

RATE STRUCTURE OPTIONS

August 15, 2017

Commission's Pricing Policy Prioritization

Policy Considerations	Score
Revenue Stability	17
Conservation/Demand Management	15
Rate Stability	15
Affordability	14
Ease of Understanding	12
Ease of Implementation	11
Minimize Customer Impacts	11
Cost Based Rates	6

Identification of Rate Structure Options

- ▶ Examined various volumetric rate structures
- ▶ Determined that an inclining block structure is best at addressing pricing policies
- ▶ Only one customer class per state law
- ▶ Basis for rate design is 3 person single family household
- ▶ Only consumption within a tier is billed at that tier's rate

Key Considerations

- ▶ Customer base is overwhelmingly residential with 93% of bills to Single Family Residential (SFR) and Multifamily (MF)
 - SFR about 2/3 of all households
 - Nearly $\frac{3}{4}$ of households are 3 or less; 95% 5 or less
 - Typical household size in WSSC service area is 3 people
- ▶ 100 litres (26 gallons) – World Health Organization (WHO) estimate of minimum sanitary needs
- ▶ 55 gallons per day – Average per capita consumption in WSSC service area

Basis For Tier Cut-offs

- ▶ 80 gpd – Minimum household sanitary needs for 3 person household (26 gallons/person/day)
- ▶ 165 gpd – Average use by a typical 3 person household (55 gallons/person/day)
- ▶ 275 gpd – Average use by 5 person household
- ▶ 9,000 gpd – Consistent with current structure. Recognizes non-residential customers
- ▶ Wastewater tiers are the same as Water tiers

Rate Structure Options

W/WW Tier Cut-offs (gpd)				
3 Block Inclining	Option A	80	Option B	165
		165		275
		>165		>275

Rate Structure Options

W/WW Tier Cut-offs (gpd)				
4 Block Inclining	Option A	80	Option B	80
		165		165
		275		9,000
		>275		>9,000

Distribution of Customers

3 Block Option A		
Tier (gpd)	Kgal/Qtr	% Customers Ending in Tier
0-80	7	27.9%
81-165	15	40.4%
>165	>15	31.7%
3 Block Option B		
Tier (gpd)	Kgal/Qtr	% Customers Ending in Tier
0-165	15	68.3%
166-275	25	21.6%
>275	>25	10.1%
4 Block Option A		
Tier (gpd)	Kgal/Qtr	% Customers Ending in Tier
0-80	7	27.9%
81-165	15	40.4%
166-275	25	21.6%
>275	>25	10.1%
4 Block Option B		
Tier (gpd)	Kgal/Qtr	% Customers Ending in Tier
0-80	7	27.9%
81-165	15	40.4%
166-9,000	821	31.6%
>9,000	>821	0.2%

- ▶ All options reflect “billing through tiers”
- ▶ Estimated % of customers with bills stopping within each tier varies depending on range of tiers

Customer Impact Examples

- ▶ All examples include Ready-to-Serve charges
- ▶ Rates are based on FY18 Budget
- ▶ Impact is based on quarterly bills

Uniform Rates

	Combined Rate (\$/kgal)	Current Bill (\$/quarter)	Average Family Impact			
			Bill (\$/quarter)	\$ Change (\$/quarter)	% MHI PGC	% MHI MC
Uniform	\$14.73	\$205.45	\$248.95	\$43.50	1.3%	1.0%

Average Family - 3 person household using 55 gpd/person

3 Tier Inclining Block Structure

					Average Family Impact			
		W/WW Tier Cut-offs (gpd)	Combined Rate (\$/kgal)	Current Bill (\$/quarter)	Bill (\$/quarter)	\$ Change (\$/quarter)	% MHI PGC	% MHI MC
3 Block Inclining	Option A	80	\$10.66	\$205.45	\$210.06	\$4.61	1.1%	0.8%
		165	\$13.43					
		>165	\$17.61					
	Option B	165	\$10.41	\$205.45	\$184.15	(\$21.30)	1.0%	0.7%
		275	\$13.89					
		>275	\$19.96					

Average Family – 3 person household using 55 gpd/person

4 Tier Inclining Block Structure

					Average Family Impact			
		W/WW Tier Cut-offs (gpd)	Combined Rate (\$/kgal)	Current Bill (\$/quarter)	Bill (\$/quarter)	\$ Change (\$/quarter)	% MHI PGC	% MHI MC
4 Block Inclining	Option A	80	\$10.66	\$205.45	\$200.62	(\$4.83)	1.1%	0.8%
		165	\$12.25					
		275	\$14.86					
		>275	\$18.74					
	Option B	80	\$10.66	\$205.45	\$207.34	\$1.89	1.1%	0.8%
		165	\$13.09					
		9,000	\$16.16					
		>9,000	\$20.52					

Average Family – 3 person household using 55 gpd/person

Customer Impacts

Single Family Residential 3/4" meter, 26 gpd

	Current	Uniform		3 Block Option A		3 Block Option B		4 Block Option A		4 Block Option B	
	Bill Amount	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current
Total Bill	\$ 43.90	\$ 57.46	\$ 13.56	\$ 49.32	\$ 5.42	\$ 48.82	\$ 4.92	\$ 49.32	\$ 5.42	\$ 49.32	\$ 5.42

Single Family Residential 3/4" meter, 55 gpd

	Current	Uniform		3 Block Option A		3 Block Option B		4 Block Option A		4 Block Option B	
	Bill Amount	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current
Total Bill	\$ 73.60	\$ 101.65	\$ 28.05	\$ 81.30	\$ 7.70	\$ 80.05	\$ 6.45	\$ 81.30	\$ 7.70	\$ 81.30	\$ 7.70

Single Family Residential 3/4" meter, 80 gpd

	Current	Uniform		3 Block Option A		3 Block Option B		4 Block Option A		4 Block Option B	
	Bill Amount	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current
Total Bill	\$ 91.84	\$ 131.11	\$ 39.27	\$ 102.62	\$ 10.78	\$ 100.87	\$ 9.03	\$ 102.62	\$ 10.78	\$ 102.62	\$ 10.78

Customer Impacts

Single Family Residential 3/4" meter, 100 gpd

	Current	Uniform		3 Block Option A		3 Block Option B		4 Block Option A		4 Block Option B	
	Bill Amount	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current
Total Bill	\$ 121.42	\$ 160.57	\$ 39.15	\$ 129.48	\$ 8.06	\$ 121.69	\$ 0.27	\$ 127.12	\$ 5.70	\$ 128.80	\$ 7.38

Single Family Residential 3/4" meter, 165 gpd

	Current	Uniform		3 Block Option A		3 Block Option B		4 Block Option A		4 Block Option B	
	Bill Amount	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current
Total Bill	\$ 205.45	\$ 248.95	\$ 43.50	\$ 210.06	\$ 4.61	\$ 184.15	\$ (21.30)	\$ 200.62	\$ (4.83)	\$ 207.34	\$ 1.89

Single Family Residential 3/4" meter, 500 gpd

	Current	Uniform		3 Block Option A		3 Block Option B		4 Block Option A		4 Block Option B	
	Bill Amount	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current
Total Bill	\$ 822.88	\$ 705.58	\$ (117.30)	\$ 755.97	\$ (66.91)	\$ 742.21	\$ (80.67)	\$ 742.76	\$ (80.12)	\$ 708.30	\$ (114.58)

Customer Impacts

Nonresidential 2" meter, 750 gpd

	Current	Uniform		3 Block Option A		3 Block Option B		4 Block Option A		4 Block Option B	
	Bill Amount	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current
Total Bill	\$ 1,414.24	\$ 1,213.64	\$ (200.60)	\$ 1,327.39	\$ (86.85)	\$ 1,365.33	\$ (48.91)	\$ 1,339.04	\$ (75.20)	\$ 1,247.82	\$ (166.42)

Nonresidential 2" meter, 2,000 gpd

	Current	Uniform		3 Block Option A		3 Block Option B		4 Block Option A		4 Block Option B	
	Bill Amount	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current
Total Bill	\$ 3,553.58	\$ 2,907.59	\$ (645.99)	\$ 3,352.54	\$ (201.04)	\$ 3,660.73	\$ 107.15	\$ 3,494.14	\$ (59.44)	\$ 3,106.22	\$ (447.36)

Nonresidential 8" meter, 10,000 gpd

	Current	Uniform		3 Block Option A		3 Block Option B		4 Block Option A		4 Block Option B	
	Bill Amount	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current
Total Bill	\$ 20,720.68	\$ 16,493.49	\$ (4,227.19)	\$ 19,040.84	\$ (1,679.84)	\$ 21,064.53	\$ 343.85	\$ 20,007.34	\$ (713.34)	\$ 18,137.14	\$ (2,583.54)

Nonresidential 8" meter, 350,000 gpd

	Current	Uniform		3 Block Option A		3 Block Option B		4 Block Option A		4 Block Option B	
	Bill Amount	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current	Bill Amount	\$ Change from Current
Total Bill	\$ 621,364.68	\$ 473,491.74	\$ (147,872.94)	\$ 565,391.09	\$ (55,973.59)	\$ 640,323.53	\$ 18,958.85	\$ 601,415.84	\$ (19,948.84)	\$ 654,770.14	\$ 33,405.46

Rate Structure Evaluation

	Revenue Stability	Conservation/ Demand Management	Rate Stability	Affordability	Ease of Understanding	Ease of Implementation	Minimize Customer Impacts	Cost Based Rates
Uniform	+	-	-	-	++	+	-	+
3 Block Option A	-	+	○	○	+	○	+	+
3 Block Option B	○	○	○	+	+	○	+	○
4 Block Option A	○	+	○	+	○	○	○	○
4 Block Option B	○	+	○	○	○	○	○	○

Phase In?

- ▶ Phase In could mitigate adverse customer impacts
- ▶ Phase In period of 3 to 5 years