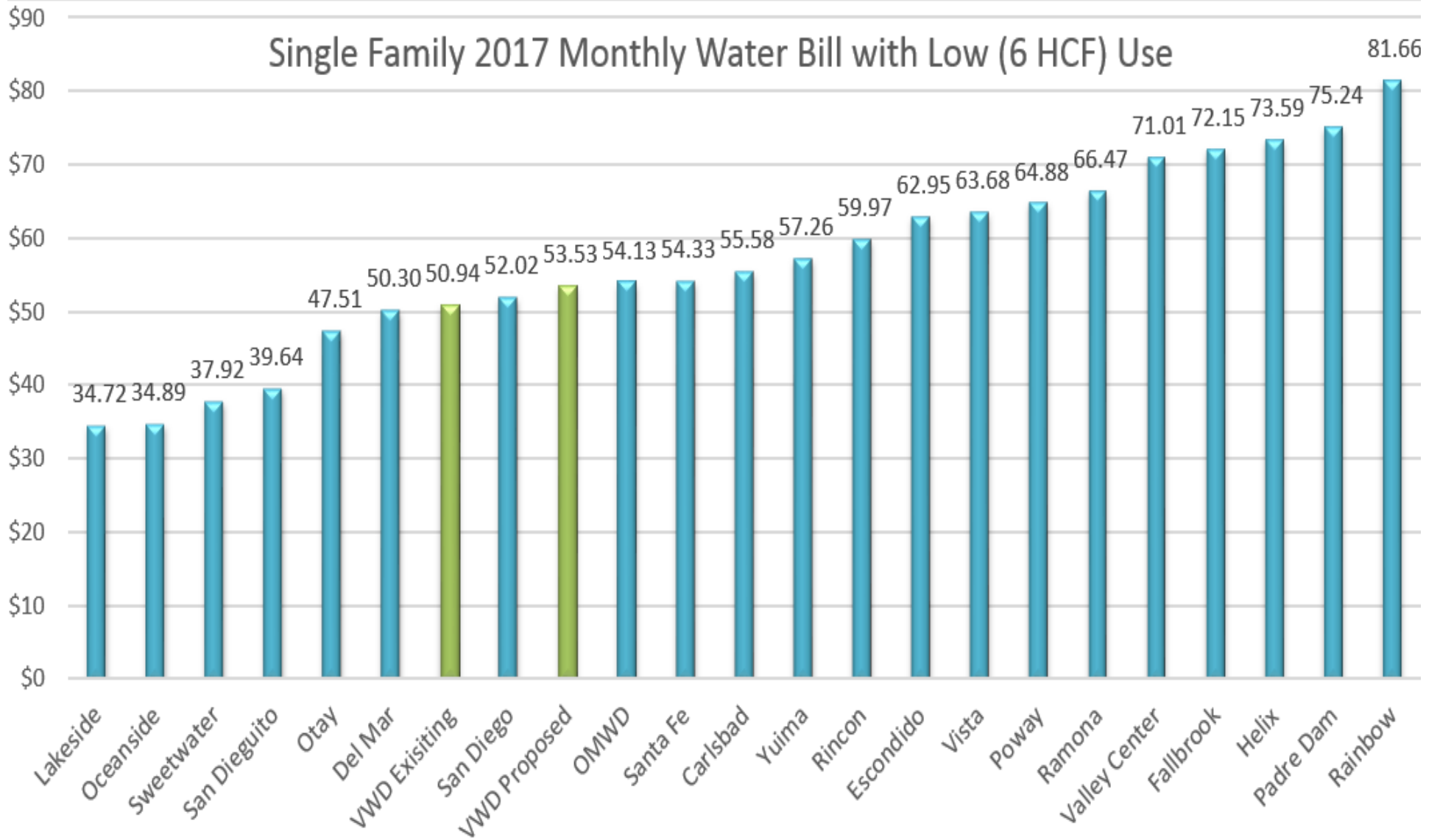
	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	\$ 79.78	\$ 84.54	\$ 89.48	\$ 94.68	\$ 98.92	\$ 102.90	\$ 4.76	6.0%	\$ 4.94	5.8%	5.8%
3/4"	84.88	87.81	90.68	94.68	98.92	102.90	2.93	3.5%	2.87	3.3%	4.4%
1"	235.49	237.84	247.25	257.95	268.33	279.25	2.35	1.0%	9.41	4.0%	4.3%
1.5"	587.43	593.79	628.45	666.38	695.31	723.91	6.36	1.1%	34.66	5.8%	6.0%
2"	1,001.03	995.53	1,059.38	1,120.01	1,170.20	1,219.40	(5.50)	-0.5%	63.84	6.4%	5.7%
3"	3,556.38	3,351.26	3,530.82	3,723.48	3,896.76	4,071.79	(205.12)	-5.8%	179.56	5.4%	5.5%
Ag 1"	470.33	507.15	524.49	546.93	564.83	585.21	36.82	7.8%	17.34	3.4%	4.3%
Ag 1.5"	1,633.91	1,764.16	1,837.27	1,928.93	1,994.20	2,066.37	130.25	8.0%	73.11	4.1%	5.0%
Mf 1"	414.57	341.79	356.55	372.98	387.73	403.06	(72.78)	-17.6%	14.75	4.3%	4.6%
Mf 1.5"	1,080.55	886.90	936.20	990.11	1,031.16	1,072.14	(193.65)	-17.9%	49.30	5.6%	5.8%

Water Rate Impact – RTS plus Commodity

Ag = Agricultural; Mf = Multi-Family

High User	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	\$ 117.58	\$ 119.98	\$ 126.28	\$ 133.24	\$ 138.76	\$ 144.18	\$ 2.40	2.0%	\$ 6.30	5.3%	5.5%
3/4"	122.68	123.25	127.48	133.24	138.76	144.18	0.57	0.5%	4.23	3.4%	4.5%
1"	393.23	384.03	399.05	417.01	432.67	449.53	(9.20)	-2.3%	15.02	3.9%	4.5%
1.5"	960.10	943.76	991.85	1,047.16	1,088.73	1,131.55	(16.34)	-1.7%	48.09	5.1%	5.6%
2"	1,665.64	1,589.15	1,675.78	1,765.89	1,837.52	1,910.84	(76.49)	-4.6%	86.62	5.5%	5.4%
3"	5,318.67	5,176.42	5,426.02	5,709.32	5,948.52	6,197.71	(142.25)	-2.7%	249.60	4.8%	5.2%
Ag 1"	816.41	879.27	910.89	951.81	983.15	1,018.65	62.86	7.7%	31.62	3.6%	4.5%
Ag 1.5"	2,754.55	2,969.12	3,088.47	3,239.97	3,348.76	3,469.89	214.57	7.8%	119.4	4.0%	4.9%
Mf 1"	727.22	634.06	661.76	698.44	728.21	761.07	(93.16)	-12.8%	27.7	4.4%	5.5%
Mf 1.5"	1,816.74	1,581.55	1,661.93	1,765.05	1,842.64	1,926.35	(235.19)	-12.9%	80.4	5.1%	6.2%
Very High User											
	Effective						Increase				
	Current	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2018		CY 2019		CY2020
5/8"	\$ 241.99	\$ 297.85	\$ 312.55	\$ 333.58	\$ 349.60	\$ 367.41	\$ 55.86	23.1%	\$ 14.70	4.9%	6.7%
3/4"	247.09	301.12	313.75	333.58	349.60	367.41	54.03	21.9%	12.63	4.2%	6.3%
1"	808.97	1,044.69	1,090.91	1,161.13	1,215.79	1,278.67	235.72	29.1%	46.22	4.4%	6.4%
1.5"	2,004.78	2,603.88	2,730.37	2,917.00	3,056.57	3,215.03	599.10	29.9%	126.49	4.9%	6.8%
2"	3,451.19	4,426.60	4,647.23	4,961.79	5,200.92	5,471.89	975.41	28.3%	220.62	5.0%	6.8%
3"	11,661.4	15,255.7	15,981.3	17,061.9	17,896.1	18,847.4	3,594.4	30.8%	725.6	4.8%	6.8%
Ag 1"	1,578.61	1,698.82	1,761.89	1,843.51	1,904.45	1,973.25	120.21	7.6%	63.07	3.7%	4.6%
Ag 1.5"	5,407.83	5,822.04	6,050.87	6,344.05	6,555.88	6,792.93	414.21	7.7%	228.8	3.9%	4.8%
Mf 1"	1,475.63	1,489.53	1,557.63	1,661.98	1,742.25	1,834.70	13.90	0.9%	68.1	4.6%	6.7%
Mf 1.5"	3,706.29	3,741.40	3,923.78	4,197.75	4,402.84	4,637.00	35.11	0.9%	182.4	4.9%	7.0%

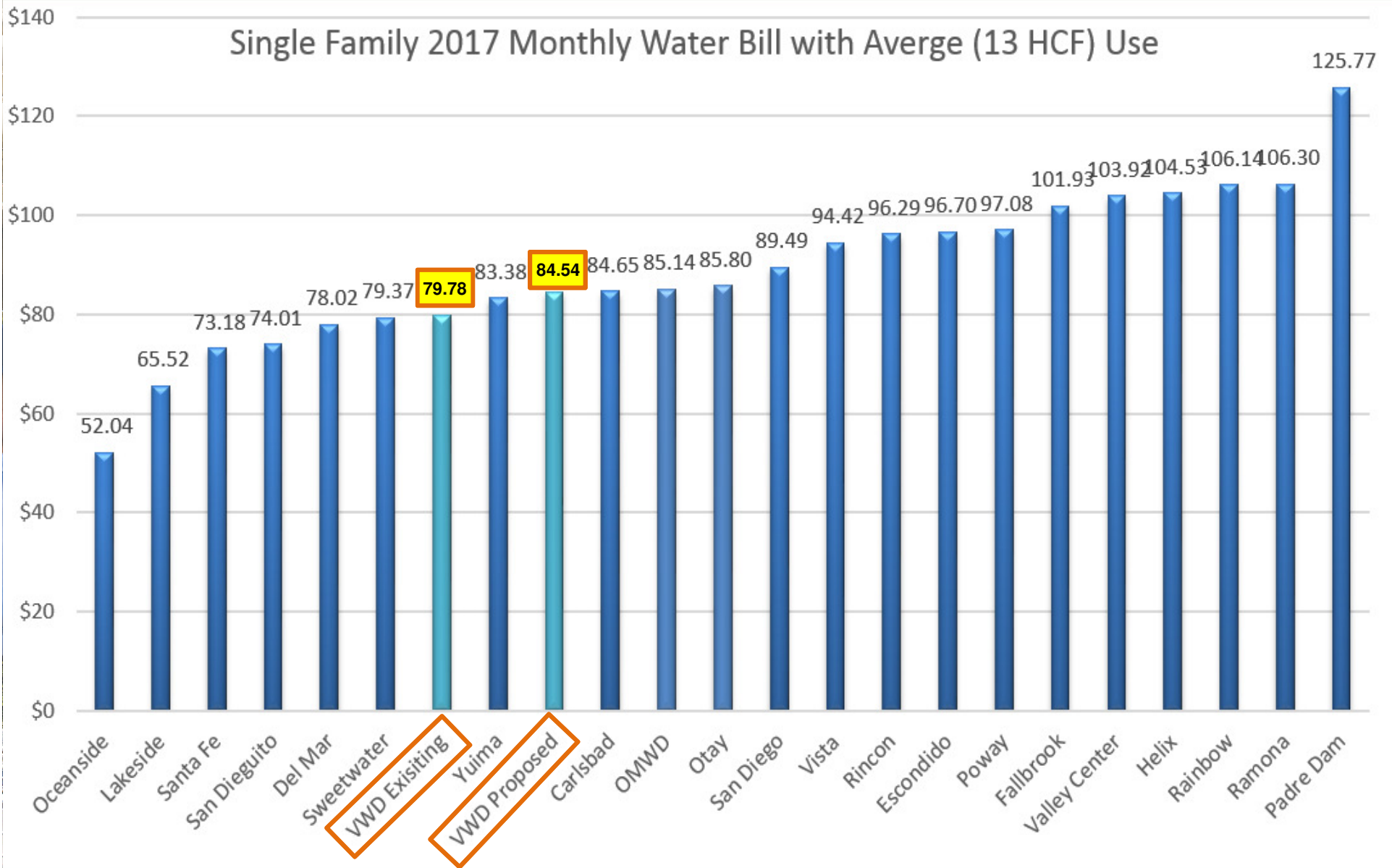
Single Family 2017 Monthly Water Bill with Low (6 HCF) Use



Average =57.31; Median =55.58

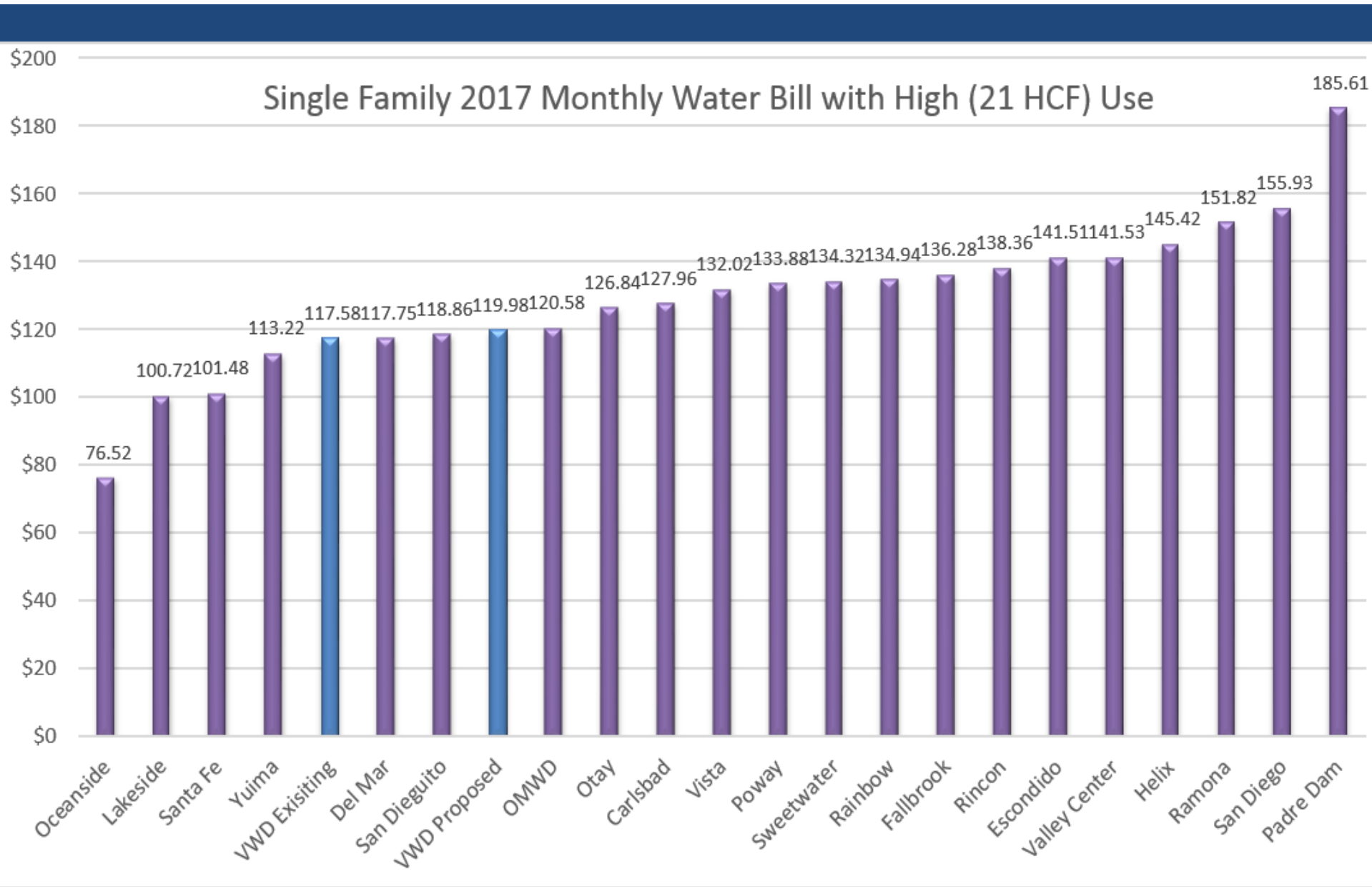


Single Family 2017 Monthly Water Bill with Average (13 HCF) Use



Average =89.25; Median =85.8

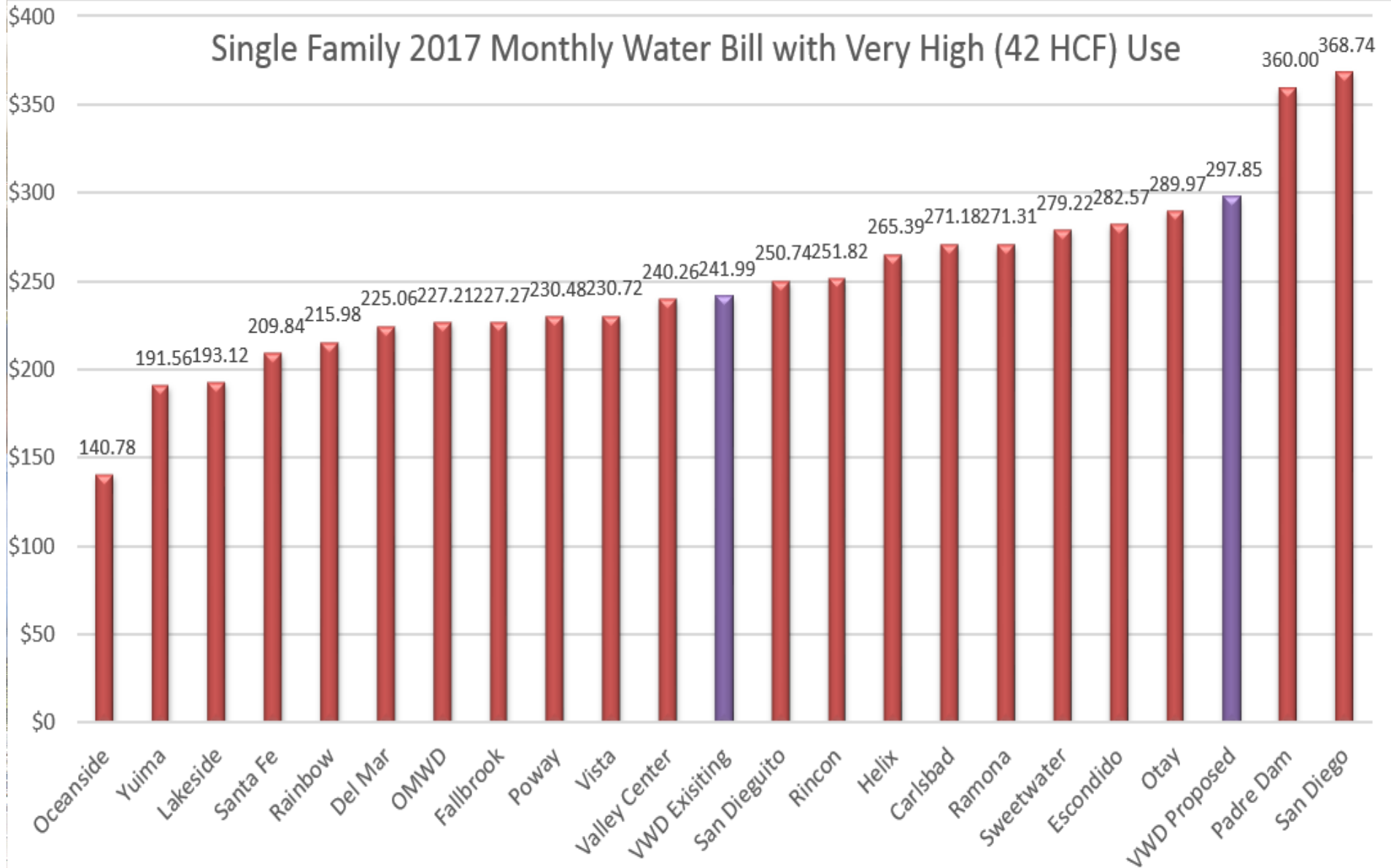




Average =129.69; Median =132.02



Single Family 2017 Monthly Water Bill with Very High (42 HCF) Use



Average =248.42; Median =241.99



What drives water rate increases?

FY 2016/17 to 2017/18 Water Budget Increases

**Total Budget Increases
\$4.8 Million**

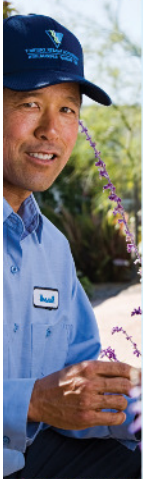
**Salaries and
benefits
\$0.04**

in \$ millions

**Capital
replacement
\$1.89**

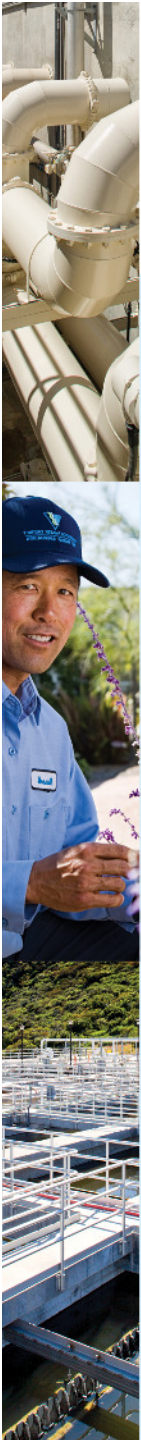
**Water
purchases
\$2.26**

**Operations
\$0.60**



What have we done to reduce costs

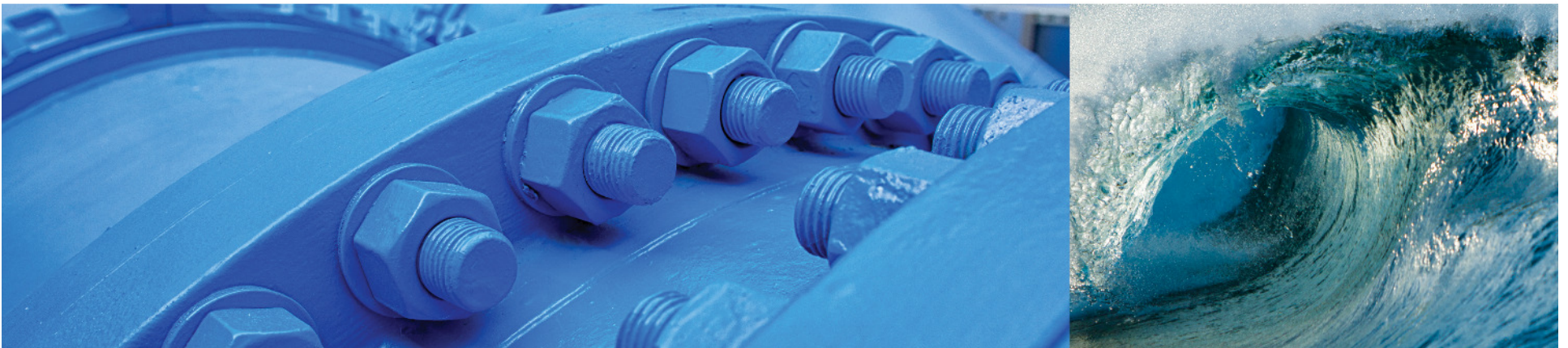
- Budget process
 - Multi-level assessment of budget requests
 - Cuts at many levels, even before GM/Board review
 - Eliminate 4 positions
- Investments in technology
 - Remote monitoring
 - E-logger (design and code IT systems in-house, eliminates duplication, mobile)
- Investments in energy efficiency
 - Solar projects
 - Efficient pumps and motors
- Investments in advanced treatment technology
 - Filter media - reducing chemical costs
 - On-site chlorine generation
- Cost sharing/collaboration with OMWD
 - Reduced water treatment costs
 - Automated metering infrastructure
- Control benefit costs
 - Scrutinize benefit provider contracts - rebid
 - Increase employee cost sharing





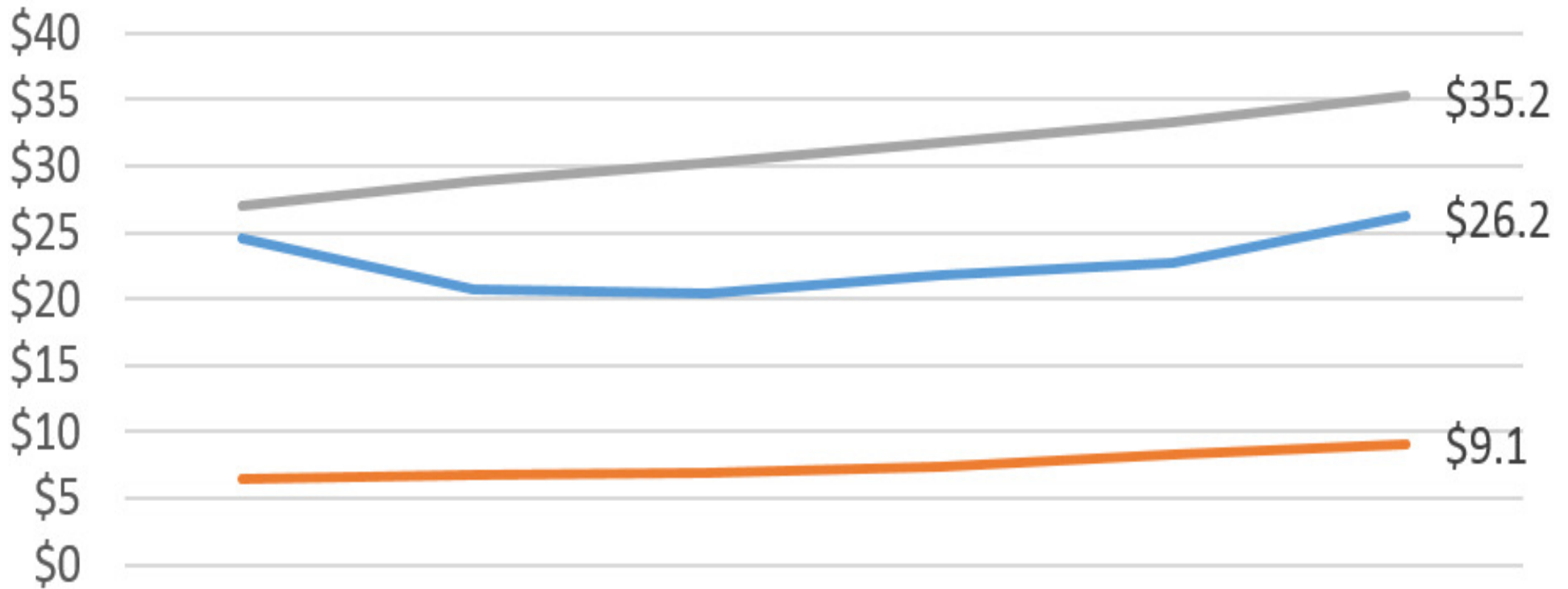
Impacts to Reserves and Financial Performance

September 20, 2017 Rate Hearing



Water Projected Replacement Reserves and Proposed Rates

(in millions)



	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Average Single Family Resident Water Bill / Increase		\$ 84.54 6.0%	\$ 89.48 5.8%	\$ 94.68 5.8%	\$ 98.92 4.5%	\$ 102.90 4.0%

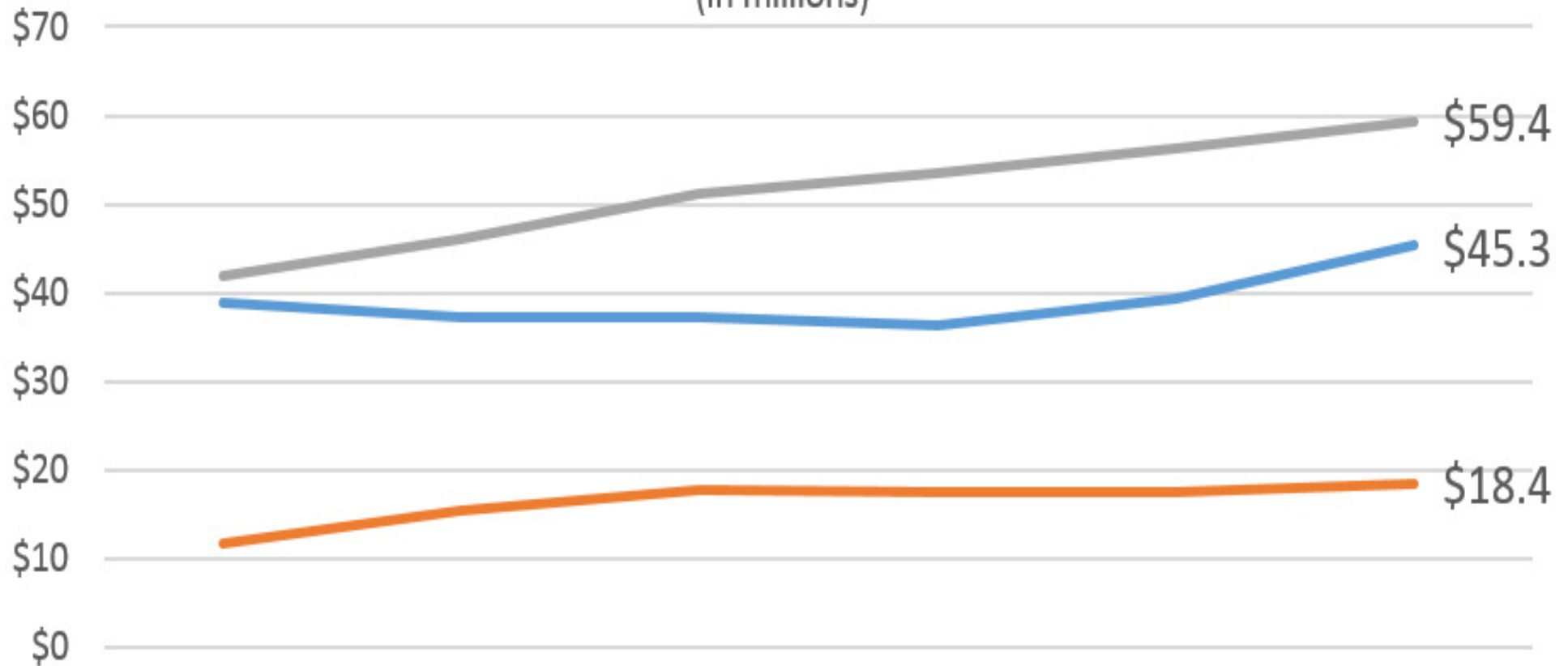
— Replacement Reserve

— Replacement Reserve Floor

— Replacement Reserve Ceiling

Sewer Projected Replacement Reserves and Proposed Rates

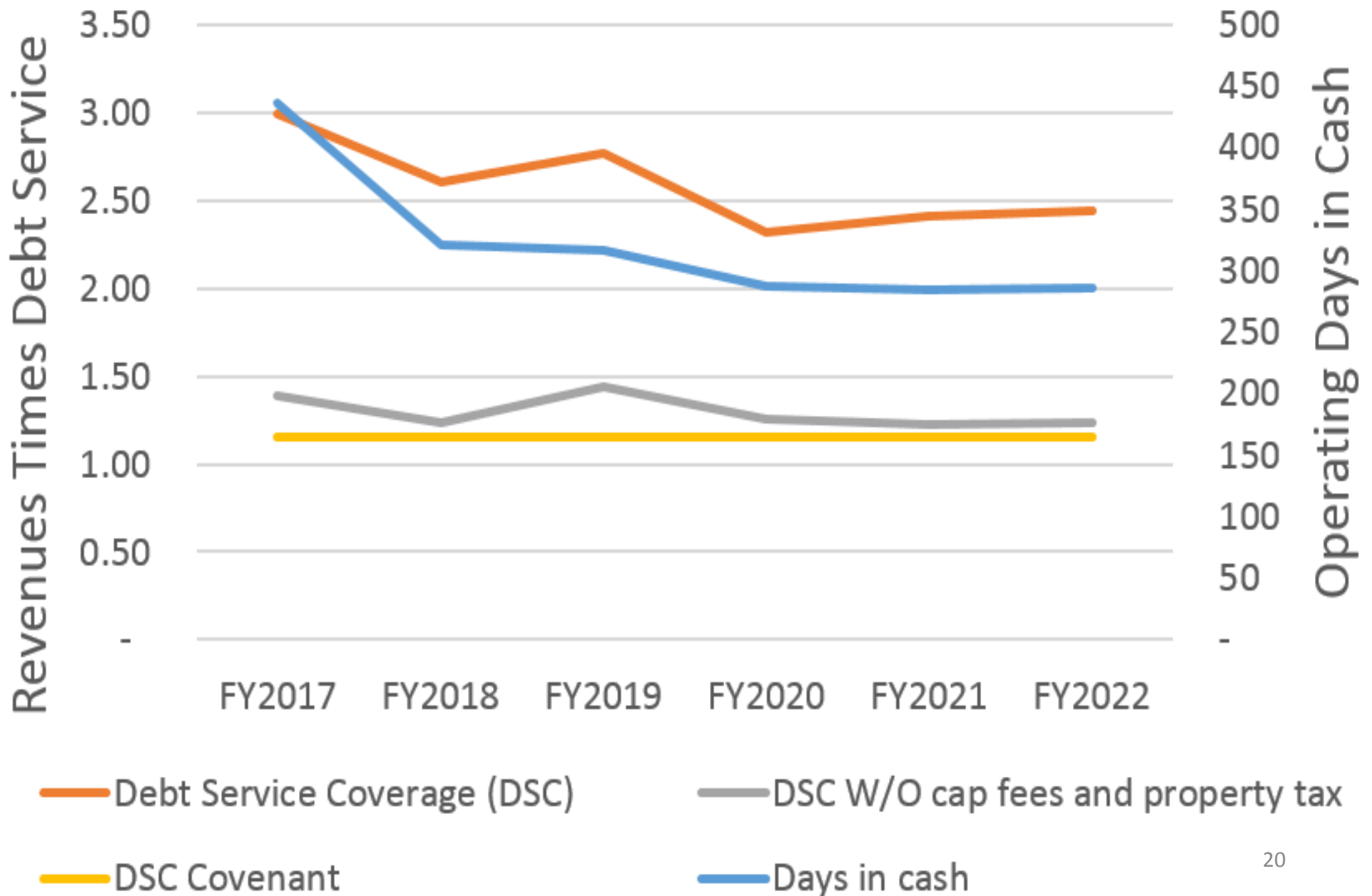
(in millions)



	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Single Family Resident Sewer Bill / Increase		\$ 38.99 0.0%	\$ 38.99 0.0%	\$ 38.99 0.0%	\$ 40.16 3.0%	\$ 41.77 4.0%

— Replacement Reserve
 — Replacement Reserve Floor
 — Replacement Reserve Ceiling

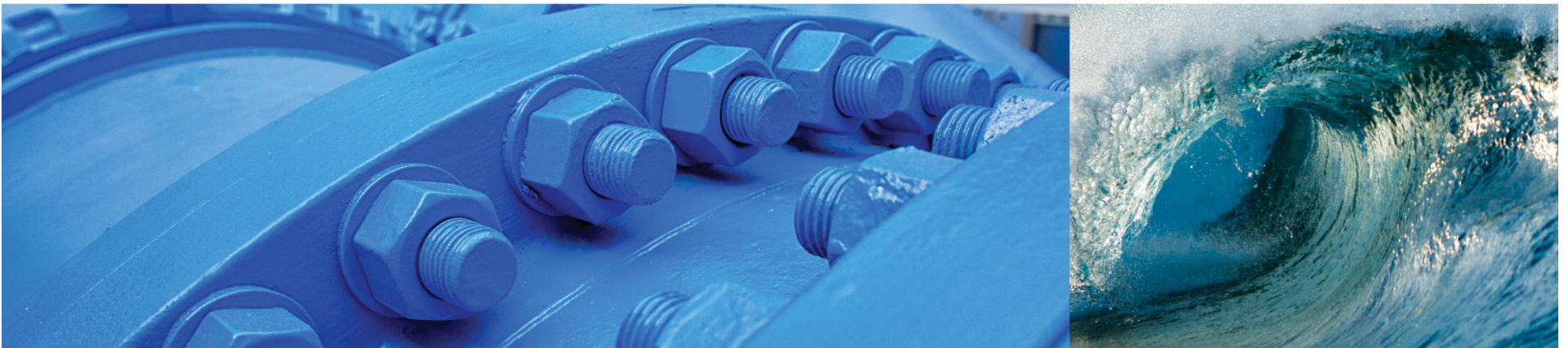
Financial Performance Indicators





Rate Protest Comments

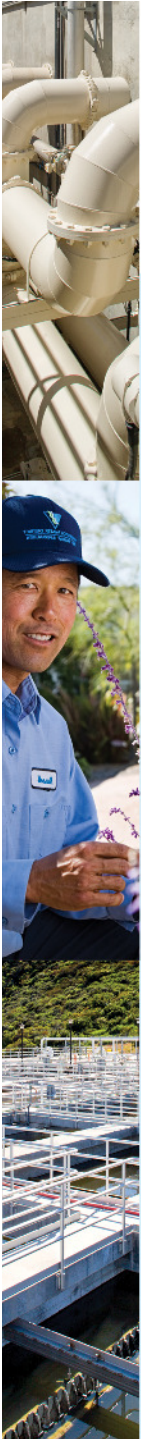
September 20, 2017 Rate Hearing  VALLECITOS
WATER DISTRICT
Water and Wastewater Specialists since 1955





Rate Protests (22 as of September 14) Specific Concerns

- “Have you ever considered a Senior Discount?”
- “I used to get some reduction in my cost [with] low usage ...”
- “Rate increases should not be greater than ongoing inflation.”
- “Look at your customers and not your bottom line.”
- “You give those of us who conserve ... no incentive.”
- “Board members [paid] \$1.5 million in salaries, ... pension benefits, ... cell phone costs ...”
- “Invest in new and upgraded facilities and equipment , ... [reduce] the cost of operations and [improve] operating performance ...”
- No “transparency or detail” on revenue “rate increases will provide ... and will be used for; pensions, salary increases ...”
- “Rate increase would not affect customers equally ... most affected would be residential ...”

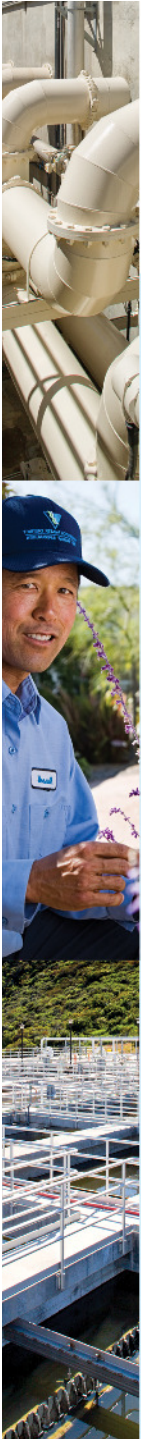


Rate Protest

“Have you ever considered a Senior Discount?”

“I used to get some reduction in my cost [with] low usage ...”

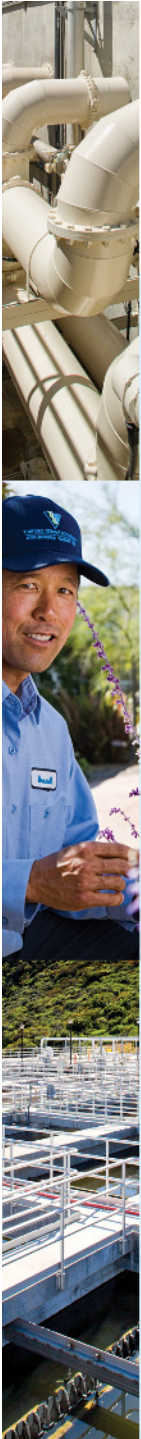
- Vallecitos is a public water utility (i.e., government), subject to the provisions of the California Constitution for property-related fees (Article XIII C and D).
- “A charge imposed for a specific government service or product [may] not exceed the reasonable costs ... of the service or product ...” *Proposition 26, 2010.*
- It is unlawful to burden ratepayers with subsidies who are not seniors or are not frugal users with those discounts.
- Subsidies are not cost necessary to provide the service.
- Vallecitos is a sole purpose special district and does not have a General Fund to provide subsidies.



Rate Protest

“Rate increases should not be greater than ongoing inflation.”

- Costs to provide water – recovered from rates – often increase greater than the rate of inflation
- Cost of imported water increased by 26% last year with the delivery of desalinated water
- Cost of imported water historically increased greater than the rate of inflation
- Escalating costs of supply diversification, increased storage, replacing aging infrastructure



Rate Protest

“Look at your customers and not your bottom line.”

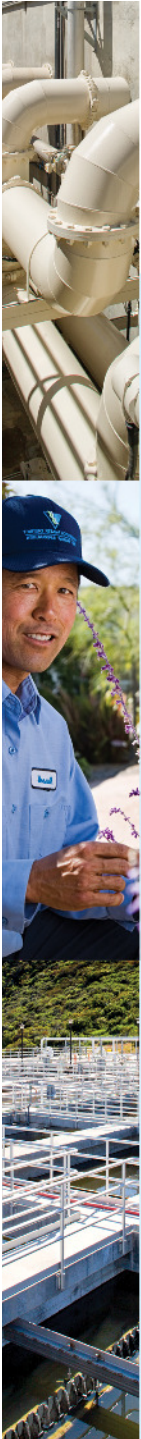
- Vallecitos’ mission is to serve as water and wastewater specialists, providing exceptional and sustainable services
- We do not have a profit motive – during the drought we encouraged conservation
- Secured diverse and drought proof supplies
- Our focus is providing our customers with reliable, safe water, not just this year, but forever
- Using reserves to minimize rate increases from the 26% increase to the cost of purchased water



Rate Protest

“You give those of us who conserve ... no incentive.”

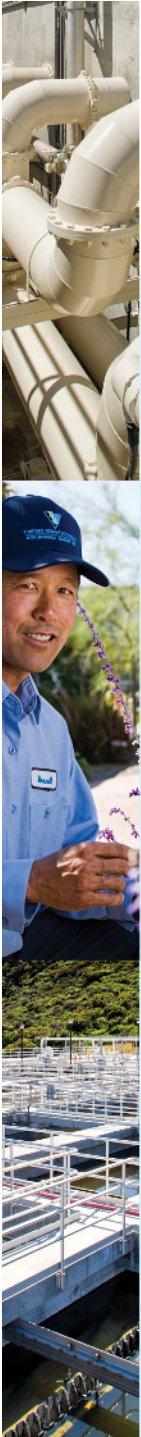
- The lowest cost water is recovered from the lowest tiers
- High users are burdened with high imported water costs and costs associated with peak use, not those who conserve
- Limited to California Constitution – prohibited from monetary incentives recovered from other users



Rate Protest

“Board members [paid] \$1.5 million in salaries, ... pension benefits, ... cell phone costs ...”

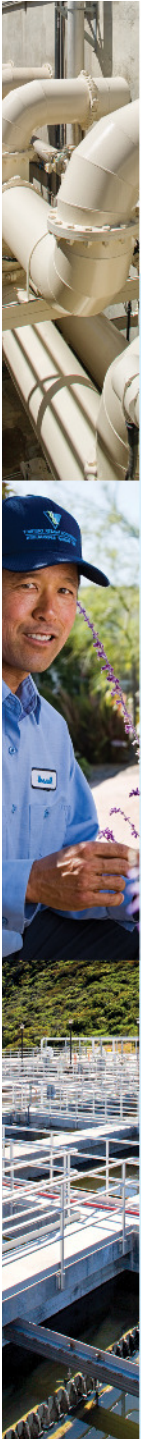
- Board pay, benefits, meeting costs, and expense reimbursements totaled \$201k in 2016.
- No pensions for Board members
- No phone allowance for Board members



Rate Protest

“Invest in new and upgraded facilities and equipment , ... [reduce] the cost of operations and [improve] operating performance ...”

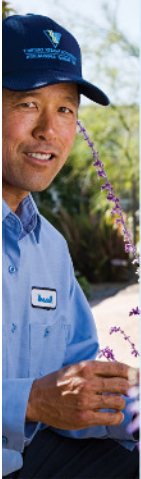
- Budget process
 - Multi-level assessment of budget requests
 - Cuts at many levels, even before GM/Board review
 - Eliminate 4 positions
- Investments in technology
 - Remote monitoring
 - E-logger (design and code IT systems in-house, eliminates duplication, mobile)
- Investments in energy efficiency
 - Solar projects
 - Efficient pumps and motors
- Investments in advanced treatment technology
 - Filter media - reducing chemical costs
 - On-site chlorine generation
- Cost sharing/collaboration with OMWD
 - Reduced water treatment costs
 - Automated metering infrastructure
- Control benefit costs
 - Scrutinize benefit provider contracts - rebid
 - Increase employee-cost sharing



Rate Protest

No “transparency or detail” on revenue “rate increases will provide ... and will be used for; pensions, salary increases ...”

- Budget (on-line)
 - Public process
 - Discloses revenues with proposed increase
 - Details what revenues will be used for
 - \$348k loss in FY2018, \$1.6m income in FY2019
 - before depreciation
 - Benefits budget increased \$93k, 1.6%
 - Slight decrease in salaries
- Cost of Service and Rate Structure Study (on-line)
 - Public process (12 public meetings)
 - Provides detail of how rates are calculated



Rate Protest

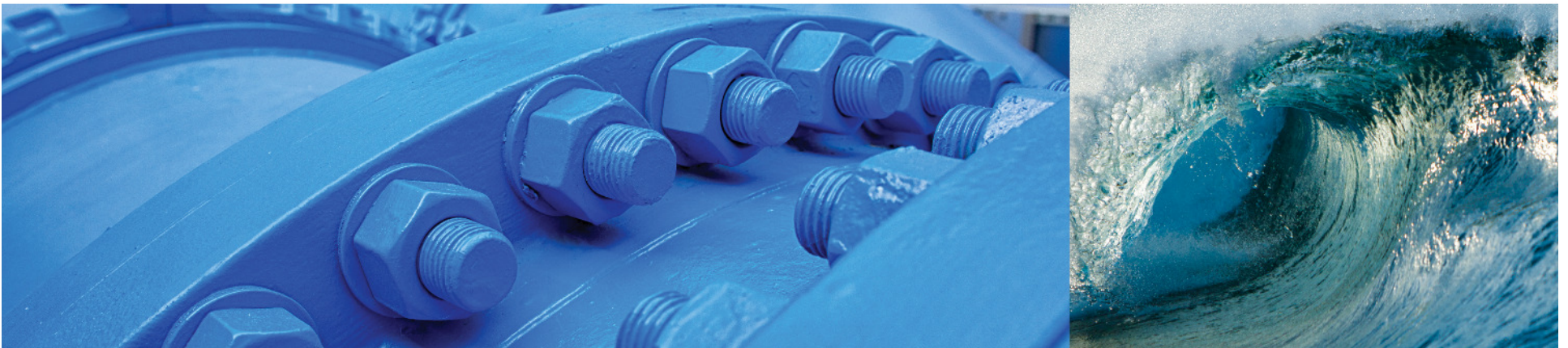
“Rate increase would not affect customers equally ... most affected would be residential ...”

- Rate increases do not affect customers equally
- Use in higher tiers pay for high cost desalinated water
- Rates make no distinction between customer types as tiers are established by meter size
- The increase for residential is the same as the increase for commercial



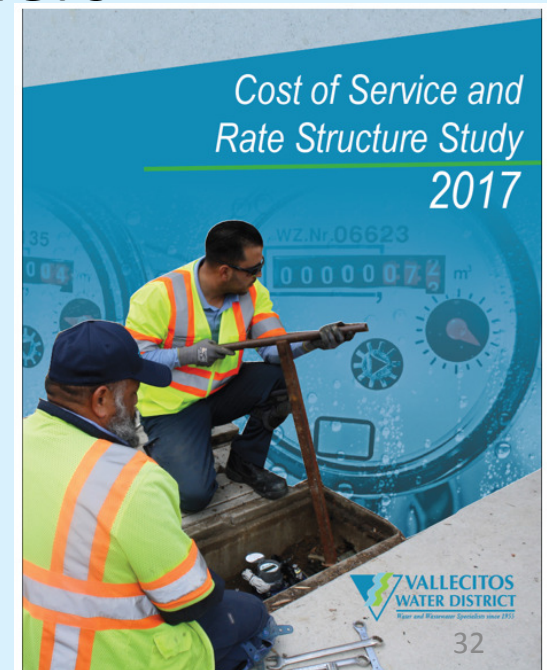
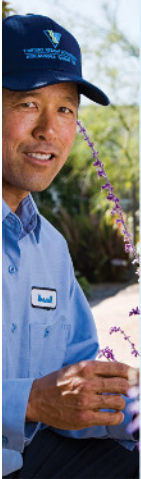
Cost of Service and Rate Structure Study

September 20, 2017 Rate Hearing



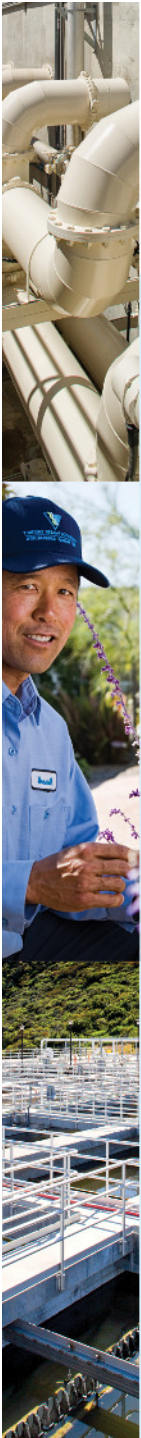
Cost of Service and Rate Structure Study Process

- Planning – Identify objectives
- Project demand
- Establish customer classes and tier breaks
- Determine allocation ratios to tiers
- Allocate costs to user charges
- Calculate Rates



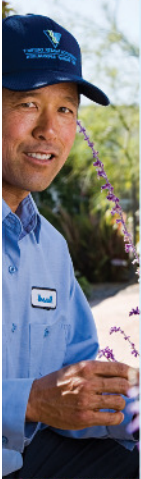
Cost of Service and Rate Structure Study Objectives

- Provide rates and a structure to the Board for approval,
- Provide one or two alternative structures if practical,
- Keep the Board apprised of progress through Board workshops throughout the process,
- Alternatives presented are legal and defensible,
- Provide a thorough and understandable administrative record
- Alternatives presented satisfy the District's mission statement, Strategic Plan objectives, and Financial Master Plan objectives,
- Nothing arbitrary (tier levels, cost acceleration from tier to tier, etc.), and
- Establish a revenue requirement that:
 - Exhausts all efforts to cut costs,
 - Maintains or improves our current level of service and workforce engagement.



Cost of Service and Rate Structure Study

Calculate Ready-to-Serve Rates



CY 2018	Ready-to-Serve		Fire
	Meters	Bill	Service
Revenue Requirement	\$11,975,979	\$ 665,140	\$ 182,496
Billing Units	390,390	258,720	38,196
Unit Cost	\$ 30.68	\$ 2.57	\$ 4.78

Meter Size	Meter Equivalents		Ready-to-Serve Charge		
	Per Meter	Unit Cost	Meter	Bill	Total
5/8"	1.0	\$ 30.68	\$ 30.68	\$ 2.57	\$ 33.25
3/4"	1.0	30.68	30.68	2.57	33.25
1"	1.5	30.68	46.02	2.57	48.59
1.5"	4.0	30.68	122.72	2.57	125.29
2"	6.5	30.68	199.42	2.57	201.99
3"	10.0	30.68	306.80	2.57	309.37
4"	15.0	30.68	460.20	2.57	462.77
6"	30.0	30.68	920.40	2.57	922.97
10"	70.0	30.68	2,147.60	2.57	2,150.17
multi	0.3	30.68	9.20	-	9.20

Cost of Service and Rate Structure Study

Calculate Commodity Rates



	2018			2019		
	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3
Revenue Requirement	\$7,647,976	\$13,057,565	\$7,542,202	\$8,317,923	\$14,194,656	\$8,104,939
Billing Units - HCF	2,262,942	2,945,092	890,366	2,269,912	3,088,840	913,889
Unit Cost	\$ 3.38	\$ 4.43	\$ 8.47	\$ 3.66	\$ 4.60	\$ 8.87





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WATER AND SEWER RATES/CHARGES

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Water and Sewer Rates/Charges

Public Rate Hearing Notice for September 20, 2017

Rates effective July 1, 2017

Pump Zone Charges effective July 1, 2017

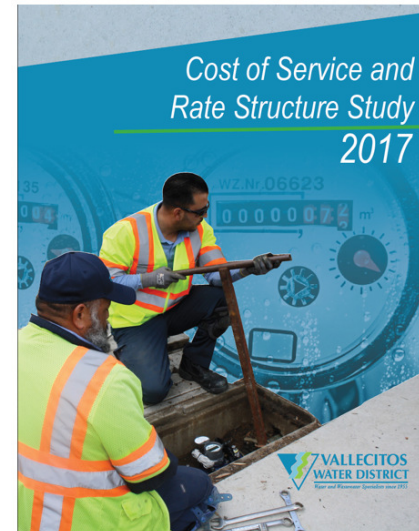
Current (Water/Sewer) Capacity Facility Fee Information

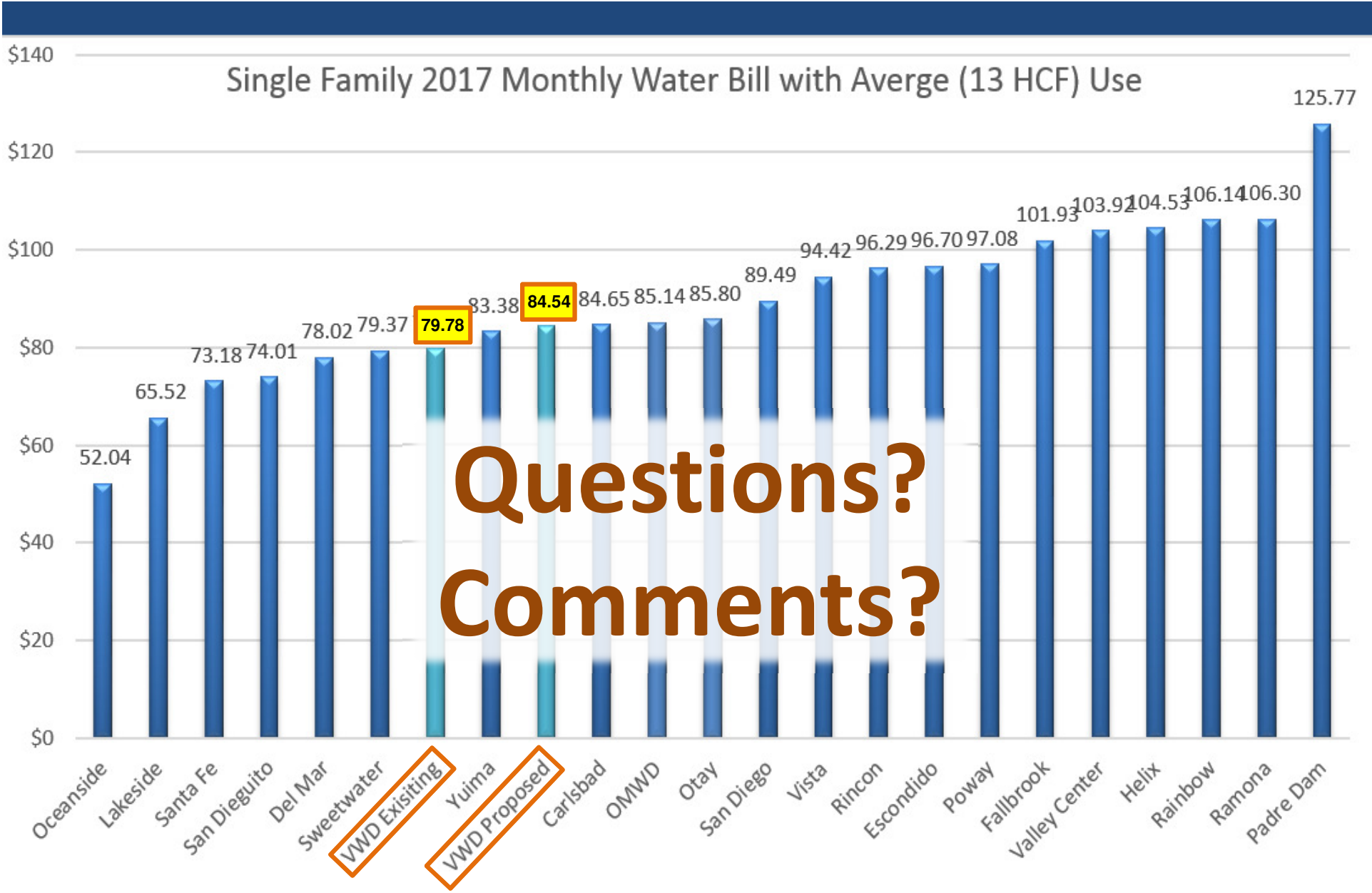
Cost of Service and Rate Structure Study

Rate presentation on May 24, 2017

Water/Sewer Rate Calculator

Rate Ordinances





Questions?
Comments?

Average =89.25; Median =85.8





Cost of Service and Rate Structure Study

Demand Projection

	Demand in Acre Feet					Increase			
	Meters	M&I	AG	Construction	Total	Meter#	Meter%	M&I Demand	
Actual	2007	19,929	17,595	2,438	465	20,499			
	2008	20,332	17,121	1,685	252	19,058	403	2.0%	-2.7%
	2009	20,445	14,985	1,607	62	16,655	113	0.6%	-12.5%
	2010	20,459	13,250	1,176	41	14,466	14	0.1%	-11.6%
	2011	20,622	13,532	1,062	40	14,634	163	0.8%	2.1%
	2012	20,828	14,109	1,342	38	15,489	206	1.0%	4.3%
	2013	21,080	14,399	1,535	50	15,984	252	1.2%	2.1%
	2014	21,273	14,994	1,455	74	16,522	193	0.9%	4.1%
	2015	21,340	11,398	991	37	12,426	67	0.3%	-24.0%
	2016	21,397	12,236	909	145	13,290	57	0.3%	7.4%
	Projected	2017	21,460	12,600	900	100	13,600	assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; 1% decline in Ag; 30% decrease in	
2018		21,530	13,000	900	100	14,000	assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat		
2019		21,610	13,400	900	100	14,400	assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat		
2020		21,700	13,800	900	100	14,800	assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat		
2021		21,800	14,200	900	100	15,200	assumptions: 3% increase in M&I - 0.3% growth, 2.7% behavior; Ag and construction flat		





Cost of Service and Rate Structure Study

Establishing Customer Class

VWD average use varies less within meter sizes than customer type

CY 2016					CY 2016						
Meter size	# meters	Avg Use		Standard Deviation		Customer Type	# meters	Avg Use		Standard Deviation	
		per Month	Absolute	Relative	per Month			Absolute	Relative		
< 1"	19,239	12	11	96%	Residential - SF	19,036	12	11	96%		
1"	1,021	40	66	164%	Residential - MF	512	142	282	198%		
1.5"	689	101	152	151%	Irrigation	826	106	175	165%		
2"	505	188	236	126%	Agriculture	115	280	450	160%		
> 2"	101	511	754	148%	Comm/Ind	939	49	106	216%		
					Other	91	126	317	252%		

CY 2015					CY 2015						
Meter size	# meters	Avg Use		Standard Deviation		Customer Type	# meters	Avg Use		Standard Deviation	
		per Month	Absolute	Relative	per Month			Absolute	Relative		
< 1"	19,206	11	11	93%	Residential - SF	18,997	11.47	13	116%		
1"	1,016	37	55	147%	Residential - MF	506	140.48	280	199%		
1.5"	682	94	150	160%	Irrigation	818	84.51	132	156%		
2"	500	170	217	127%	Agriculture	117	282.19	484	171%		
> 2"	95	476	682	143%	Comm/Ind	942	47.55	97	205%		
					Other	89	123.79	321	259%		



Cost of Service and Rate Structure Study

Establishing Tiers



2013 through 2016 (averages in units, use captured in acre feet)

Meter size	Average	Use	Average	Use	Average	Use
	Min Use	Captured	Use	Captured	Max Use	Captured
< 1"	6	2,922	13	4,989	21	5,953
1"	16	346	45	688	78	854
1.5"	43	575	117	1,047	196	1,271
2"	85	829	201	1,527	335	1,939
> 2"	430	539	778	829	1,190	1,041
TOTAL		5,211		9,080		11,058

Multi-Family is currently Included in the above meter sizes

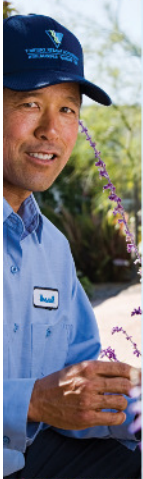
Tier's are tied to VWD customers' usage patterns, not a national statistic or theoretical number

- Tier 1 Limit = Average Minimum Use
- Tier 2 Limit = Average Maximum Use

Meter Size	Tier Structure in Units		
	Tier 1	Tier 2	Tier 3
<1"	1 - 6	7 - 21	22 +
1"	1 - 16	17 - 78	79 +
1.5"	1 - 43	44 - 196	197 +
2"	1 - 85	86 - 335	336 +
>2"	1 - 430	431-1,190	1,191 +
Ag		1 +	
Temporary Construction			1 +

Cost of Service and Rate Structure Study

Determine Allocation Ratios to Tiers



Peaking



Water Demand in Acre Feet
 Water Demand Percent

CY 2018 Allocation			
Total	Tier1	Tier2	Tier3
14,000	5,195	6,761	2,044
100.00%	37.11%	48.29%	14.60%

Facilities designed to meet max day demand

E.g., Storage, treatment, pumping

Base = $(1.0/1.9) \times 100 =$

Max Day = $(1.9 - 1.0)/1.9 \times 100 =$

52.63%	19.53%	25.42%	7.68%
47.37%	-	36.37%	11.00%
	19.53%	61.79%	18.68%

Facilities designed to meet max hour demand

E.g., Transmission and distribution

Base = $(1.0/3) \times 100 =$

Max Day = $(1.9 - 1.0)/3 \times 100 =$

Max Hr = $(3 - 1.9)/3 \times 100 =$

33.33%	12.36%	16.10%	4.87%
30.00%	-	23.04%	6.96%
36.67%	-	-	36.67%
	12.36%	39.14%	48.50%



Cost of Service and Rate Structure Study

Allocate Supply Cost Across Tiers



	Projected	Commodity		
	2018	Tier1	Tier2	Tier3
Water Costs				
Projected AF demand	14,000	5,195	6,761	2,044
Projected AF production	14,830			
OMWD	3,899	3,899		
SDCWA	7,431	1,604	5,827	
Desal - committed	3,500		1,335	2,165
Desal - excess	-			-
Cost per AF		\$ 1,249	\$ 1,309	\$ 2,560
		<u>\$ 1,309</u>	<u>\$ 2,560</u>	<u>\$ 733</u>
Water purchases		\$ 4,869,851	\$ 7,627,543	\$ 5,542,400
		<u>\$ 2,099,636</u>	<u>\$ 3,417,600</u>	<u>\$ -</u>



	Projected	
	2018	Offset
Water cost	\$ 29,405,194	\$ -
Operating Expenses		
Pumping	739,000	295,000
Water Quality	181,000	-
Water Treatment	460,500	-
Tanks & Reservoirs	422,500	-
Transmission & Dist.	1,941,500	-
Services	259,000	-
Meters	642,000	275,800
Backflow Prevention	65,000	65,000
Customer Accounts	627,500	135,700
Equipment & Vehicles	302,500	-
Building & Grounds	359,500	-
Engineering	1,415,500	31,500
Safety & Reg. Affairs	266,500	-
Information Technology	1,024,500	-
G&A - Conservation	581,089	-
General&Admin - Other	2,314,411	181,500
Capital Replacement	2,474,164	2,205,500
Reserve Target Adjustmnt	780,000	-
Total Costs to Recover	\$ 44,261,358	\$ 3,190,000

Cost of Service and Rate Structure Study

Allocate Costs to Users Charges

1st, offset costs to be recovered by revenue from other sources

- Property tax
- Investment earnings
- Late/lock charges
- Pumping surcharges
- Backflow fees
- Engineering fees
- Cell tower revenues
- Miscellaneous revenue

	Ready-to-Serve	
	Meters	Bill
Water cost	\$ 5,848,164	\$ -
Operating Expenses		
Pumping	-	-
Water Quality	-	-
Water Treatment	-	-
Tanks & Reservoirs	-	-
Transmission & Dist.	-	-
Services	259,000	-
Meters	192,860	173,340
Backflow Prevention	-	-
Customer Accounts	-	491,800
Equipment & Vehicles	302,500	-
Building & Grounds	359,500	-
Engineering	1,384,000	-
Safety & Reg. Affairs	266,500	-
Information Technology	1,024,500	-
G&A - Conservation	-	-
General&Admin - Other	2,132,911	-
Capital Replacement	52,787	-
Reserve Target Adjustmnt	153,257	-
Total Costs to Recover	\$ 11,975,979	\$ 665,140

Cost of Service and Rate Structure Study

Allocate Costs to Users Charges

2nd, allocate costs not directly related to flow to the Ready-to-Serve charge

- Meter reading and billing to “Bill” – same effort regardless of meter size
- Other costs to “Meters” will be distributed based on meter equivalents



	Commodity			Fire
	Tier1	Tier2	Tier3	Protection
Water cost	\$ 6,969,487	\$ 11,045,143	\$ 5,542,400	\$ -
Operating Expenses				
Pumping	82,378	260,630	78,792	22,200
Water Quality	67,169	87,405	26,426	-
Water Treatment	89,936	284,543	86,021	-
Tanks & Reservoirs	78,388	248,010	74,977	21,125
Transmission & Dist.	227,971	721,908	894,546	97,075
Services	-	-	-	-
Meters	-	-	-	-
Backflow Prevention	-	-	-	-
Customer Accounts	-	-	-	-
Equipment & Vehicles	-	-	-	-
Building & Grounds	-	-	-	-
Engineering	-	-	-	-
Safety & Reg. Affairs	-	-	-	-
Information Technology	-	-	-	-
G&A - Conservation	-	-	581,089	-
General&Admin - Other	-	-	-	-
Capital Replacement	33,984	105,022	66,086	10,785
Reserve Target Adjustmnt	98,663	304,904	191,865	31,311
Total Costs to Recover	\$ 7,647,976	\$ 13,057,565	\$ 7,542,202	\$ 182,496

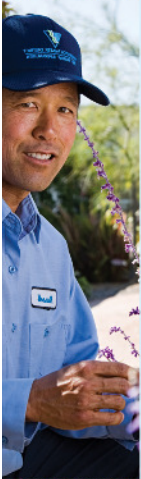
3rd, flow-related costs, capital replacement, and conservation are allocated to commodity

Cost of Service and Rate Structure Study

Allocate Costs to Users Charges

Cost of Service and Rate Structure Study

Calculate Ready-to-Serve Rates



CY 2018	Ready-to-Serve		Fire
	Meters	Bill	Service
Revenue Requirement	\$11,975,979	\$ 665,140	\$ 182,496
Billing Units	390,390	258,720	38,196
Unit Cost	\$ 30.68	\$ 2.57	\$ 4.78

Meter Size	Meter Equivalents		Ready-to-Serve Charge		
	Per Meter	Unit Cost	Meter	Bill	Total
5/8"	1.0	\$ 30.68	\$ 30.68	\$ 2.57	\$ 33.25
3/4"	1.0	30.68	30.68	2.57	33.25
1"	1.5	30.68	46.02	2.57	48.59
1.5"	4.0	30.68	122.72	2.57	125.29
2"	6.5	30.68	199.42	2.57	201.99
3"	10.0	30.68	306.80	2.57	309.37
4"	15.0	30.68	460.20	2.57	462.77
6"	30.0	30.68	920.40	2.57	922.97
10"	70.0	30.68	2,147.60	2.57	2,150.17
multi	0.3	30.68	9.20	-	9.20

Cost of Service and Rate Structure Study

Calculate Commodity Rates



	2018			2019		
	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3
Revenue Requirement	\$7,647,976	\$13,057,565	\$7,542,202	\$8,317,923	\$14,194,656	\$8,104,939
Billing Units - HCF	2,262,942	2,945,092	890,366	2,269,912	3,088,840	913,889
Unit Cost	\$ 3.38	\$ 4.43	\$ 8.47	\$ 3.66	\$ 4.60	\$ 8.87





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WATER AND SEWER RATES/CHARGES

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Water and Sewer Rates/Charges

Public Rate Hearing Notice for September 20, 2017

[Rates effective July 1, 2017](#)

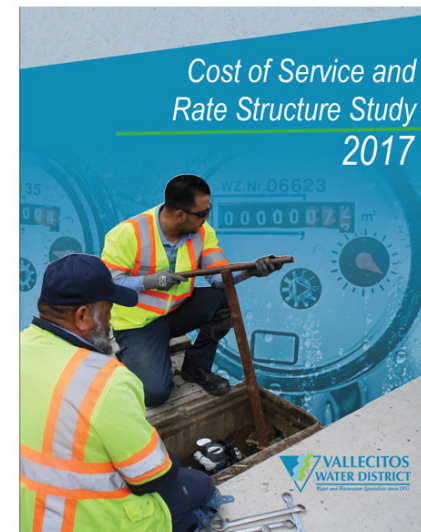
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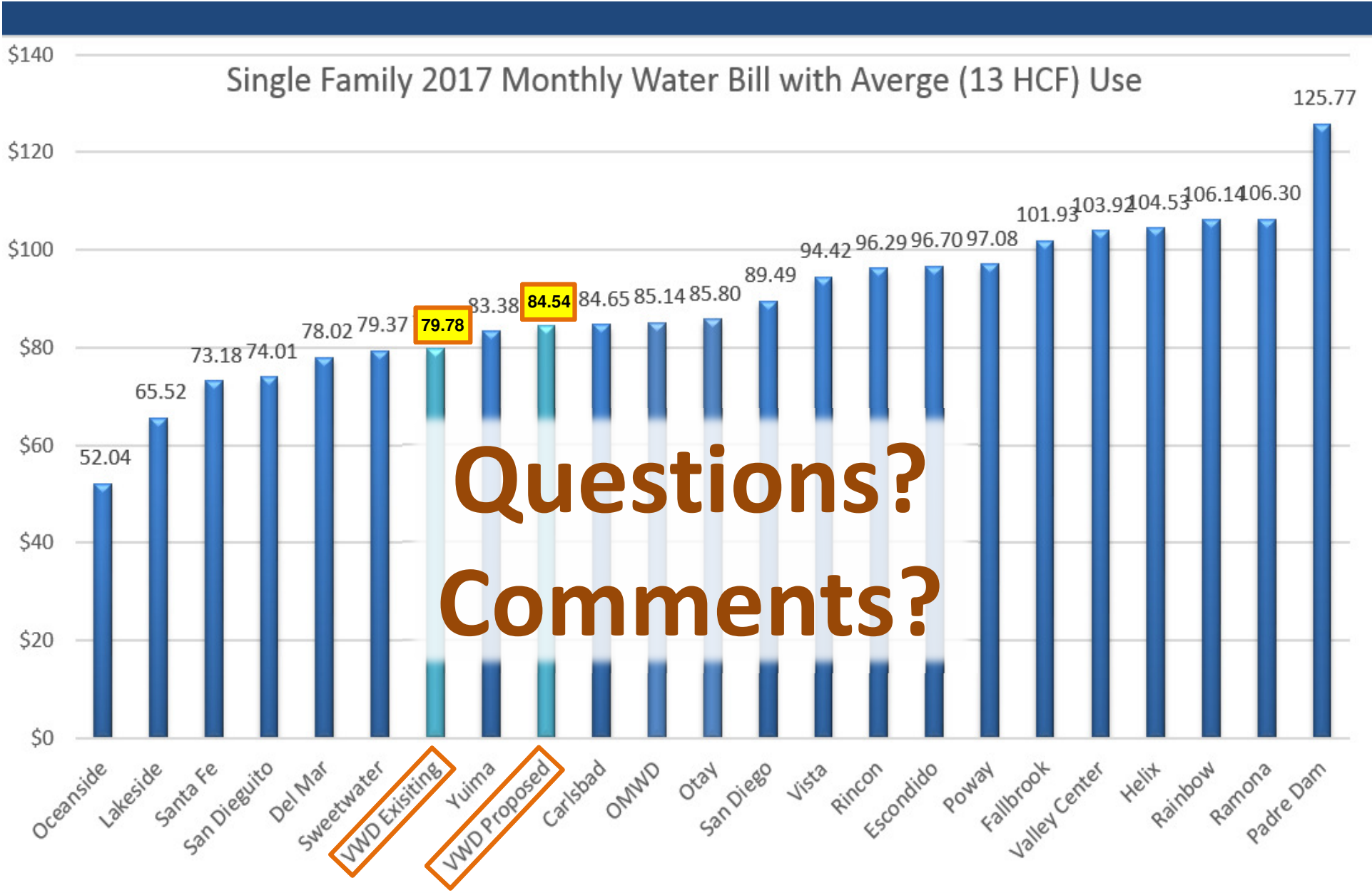


Recommendation for 2018 and 2019 Rates

Approve rates for 2018 and 2019 as presented in the Notice of Public Hearing and Cost of Service and Rate Structure Study

Ready-to-Serve Charge				Tier Structure in Units							
Meter Size	Effective January:			Current				Effective January 2018			
	Current	2018	2019	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	
5/8"	31.42	33.25	35.32	<1"	1 - 5	6 - 17	18 - 36	37 +	1 - 6	7 - 21	22 +
3/4"	36.52	36.52	36.52	1"	1 - 5	6 - 60	61 - 214	215 +	1 - 16	17 - 78	79 +
1"	55.29	55.29	55.29	1.5"	1 - 5	6 - 157	158 - 627	628 +	1 - 43	44 - 196	197 +
1.5"	110.59	120.63	130.67	2"	1 - 5	6 - 242	243 - 806	807 +	1 - 85	86 - 335	336 +
2"	178.11	194.35	214.68	>2"	1 - 5	6 - 1133	1134-3970	3,971 +	1 - 430	431-1190	1,191 +
3"	356.22	356.22	356.22	Ag	1 - 5	6 +				1 +	
4"	552.94	552.94	552.94	TC = Temporary Construction Meter				1 +			1 +
6"	1,105.88	1,105.88	1,105.88	<u>Commodity Rates per Unit</u>				Unit = 100 cubic feet, or 748 gallons, of water			
10"	2,549.36	2,549.36	2,549.36	<u>Current</u>				<u>CY 2018</u>			
Multi	18.26	11.18	11.18	Tier 1	\$ 3.08	\$ 3.38	\$ 3.66				
Fire	5.87	5.87	5.87	Tier 2	4.12	4.43	4.60				
TC	204.48	230.91	257.33	Tier 3	5.33	8.47	8.87				
				Tier 4	7.41						

Multi = additional living unit on one meter
 Fire = per diameter inch of fire service line



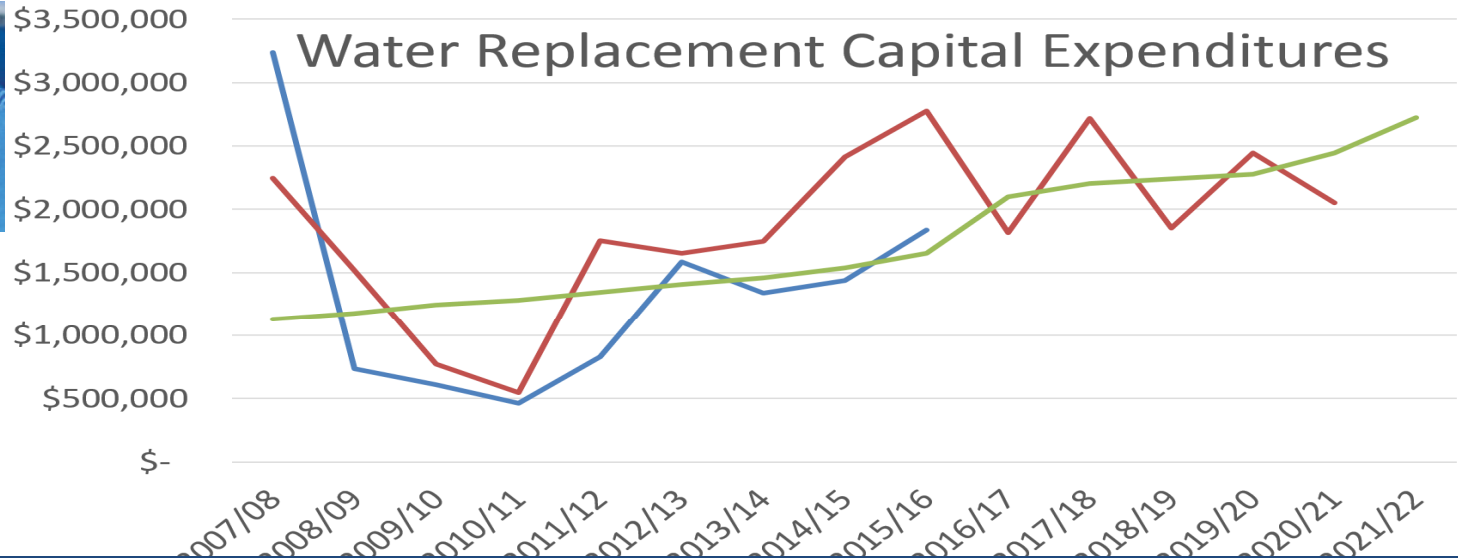
Questions?
Comments?

Average =89.25; Median =85.8





Smoothing
volatile
capital
requirement



Property Tax & Investment Earnings Offset	5 Year Total	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Capital Replacement	12,902,000	4,435,700	3,900,200	2,036,100	2,530,000	-
Capital Revenue Requirement Smoothed		2,553,252	2,395,076	2,594,759	2,645,241	2,713,672

Plant Assets	Total	Meters	Commodity			Fire Protection
			Tier1	Tier2	Tier3	
Pumping	\$ 7,364,983	\$ -	\$ 1,010,329	\$ 4,688,511	\$ 1,297,894	\$ 368,249
Water Treatment	95,357	-	13,769	63,899	17,689	-
Tanks & Reservoirs	54,313,776	-	7,450,764	34,575,878	9,571,445	2,715,689
Transmission & Distribution	50,658,198	-	4,403,464	20,424,372	23,297,452	2,532,910
Services	13,438,304	13,438,304	-	-	-	-
Meters	5,067,418	5,067,418	-	-	-	-
General Plant	8,987,362	8,987,362	-	-	-	-
	<u>\$ 139,925,398</u>	<u>\$ 27,493,084</u>	<u>\$ 12,878,326</u>	<u>\$ 59,752,660</u>	<u>\$ 34,184,480</u>	<u>\$ 5,616,848</u>
Percent	100.00%	19.65%	9.20%	42.70%	24.43%	4.01%