

AGENDA CATEGORY: Finance Office

AGENDA CATEGORY: Finar ITEM NUMBER:	nce Oπice DATE: March 15, 2017
TIEW NOWIDEN.	DATE: Water 10, 2017
SUBJECT	WSSC Rate Study Status Briefing
SUMMARY	This briefing will review the seven rate structure options identified by the Bi-County Working Group and the Stakeholders Representative Group including estimated bill impacts and the schedule for completion of the project.
SPECIAL COMMENTS	
CONTRACT NO./ REFERENCE NO.	N/A
COSTS	N/A
AMENDMENT/ CHANGE ORDER NO. AMOUNT	N/A =
MBE PARTICIPATION	N/A
PRIOR STAFF/	Carla A. Reid, General Manager/CEO
COMMITTEE REVIEW	Joseph Beach, Chief Financial Officer
PRIOR STAFF/ COMMITTEE APPROVALS	
RECOMMENDATION TO COMMISSION	N/A
COMMISSION	N/A



WSSC Rate Structure & Rate Study March 15, 2017

wsscwater.com/fin

- Current Rate Structure
- □ Rate Study
- Specific Rate Options Considered
- Calendar & Next Steps



Existing Rates

Under the current rate structure, customers are billed at the rate for the highest tier reached during the billing cycle.

			Existing Rates	(Water & Sewer	
	То	tal Volume		Approx. %	% of Vol Chg
Tier (gallons/day)		Charge	Tier Multiplier	Volume	Revenue
0 - 49	\$	7.68	1.00	3%	2%
50 - 99	\$	8.81	1.15	12%	8%
100 - 149	\$	10.03	1.31	20%	15%
150 - 199	\$	11.43	1.49	16%	14%
200 - 249	\$	12.82	1.67	10%	10%
250 - 299	\$	13.89	1.81	5%	6%
300 - 349	\$	14.77	1.92	3%	3%
350 - 399	\$	15.45	2.01	2%	2%
400 - 449	\$	15.90	2.07	1%	1%
450 - 499	\$	16.38	2.13	1%	1%
500 - 749	\$	16.70	2.17	2%	2%
750 - 999	\$	17.08	2.22	1%	1%
1,000 - 3,999	\$	17.64	2.30	5%	7%
4,000 - 6,999	\$	18.04	2.35	2%	3%
7,000 - 8,999	\$	18.30	2.38	1%	2%
9,000 & Greater	\$	18.71	2.44	16%	23%

- Current rate structure
 - Implemented 16-tier structure on July 1, 1992
 - Revenues vary with customer usage patterns
 - Declining consumption despite growing population and number of accounts.
 - +60,000 accounts have been added since 1992 with the same water demand.
 - Challenging to meet increasing costs of aging infrastructure when the revenue base is declining
 - Fixed fees are less than 10% of budgeted water & sewer revenue (industry average = 10% to 30%)



Rate Structure & Rate Study

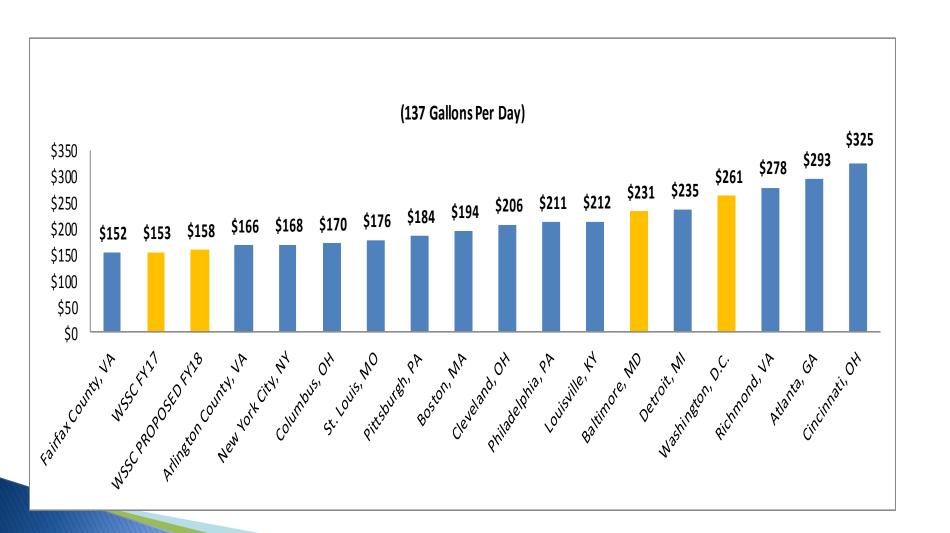
Ready to Serve Charges - Fixed Fees

FY'17 Approved Quarterly Charges*

Meter Size	CCOUNT ENANCE FEE	INFRASTRUCTURE INVESTMENT FEE		
Small Meters				
5/8"	\$ 16.00	\$	11.00	
3/4"	16.00		12.00	
1"	16.00		14.00	
Large Meters				
1-1/2"	16.00		90.00	
2"	27.00		185.00	
3"	66.00		585.00	
4"	142.00		813.00	
6"	154.00		1,265.00	
8"	200.00		2,845.00	
10"	246.00		4,425.00	
Detector Check Meters				
2"	33.00		n/a	
4"	177.00		n/a	
6"	255.00		n/a	
8"	461.00		n/a	
10"	633.00		n/a	
Fire Service Meters				
4"	182.00		499.00	
6"	293.00		616.00	
8"	452.00		2,524.00	
10"	682.00		2,714.00	
12"	989.00		5,214.00	
			•	

^{*}These are quarterly fees which are prorated based on the length of the billing cycle.

How do we compare? Quarterly Bills



Scope of current study

Phase 1

Phase 2

- Review current rate structure
- Evaluate alternative rate structures
- Select three viable alternative rate structures
- Deliver a Phase 1 report
- Develop a 10-year financial plan

- Perform cost analysis for three viable options
- Develop draft rate schedules
- Perform bill impact comparison
- Develop a Phase 2 report
- Select the "best-fit" rate structure
- Finalize rate schedules
- Submit recommendations to Commission and Elected Officials for final decision





Bi-County Rate Structure Working Group Recommendations

Stakeholder Representatives Group (SRG) Input

Residential	Non-Residential					
Industrial	Environmental					
Montgomery and Prince George's County Government						

Rate structure evaluation criteria



- Alignment between nature of cost and recovery of cost
- Revenue and financial stability
- Easy to understand and administer
- Minimize impact on low/fixed income
- Consistent with WSSC policies
- Customer acceptance
- Consistent application
- Legally defensible
- Sustainable system reinvestment



Rate Options Under Consideration



- ► OPTION 1: <u>UNIFORM</u> VOLUME RATE STRUCTURE, NO CUSTOMER CLASSES
 - \$13.06/1000 gal



Option #1: Uniform Volume Charge – Quarterly Bill Impact

	Avera	ge	Typical Bill Impact - Quarterly					
	Quarte	erly			Increase	Increase		
	Volur	ne	Existing	Option 1	(Decrease) - \$	(Decrease) - %		
Small Meters	gpd	kgal						
5/8"	99	9	\$106.29	\$144.51	\$38.22	36.0%		
3/4"	132	12	\$148.36	\$184.68	\$36.32	24.5%		
1"	132	12	\$150.36	\$186.68	\$36.32	24.2%		
Large Meters								
1-1/2"	1,282	117	\$2,169.88	\$1,633.67	(\$536.21)	-24.7%		
2"	2,170	198	\$3,704.72	\$2,797.29	(\$907.43)	-24.5%		
3"	5,293	483	\$9,364.32	\$6,957.53	(\$2,406.79)	-25.7%		
4"	7,529	687	\$13,527.10	\$9,925.16	(\$3,601.94)	-26.6%		
6"	11,638	1,062	\$21,289.02	\$15,285.53	(\$6,003.49)	-28.2%		
8"	32,121	2,931	\$57,884.01	\$41,315.06	(\$16,568.95)	-28.6%		
10"	44,975	4,104	\$81,456.84	\$58,256.92	(\$23,199.92)	-28.5%		
12"	93,699	8,550	\$164,641.50	\$116,308.34	(\$48,333.16)	-29.4%		

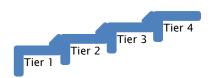
Option #1: Uniform Volume Charge – Quarterly Bill Impact (3/4" Meter)

		Typical Bill Impact - Quarterly						
	Residential 3/4" Meter Average Quarterly Volume		Option 1	Increase (Decrease) - \$	Increase (Decrease) - %			
gpd	kgal							
33	3	\$51.04	\$67.17	\$16.13	31.6%			
66	6	\$80.86	\$106.34	\$25.48	31.5%			
99	9	\$107.29	\$145.51	\$38.22	35.6%			
132	12	\$148.36	\$184.68	\$36.32	24.5%			
164	15	\$199.45	\$223.85	\$24.40	12.2%			
197	18	\$233.74	\$263.03	\$29.29	12.5%			
274	25	\$375.25	\$354.42	(\$20.83)	-5.5%			
329	30	\$471.10	\$419.71	(\$51.39)	-10.9%			
384	35	\$568.75	\$484.99	(\$83.76)	-14.7%			
438	40	\$664.00	\$550.28	(\$113.72)	-17.1%			
548	50	\$863.00	\$680.85	(\$182.15)	-21.1%			
658	60	\$1,030.00	\$811.42	(\$218.58)	-21.2%			
822	75	\$1,309.00	\$1,007.27	(\$301.73)	-23.1%			

Option #2: 4-Tier Volume Rate Structure, No Customer Classes

		Option #2 (Water & Sewer)								
			Resid. Tier	Approx. % of	Approx. % of Bills	Approx. %	% of Vol Chg			
Tier (gallons/day)	Res	sid. Charge	Multiplier	Bills - M	-Q	Volume	Revenue			
0 - 99	\$	10.67	1.00	31%	54%	49%	41%			
100 - 249	\$	13.34	1.25	11%	38%	23%	23%			
250 - 8,999	\$	16.01	1.50	46%	8%	16%	19%			
9,000 & Greater	\$	18.67	1.75	12%	0%	12%	17%			





OPTION #2: 4 TIER INCLINING RATE STRUCTURE

- > Under Option #2, more volume is billed at the lower tiers
- Therefore, rates for all four tiers need to increase in order to recover the same amount of FY 2017 revenue

	Billed Volume (1,000 gal)						
Tier							
(gallons/day)	Existing	Option 2					
0-99	7,093,499	23,000,518					
100-249	21,272,063	10,789,274					
250-8,999	11,015,605	7,807,158					
>=9,000	8,467,046	6,251,268					



Option #2: 4 Tier Inclining Rate Structure – Quarterly Bill Impact

	Avera	nge	Typical Bill Impact - Quarterly					
	Quarte Volur	erly	Existing	Option 2	Increase (Decrease) - \$	Increase (Decrease) - %		
Small Meters	gpd	kgal	<u> </u>	·				
5/8"	99	9	\$106.29	\$123.04	\$16.75	15.8%		
3/4"	132	12	\$148.36	\$164.05	\$15.69	10.6%		
1"	132	12	\$150.36	\$166.05	\$15.69	10.4%		
Large Meters								
1-1/2"	1,282	117	\$2,169.88	\$1,893.90	(\$275.98)	-12.7%		
2"	2,170	198	\$3,704.72	\$3,296.41	(\$408.31)	-11.0%		
3"	5,293	483	\$9,364.32	\$8,297.20	(\$1,067.12)	-11.4%		
4"	7,529	687	\$13,527.10	\$11,866.47	(\$1,660.63)	-12.3%		
6"	11,638	1,062	\$21,289.02	\$18,975.48	(\$2,313.54)	-10.9%		
8"	32,121	2,931	\$57,884.01	\$55,503.15	(\$2,380.86)	-4.1%		
10"	44,975	4,104	\$81,456.84	\$79,033.73	(\$2,423.11)	-3.0%		
12"	93,699	8,550	\$164,641.50	\$162,058.26	(\$2,583.24)	-1.6%		



Option #2: 4 Tier Inclining Rate Structure – Quarterly Bill Impact (3/4" Meter)

		Typical Bill Impact - Quarterly						
Residential 3/4" Meter		Fuintin a	Ontion 3	Increase	Increase (Days and)			
Average Quarte	kgal	Existing	Option 2	(Decrease) - \$	(Decrease) - %			
gpd		¢E1.04	¢60.01	¢0.07	17.60/			
33	3	\$51.04	\$60.01	\$8.97	17.6%			
66	6	\$80.86	\$90.96	\$10.10	12.5%			
99	9	\$107.29	122.97	\$15.68	14.6%			
132	12	\$148.36	\$162.99	\$14.63	9.9%			
164	15	\$199.45	\$201.67	\$2.22	1.1%			
197	18	\$233.74	\$240.35	\$6.61	2.8%			
274	25	\$375.25	\$339.86	(\$35.39)	-9.4%			
329	30	\$471.10	\$418.29	(\$52.81)	-11.2%			
384	35	\$568.75	\$498.32	(\$70.43)	-12.4%			
438	40	\$664.00	\$575.15	(\$88.85)	-13.4%			
548	50	\$863.00	\$733.61	(\$129.39)	-15.0%			
658	60	\$1,030.00	\$892.07	(\$137.93)	-13.4%			
822	75	\$1,309.00	\$1,128.96	(\$180.04)	-13.8%			

Option #3: Uniform Volume Rate Structure, Residential and Non-Residential Rates

Uniform volume charge for Residential and Non-Residential customers. Example rates shown are calculated to be revenue neutral with revenue recovery by class under the current rate structure.

		Option #3 (Water & Sewer)								
Tier (gallons/day)	Volume Charge		Approx. % of Bills	Approx. % Volume	% of Vol Chg Revenue					
Residential	\$	11.45	92%	75%	66%					
Non-Residential	\$	17.98	8%	25%	34%					

Option #4: 4-Tier Residential Volume Rates: Uniform Non-Residential Volume Rate Structure

Residential customers billed based on a 4-tier volume rate structure. Tiers set at lower increments than for Option 2, recognizing Residential usage characteristics. Provides conservation incentive focused on Residential usage. Non-residential customer's bill based on a uniform volume charge basis, as in Option 3.

		Option #4 (Water & Sewer)								
			Resid. Tier	ı	Von. Res.		Approx. %	% of Vol Chg		
Tier (gallons/day)	Res	id. Charge	Multiplier		Charge	Approx. % of Bills	Volume	Revenue		
0 - 99	\$	10.25	1.00			49%	48%	38%		
100 - 249	\$	12.81	1.25			36%	22%	21%		
250 - 399	\$	15.38	1.50			5%	2%	3%		
400 & Greater	\$	17.94	1.75			2%	3%	4%		
Non-Resid.				\$	17.98	8%	25%	34%		

Option #5: 4-Tier Volume Rate Structure (Option #2 With Different Tier "Multipliers;" No Customer Classes

Option 5 is a variation of Option 2. The structure utilizes the same "breaks" between the tiers as in Option 2; However, the "multiplier" used in calculating the rates for Tiers 2-4 is higher than for Option 2.

	Option #5 (Water & Sewer)								
			Resid. Tier	Approx. % of	Approx. % of Bills	Approx. %	% of Vol Chg		
Tier (gallons/day)	Resid	d. Charge	Multiplier	Bills - M	- Q	Volume	Revenue		
0 - 99	\$	9.02	1.00	31%	54%	49%	34%		
100 - 249	\$	13.53	1.50	11%	38%	23%	24%		
250 - 8,999	\$	18.05	2.00	46%	8%	16%	22%		
9,000 & Greater	\$	22.56	2.50	12%	0%	12%	20%		



OPTION #5: 4 TIER INCLINING RATE STRUCTURE – QUARTERLY BILL IMPACT

	Avera	ge	Typical Bill Impact - Quarterly					
	Quarte Volun	erly	Existing	Option 5	Increase (Decrease) - \$	Increase (Decrease) - %		
Small Meters	gpd	kgal		<u> </u>				
5/8"	99	9	\$106.29	\$108.21	\$1.92	1.8%		
3/4"	132	12	\$148.36	\$149.81	\$1.45	1.0%		
1"	132	12	\$150.36	\$151.81	\$1.45	1.0%		
Large Meters								
1-1/2"	1,282	117	\$2,169.88	\$2,073.88	(\$96.00)	-4.4%		
2"	2,170	198	\$3,704.72	\$3,641.59	(\$63.13)	-1.7%		
3"	5,293	483	\$9,364.32	\$9,223.61	(\$140.71)	-1.5%		
4"	7,529	687	\$13,527.10	\$13,208.93	(\$318.17)	-2.4%		
6"	11,638	1,062	\$21,289.02	\$21,526.87	\$237.85	1.1%		
8"	32,121	2,931	\$57,884.01	\$65,312.14	\$7,428.13	12.8%		
10"	44,975	4,104	\$81,456.84	\$93,397.64	\$11,940.80	14.7%		
12"	93,699	8,550	\$164,641.50	\$193,686.61	\$29,045.11	17.6%		



OPTION #5: 4 TIER INCLINING RATE STRUCTURE – QUARTERLY BILL IMPACT (3/4" METER)

		Typical Bill Impact - Quarterly						
Residential 3/4" Meter Average Quarterly Volume		Existing	Option 5	Increase (Decrease) - \$	Increase (Decrease) - %			
gpd	kgal							
33	3	\$51.04	\$55.07	\$4.03	7.9%			
66	6	\$80.86	\$81.23	\$0.37	0.5%			
99	9	\$107.29	\$108.30	\$1.01	0.9%			
132	12	\$148.36	\$148.91	\$0.55	0.4%			
164	15	\$199.45	\$188.16	(\$11.29)	-5.7%			
197	18	\$233.74	\$227.40	(\$6.34)	-2.7%			
274	25	\$375.25	\$332.52	(\$42.73)	-11.4%			
329	30	\$471.10	\$420.95	(\$50.15)	-10.6%			
384	35	\$568.75	\$511.17	(\$57.58)	-10.1%			
438	40	\$664.00	\$597.79	(\$66.21)	-10.0%			
548	50	\$863.00	\$776.45	(\$86.55)	-10.0%			
658	60	\$1,030.00	\$955.10	(\$74.90)	-7.3%			
822	75	\$1,309.00	\$1,222.17	(\$86.83)	-6.6%			

Option #6: 4-Tier Volume Rate Structure (Option #2 With Different Tier "Breaks;" No Customer Classes

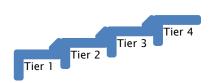
Option 6 is also a variation on Option 2. For Option 6, the "multiplier" used to calculate rates between the tiers are the same as for Option 2; However, the "breaks" between the tiers have been adjusted to include more volume in the lower tiers.

		Option #6 (Water & Sewer)								
			Resid. Tier	Approx. % of	Approx. % of Bills	Approx. %				
Tier (gallons/day)	Res	sid. Charge	Multiplier	Bills - M	-Q	Volume	% of Revenue	Rationale For Tier "Breaks"		
0 - 240	\$	11.30	1.00	41%	91%	72%	62%	4 people x 60 gpd		
241 - 600	\$	14.13	1.25	12%	8%	5%	6%	10 people x 60 gpd		
601 - 9,000	\$	16.95	1.50	35%	1%	11%	14%			
9,001 & Greater	\$	19.78	1.75	12%	0%	12%	18%	Match previous top tier		



OPTION #6: 4 TIER INCLINING RATE STRUCTURE – QUARTERLY BILL IMPACT

	Avera	ge	Typical Bill Impact - Quarterly					
	Quarterly				Increase	Increase		
	Volur	ne	Existing	Option 6	(Decrease) - \$	(Decrease) - %		
Small Meters	gpd	kgal						
5/8"	99	9	\$106.29	\$128.71	\$22.42	21.1%		
3/4"	132	12	\$148.36	\$163.61	\$15.25	10.3%		
1"	132	12	\$150.36	\$165.61	\$15.25	10.1%		
Large Meters								
1-1/2"	1,282	117	\$2,169.88	\$1,974.00	(\$195.88)	-9.0%		
2"	2,170	198	\$3,704.72	\$3,453.03	(\$251.69)	-6.8%		
3"	5,293	483	\$9,364.32	\$8,723.07	(\$641.25)	-6.8%		
4"	7,529	687	\$13,527.10	\$12,485.08	(\$1,042.02)	-7.7%		
6"	11,638	1,062	\$21,289.02	\$19,986.29	(\$1,302.73)	-6.1%		
8"	32,121	2,931	\$57,884.01	\$58,573.96	\$689.95	1.2%		
10"	44,975	4,104	\$81,456.84	\$83,397.41	\$1,940.57	2.4%		
12"	93,699	8,550	\$164,641.50	\$171,322.29	\$6,680.79	4.1%		



OPTION #6: 4 TIER INCLINING RATE STRUCTURE – QUARTERLY BILL IMPACT (3/4" METER)

			Typical Bill Imp	al Bill Impact - Quarterly		
Residential 3/4" Meter Average Quarterly Volume		Existing	Option 6	Increase (Decrease) - \$	Increase (Decrease) - %	
gpd	kgal					
33	3	\$51.04	\$61.90	\$10.86	21.3%	
66	6	\$80.86	\$94.67	\$13.81	17.1%	
99	9	\$107.29	128.58	\$21.29	19.8%	
132	12	\$148.36	\$162.48	\$14.12	9.5%	
164	15	\$199.45	\$199.21	(\$0.24)	-0.1%	
197	18	\$233.74	\$240.17	\$6.43	2.8%	
274	25	\$375.25	\$339.05	(\$36.20)	-9.6%	
329	30	\$471.10	\$415.90	(\$55.20)	-11.7%	
384	35	\$568.75	\$500.65	(\$68.10)	-12.0%	
438	40	\$664.00	\$582.02	(\$81.98)	-12.3%	
548	50	\$863.00	\$749.83	(\$113.17)	-13.1%	
658	60	\$1,030.00	\$917.65	(\$112.35)	-10.9%	
822	75	\$1,309.00	\$1,168.52	(\$140.48)	-10.7%	

Option #7: 8-Tier Volume Rate Structure; No Customer Classes

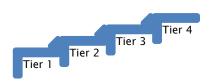
 Option 7 is an 8-tier volume rate structure for all customers. The first 4 tiers are established to reflect most residential volume, providing conservation incentive. Example rates and multipliers provide rate relief to very small volume customers.

		Option #7 (Water & Sewer)								
			Resid. Tier	Approx. % of	Approx. % of Bills	Approx. %				
Tier (gallons/day)	Resi	d. Charge	Multiplier	Bills - M	-Q	Volume	% of Revenue	Rationale For Tier "Breaks"		
0 - 60	\$	8.62	1.00	28%	33%	33%	22%	1 person x 60 gpd		
61 - 120	\$	10.78	1.25	7%	30%	23%	19%	2 people x 60 gpd		
121 - 240	\$	12.93	1.50	6%		16%	16%	4 people x 60 gpd		
241 - 600	\$	15.09	1.75	12%	8%	6%	6%	10 people x 60 gpd		
601 - 1,800	\$	17.24	2.00	15%	1%	4%	5%	Even distr of vol in tiers 5-7		
1,801 - 4,200	\$	19.40	2.25	12%	0%	3%	5%	Even distr of vol in tiers 5-7		
4,200 - 9,000	\$	21.55	2.50	8%	0%	3%	6%	Even distr of vol in tiers 5-7		
9,001 & Greater	\$	23.71	2.75	12%	0%	12%	21%	Match previous top tier		



OPTION #7: 8 TIER INCLINING RATE STRUCTURE – QUARTERLY BILL IMPACT

	Avera	ıge	Typical Bill Impact - Quarterly					
	Quarto	erly			Increase	Increase		
	Volur	ne	Existing	Option 7	(Decrease) - \$	(Decrease) - %		
Small Meters	gpd	kgal						
5/8"	99	9	\$106.29	\$114.28	\$7.99	7.5%		
3/4"	132	12	\$148.36	\$147.61	(\$0.75)	-0.5%		
1"	132	12	\$150.36	\$149.61	(\$0.75)	-0.5%		
Large Meters								
1-1/2"	1,282	117	\$2,169.88	\$1,914.35	(\$255.53)	-11.8%		
2"	2,170	198	\$3,704.72	\$3,591.43	(\$113.29)	-3.1%		
3"	5,293	483	\$9,364.32	\$10,098.14	\$733.82	7.8%		
4"	7,529	687	\$13,527.10	\$14,798.56	\$1,271.46	9.4%		
6"	11,638	1,062	\$21,289.02	\$23,863.39	\$2,574.37	12.1%		
8"	32,121	2,931	\$57,884.01	\$69,796.28	\$11,912.27	20.6%		
10"	44,975	4,104	\$81,456.84	\$99,229.66	\$17,772.82	21.8%		
12"	93,699	8,550	\$164,641.50	\$204,627.43	\$39,985.93	24.3%		



OPTION #7: 8 TIER INCLINING RATE STRUCTURE – QUARTERLY BILL IMPACT (3/4" METER)

		Typical Bill Impact - Quarterly						
Residential 3/4" Meter Average Quarterly Volume		Existing	Option 7	Increase (Decrease) - \$	Increase (Decrease) - %			
gpd	kgal							
33	3	\$51.04	\$53.86	\$2.82	5.5%			
66	6	\$80.86	\$82.09	\$1.23	1.5%			
99	9	\$107.29	114.42	\$7.13	6.6%			
132	12	\$148.36	\$146.75	(\$1.61)	-1.1%			
164	15	\$199.45	\$181.01	(\$18.44)	-9.2%			
197	18	\$233.74	\$218.51	(\$15.23)	-6.5%			
274	25	\$375.25	\$309.03	(\$66.22)	-17.6%			
329	30	\$471.10	\$378.21	(\$92.89)	-19.7%			
384	35	\$568.75	\$453.63	(\$115.12)	-20.2%			
438	40	\$664.00	\$526.05	(\$137.95)	-20.8%			
548	50	\$863.00	\$675.39	(\$187.61)	-21.7%			
658	60	\$1,030.00	\$836.17	(\$193.83)	-18.8%			
822	75	\$1,309.00	\$1,091.33	(\$217.67)	-16.6%			

Timeline

