



Waterworks District #1 Water Rates

December 7, 2016



MICHAELA BROWN, DIRECTOR
WATER & SANITATION DEPARTMENT
PUBLIC WORKS AGENCY





REASONS FOR RATE CHANGES

- Defensible water rates in compliance with Proposition 218 and San Juan Capistrano requirements
- District costs increases
 - Imported water costs increase at ~6% per year
 - Labor and material costs increase at ~3 to 5% per year
 - Capital needs of repair and replacement of aging water system infrastructure



CURRENT RATE STRUCTURE 2016

Water/Irrigation Tiered Rates Service Code 30/31, WDO/IDO

District No. 1 - Rounding				
Low Demand				
	Tier I	Tier II	Tier III	Tier IV
Rate	\$3.104/hcf	\$3.259/hcf	\$4.889/hcf	\$8.148/hcf
Penalty		\$0.155	\$1.785	\$5.044
BAN	Values are the Top of the Range (hcf)			
1	8.00	10.08	17.64	999,999,999
2	8.00	13.23	23.15	999,999,999
3	10.08	17.64	30.87	999,999,999
4	12.60	22.05	38.59	999,999,999
5	15.12	26.46	46.31	999,999,999
6	17.64	30.87	54.02	999,999,999
7	20.16	35.28	61.74	999,999,999
8	22.68	39.69	69.46	999,999,999
10	27.72	48.51	84.89	999,999,999
13	35.28	61.74	108.05	999,999,999
16	42.84	74.97	131.20	999,999,999
20	52.92	92.61	162.07	999,999,999
29	75.60	132.30	231.53	999,999,999
39	100.80	176.40	308.70	999,999,999
44	113.40	198.45	347.29	999,999,999
59	151.20	264.60	463.05	999,999,999
119	302.40	529.20	926.10	999,999,999

District No. 1 - Rounding				
Peak Demand				
	Tier I	Tier II	Tier III	Tier IV
Rate	\$3.104/hcf	\$3.259/hcf	\$4.889/hcf	\$8.148/hcf
Penalty		\$0.155	\$1.785	\$5.044
BAN	Values are the Top of the Range (hcf)			
1	8.00	15.12	26.46	999,999,999
2	8.00	19.85	34.73	999,999,999
3	10.08	26.46	46.31	999,999,999
4	12.60	33.08	57.88	999,999,999
5	15.12	39.69	69.46	999,999,999
6	17.64	46.31	81.03	999,999,999
7	20.16	52.92	92.61	999,999,999
8	22.68	59.54	104.19	999,999,999
10	27.72	72.77	127.34	999,999,999
13	35.28	92.61	162.07	999,999,999
16	42.84	112.46	196.80	999,999,999
20	52.92	138.92	243.10	999,999,999
29	75.60	198.45	347.29	999,999,999
39	100.80	264.60	463.05	999,999,999
44	113.40	297.68	520.93	999,999,999
59	151.20	396.90	694.58	999,999,999
119	302.40	793.80	1389.15	999,999,999



WHAT IS COST OF SERVICE?

Rationale:

- Different types of customers generate different costs because their patterns of use or characteristics are different
- Cost of service allows the matching of rates charged to each group with the costs of serving them
- Each group will “pay its own way”; no subsidies



PROPOSED WATER RATE STRUCTURE

- Single Family Residential (SFR) customers will have 3 tiers
 - Tier 1: 0-10 hcf/month – provide for indoor water usage
 - Tier 2: >10-25 hcf/month – represent average summer usage (Jul-Sep)
 - Tier 3: >25 hcf/month
- All other customers will have uniform rates
 - Residential Non-Tiered
 - Residential Multi Family
 - Commercial
 - Agricultural
 - Industrial
 - Institutional
 - Temporary Construction

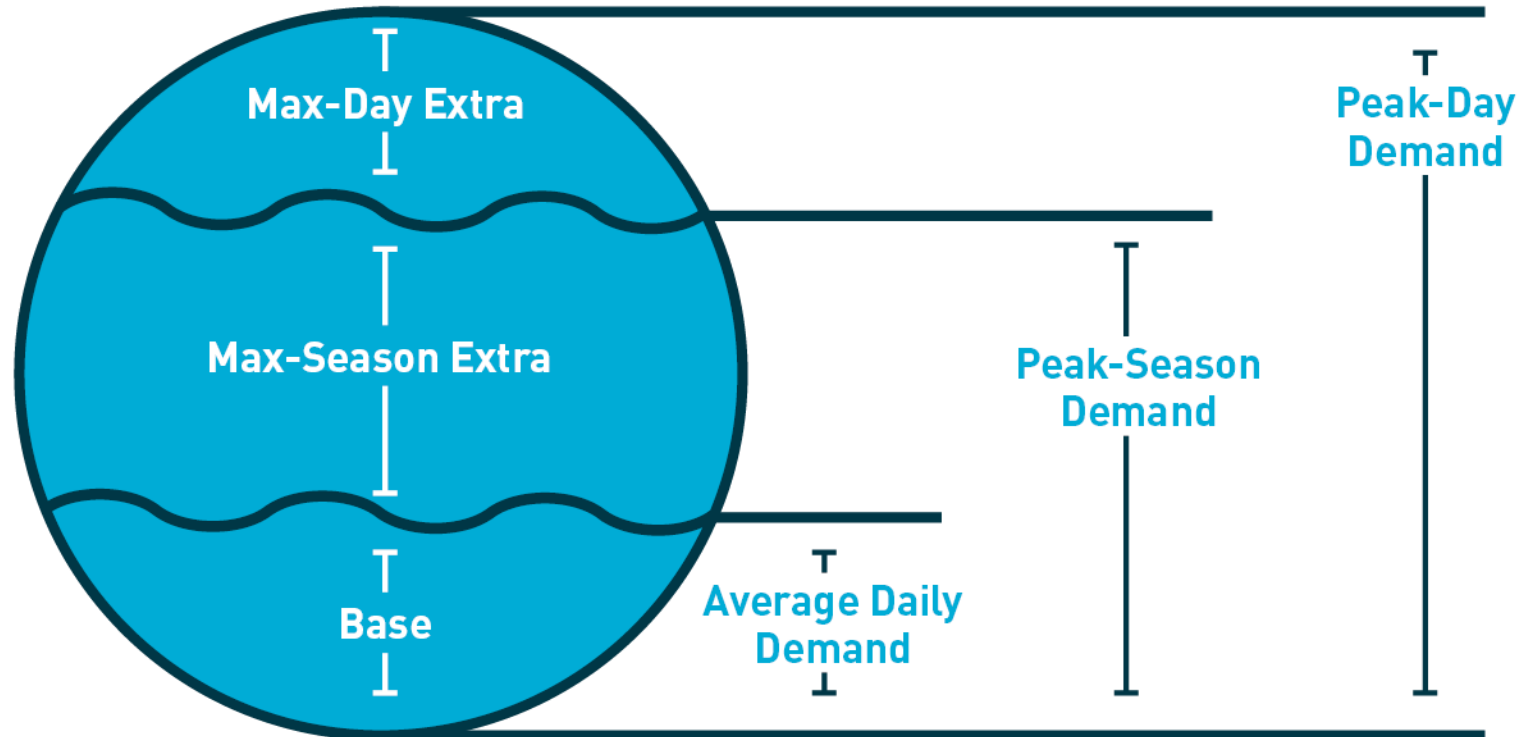


WATER RATE COMPONENTS

- ***Water supply*** costs
 - Groundwater (~18% of total supply)
 - Imported water (~82% of total supply)
- ***Base delivery*** costs recover remaining fixed costs not recovered by service charges
- ***Peaking*** costs recover the extra capacity, or peak demand, costs of the system



HOW DO WE DETERMINE PEAK DEMAND?





PEAKING COSTS

- Peaking factors:
 - Indoor Use: very low-peaking
 - Outdoor Use: high peaking factors
 - Commercial / Industrial: low peaking factor
- Peaking factors by customer classes

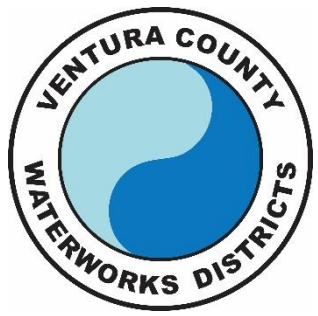




PROPOSED METER CHARGES

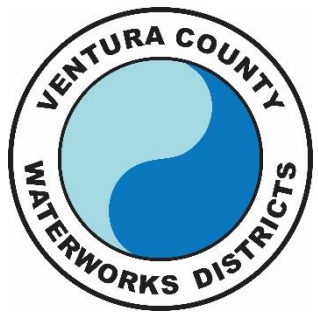
- Retain current fixed revenue percentage of ~10%
 - Increase subsequent year by 1% to provide for revenue stability
- Use AWWA meter capacity ratio to differentiate between meter sizes

Meter Size	Meter Ratio	Meter	Customer/ Billing	Proposed Monthly Charges	Current Charges	Difference	No. of Meters
3/4"	1.00	\$5.43	\$4.97	\$10.41	\$7.25	\$3.16	8,646
1"	1.67	\$9.06	\$4.97	\$14.04	\$14.50	(\$0.46)	1,386
1 1/2"	3.33	\$18.11	\$4.97	\$23.09	\$29.00	(\$5.91)	356
2"	5.33	\$28.98	\$4.97	\$33.96	\$50.75	(\$16.79)	318
3"	11.67	\$63.39	\$4.97	\$68.37	\$108.75	(\$40.38)	93
4"	21.00	\$114.10	\$4.97	\$119.08	\$217.50	(\$98.42)	24
6"	43.33	\$235.45	\$4.97	\$240.43	\$435.00	(\$194.57)	1



RAFTELIS PROPOSED 2017 (Supply Cost All \$2.52)

Customer Class	Monthly Tier (hcf)	% Usage	% Bills	Supply	Base Delivery	Peaking	Total Rate
Residential							
Tier 1	10	44%	38%	\$2.52	\$0.53	\$0.14	\$3.20
Tier 2	25	28%	45%	\$2.52	\$0.53	\$0.78	\$3.83
Tier 3	>25	29%	17%	\$2.52	\$0.53	\$1.35	\$4.40
Subtotal Residential							
Residential Non-Tiered				\$2.52	\$0.53	\$0.86	\$3.92
Residential Multi Family				\$2.52	\$0.53	\$0.33	\$3.39
Commercial				\$2.52	\$0.53	\$0.61	\$3.67
Agricultural				\$2.52	\$0.53	\$0.81	\$3.86
Industrial				\$2.52	\$0.53	\$0.39	\$3.44
Institutional				\$2.52	\$0.53	\$1.07	\$4.12
Temporary Construction				\$2.52	\$0.53	\$2.16	\$5.22



RAFTELIS PROPOSED (2017 -2020)

February 2017 January 2018 January 2019 January 2020

Commodity Rates

Residential

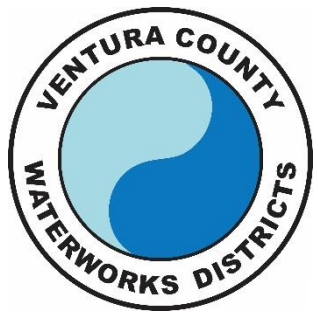
Tier 1	0-10 hcf	\$3.20	\$3.47	\$3.76	\$4.08
Tier 2	11-25 hcf	\$3.83	\$4.16	\$4.51	\$4.89
Tier 3	>25 hcf	\$4.40	\$4.77	\$5.17	\$5.60
Residential Non-Tiered		\$3.92	\$4.25	\$4.61	\$5.00
Residential Multi Family		\$3.39	\$3.68	\$3.99	\$4.32
Commercial		\$3.67	\$3.98	\$4.31	\$4.67
Agricultural		\$3.86	\$4.19	\$4.54	\$4.92
Industrial		\$3.44	\$3.73	\$4.04	\$4.38
Institutional		\$4.12	\$4.47	\$4.84	\$5.24
Temporary Construction		\$5.22	\$5.66	\$6.13	\$6.64



Staff's Evaluation

Agricultural Water Supply Cost \$2.08

Customer Class	Monthly Tier (hcf)	% Usage	% Bills	Supply	Base Delivery	Peaking	Total Rate
Residential							
Tier 1	10	44%	38%	\$2.66	\$0.53	\$0.14	\$3.33
Tier 2	25	28%	45%	\$2.66	\$0.53	\$0.78	\$3.97
Tier 3	>25	29%	17%	\$2.66	\$0.53	\$1.35	\$4.54
Subtotal Residential							
Residential Non-Tiered				\$2.66	\$0.53	\$0.86	\$4.05
Residential Multi Family				\$2.66	\$0.53	\$0.33	\$3.52
Commercial				\$2.66	\$0.53	\$0.61	\$3.81
Agricultural				\$2.08	\$0.53	\$0.81	\$3.42
Industrial				\$2.66	\$0.53	\$0.39	\$3.58
Institutional				\$2.66	\$0.53	\$1.07	\$4.26
Temporary Construction				\$2.66	\$0.53	\$2.16	\$5.35



Staff's Evaluation

Agricultural Water Supply Cost 2017 -2020

Commodity Rates		January 2017	January 2018	January 2019	January 2020
Residential					
Tier 1	0-10 hcf	\$3.33	\$3.61	\$3.91	\$4.24
Tier 2	>10-25 hcf	\$3.97	\$4.31	\$4.67	\$5.06
Tier 3	>25 hcf	\$4.54	\$4.93	\$5.34	\$5.79
Residential Non-Tiered		\$4.05	\$4.39	\$4.76	\$5.16
Residential Multi Family		\$3.52	\$3.82	\$4.14	\$4.49
Commercial		\$3.81	\$4.13	\$4.48	\$4.85
Agricultural		\$3.42	\$3.71	\$4.02	\$4.36
Industrial		\$3.58	\$3.89	\$4.22	\$4.57
Institutional		\$4.26	\$4.62	\$5.01	\$5.43
Temporary Construction		\$5.35	\$5.80	\$6.28	\$6.80



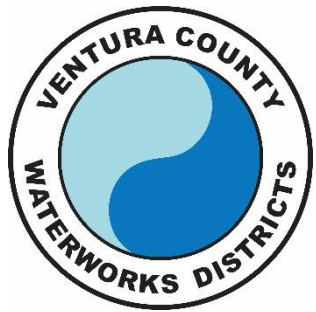
Raftelis Proposed and Staff's Evaluation of Agricultural Water Supply Cost

Customer Class	Monthly Tier (hcf)	% Usage	% Bills	Supply	Base Delivery	Peaking	Total Rate
Residential							
Tier 1	10	44%	38%	\$2.52	\$0.53	\$0.14	\$3.20
Tier 2	25	28%	45%	\$2.52	\$0.53	\$0.78	\$3.83
Tier 3	>25	29%	17%	\$2.52	\$0.53	\$1.35	\$4.40
Subtotal Residential							
Residential Non-Tiered				\$2.52	\$0.53	\$0.86	\$3.92
Residential Multi Family				\$2.52	\$0.53	\$0.33	\$3.38
Commercial				\$2.52	\$0.53	\$0.61	\$3.67
Agricultural				\$2.52	\$0.53	\$0.81	\$3.86
Industrial				\$2.52	\$0.53	\$0.39	\$3.44
Institutional				\$2.52	\$0.53	\$1.07	\$4.12
Temporary Construction				\$2.52	\$0.53	\$2.16	\$5.22

Customer Class	Monthly Tier (hcf)	% Usage	% Bills	Supply	Base Delivery	Peaking	Total Rate
Residential							
Tier 1	10	44%	38%	\$2.66	\$0.53	\$0.14	\$3.33
Tier 2	25	28%	45%	\$2.66	\$0.53	\$0.78	\$3.97
Tier 3	>25	29%	17%	\$2.66	\$0.53	\$1.35	\$4.54
Subtotal Residential							
Residential Non-Tiered				\$2.66	\$0.53	\$0.86	\$4.05
Residential Multi Family				\$2.66	\$0.53	\$0.33	\$3.52
Commercial				\$2.66	\$0.53	\$0.61	\$3.81
Agricultural				\$2.08	\$0.53	\$0.81	\$3.42
Industrial				\$2.66	\$0.53	\$0.39	\$3.58
Institutional				\$2.66	\$0.53	\$1.07	\$4.26
Temporary Construction				\$2.66	\$0.53	\$2.16	\$5.35
Uniform Rate				\$2.52	\$0.53	\$0.72	\$3.77



Residential Customer Impacts



RESIDENTIAL AVERAGE MONTHLY INCREASE OR DECREASE

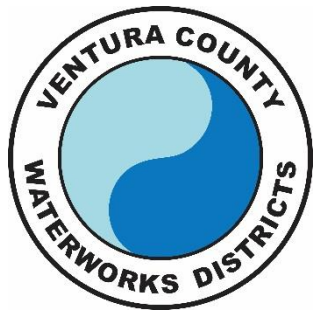
Raftelis Recommended Supply Cost at \$2.52

Usage HCF	Meter Size	# of Customers	1-2	# of Customers	3-4	# of Customers	5-6
0 - 10	3/4"	2,362	\$0.77	21	\$1.04	0	-
>10 - 25	3/4"	5,312	(\$1.93)	85	(\$0.67)	3	\$1.92
> 25	3/4"	1,138	(\$11.05)	234	(\$7.62)	32	\$3.76
0 - 10	1"	1	(\$6.86)	616	(\$6.37)	1	(\$5.29)
>10 - 25	1"	1	(\$16.42)	266	(\$7.47)	2	(\$4.83)
> 25	1"	1	(\$20.53)	493	(\$12.78)	37	\$8.04

Residential Customer's Average Monthly Bill Increase or Decrease by Meter Size & BAN

Staff's Evaluation with Agricultural Water Supply Cost at \$2.08

Usage HCF	Meter Size	# of Customers	1-2	# of Customers	3-4	# of Customers	5-6
0 - 10	3/4"	2,362	\$1.52	21	\$1.82	0	-
>10 - 25	3/4"	5,312	\$0.29	85	\$1.92	3	\$4.62
> 25	3/4"	1,138	(\$7.19)	234	(\$2.77)	32	\$10.31
0 - 10	1"	1	(\$6.13)	616	(\$5.80)	1	(\$4.14)
>10 - 25	1"	1	(\$13.54)	266	(\$5.26)	2	(\$1.97)
> 25	1"	1	(\$16.56)	493	(\$6.83)	37	\$17.18



RESIDENTIAL AVERAGE MONTHLY INCREASE OR DECREASE

Raftelis Recommended Supply Cost at \$2.52

Usage HCF	Meter Size	# of Customers	7-8	# of Customers	9-12	# of Customers	13-16	# of Customers	20-29	# of Customers	39-59
0 - 10	3/4"	0	-	0	-	0	-	0	-	0	-
>10 - 25	3/4"	0	-	0	-	0	-	0	-	0	-
> 25	3/4"	8	\$16.82	0	-	1	\$20.09	1	\$2.60	0	-
0 - 10	1"	1	(\$4.82)	0	-	0	-	0	-	0	-
>10 - 25	1"	1	(\$5.45)	2	(\$10.89)	1	(\$10.15)	0	-	0	-
> 25	1"	13	\$9.72	7	\$26.06	8	\$39.39	11	\$127.38	3	\$219.56

Residential Customer's Average Monthly Bill Increase or Decrease by Meter Size & BAN

Staff's Evaluation with Agricultural Water Supply Cost at \$2.08

Usage HCF	Meter Size	# of Customers	7-8	# of Customers	9-12	# of Customers	13-16	# of Customers	20-29	# of Customers	39-59
0 - 10	3/4"	0	-	0	-	0	-	0	-	0	-
>10 - 25	3/4"	0	-	0	-	0	-	0	-	0	-
> 25	3/4"	8	\$24.54	0	-	1	\$29.56	1	\$6.01	0	-
0 - 10	1"	1	(\$4.45)	0	-	0	-	0	-	0	-
>10 - 25	1"	1	(\$2.90)	2	(\$8.33)	1	(\$8.12)	0	-	0	-
> 25	1"	13	\$18.41	7	\$37.70	8	\$52.61	11	\$154.37	3	\$249.72

Waterworks District #1

Recent Projects:

New Storage Tank at Meridian Hills



Newly Opened Laboratory Building





Questions?