

FY2021 Water and Sewer Rate Sheet as of 5/4/20

Billed 4/1/20 - 3/31/21

Green Box is a manual entry number

Budget

	Water	Sewer	Combined
FY20	\$357,985	\$600,152	\$958,137
FY21	\$358,965	\$606,387	\$965,352
Total Change FY20/FY21	\$980	\$6,235	\$7,215
Percent Change FY20/FY21	0.27%	1.04%	0.75%

Revenue from Non-Core User Groups

Non-Core User Groups

Industry and Allocated Accounts Fixed Rate Calculator

Industry fixed rate for Sewer is the Commercial and Government plus 15%	\$663.64
Allocated Accounts fixed rate for Water is half the Commercial and Government	\$318.28
Allocated Accounts fixed rate for Sewer is half the Commercial and Government	\$288.54

	Water						Sewer					
	FY21		FY20		Change FY20 to FY21		FY21		FY20		Change FY20 to FY21	
	Fixed Rate	Revenue	Fixed Rate	Revenue	Dollar Difference	Percentage Difference	Fixed Rate	Revenue	Fixed Rate	Revenue	Dollar Difference	Percentage Difference
Industry												
Fixed Rate							\$663.60	\$664	\$646.95	\$647	\$16.65	2.57%
Metered/Industry Usage								\$6,036		\$1,853		
Total Rev.								\$6,700		\$2,500		
Allocated Accounts												
Fixed Rate	\$318.29	\$1,273	\$297.36	\$1,487	\$20.93	7.04%	\$288.52	\$866	\$281.28	\$1,125	\$7.24	2.57%
Total Rev.		\$1,273		\$1,487				\$866		\$1,125		

Non-User Group Revenue

	Water				Sewer			
	FY21 Revenue		FY20 Revenue		FY21 Revenue		FY20 Revenue	
Sale of Water		\$1,500		\$1,500				
Fire Protection/Tank Fee		\$49,641		\$50,300				
Septage Revenue						\$200,000		\$190,000
Gateway Revenue				\$0				\$0
Hook-on Fees		\$500		\$500		\$1,000		\$1,000
Miscellaneous Fees				\$0				\$0
Interest on Investments		\$1,500		\$1,500		\$3,500		\$3,500
Total Other Revenue		\$53,141		\$53,800		\$204,500		\$194,500

Total Revenue from Non-Core Users	\$54,414	\$55,287	\$212,066	\$198,125
Total Revenue remaining to be raised by core users	\$304,551	\$302,698	\$394,321	\$402,027

Data Used to Build Rates for Core User Groups

Percentage of use in past 4 quarters

	Water				Sewer			
	Future Use Adjustment as Percentage of Gallons		Future Use Adjustment as Percentage of Gallons		Future Use Adjustment as Percentage of Gallons		Future Use Adjustment as Percentage of Gallons	
	Gallons	Percentage	98%	Users	Gallons	Percentage	98%	Users
Residential	9,351,600	53.78%	9,164,568	418	9,272,600	66.89%	9,087,148	415
Commercial & Government	7,099,700	40.83%	6,957,706	74	3,651,900	26.34%	3,578,862	72
School	938,700	5.40%	919,926	3	938,700	6.77%	919,926	3
Industry				0				1
Allocated Accounts				4				3
total	17,390,000	100.00%	17,042,200		13,863,200	100.00%	13,585,936	

Percentage of use Adjustments for Water Rates to offset for fire protection allocation to school

	Water			
	Adjustment	Adjusted FY21	Adjusted FY20	
Residential	-2.84%	50.93%	53.50%	
Commercial & Government	-2.16%	38.67%	35.36%	
School	5.00%	10.40%	11.13%	
Total		100.00%	100.00%	

Formula for determining split of 5 percentage points between Residential and Commercial & Government Based on percent of water used by each

	Gallons Used	Percentage of Use
Residential	9,351,600	56.84%
Commercial & Government	7,099,700	43.16%
Total	16,451,300	

Budget Allocations Per Core User Group

	FY21		FY20	
	Water	Sewer	Water	Sewer
Revenue to be raised from Core Users	\$304,551	\$394,321	\$302,698	\$402,026.93
Residential	\$155,118.48	\$263,747.55	\$161,958.32	\$268,598.50
Commercial & Government	\$117,765.38	\$103,873.74	\$107,049.01	\$104,073.77
School	\$31,666.98	\$26,700.15	\$33,690.86	\$29,354.66

Rates for Core User Groups

	Percent of Rev.	Water						Sewer					
		FY21		FY20		Change FY20 to FY21		FY21		FY20		Change FY20 to FY21	
		Fixed per unit. Metered per 1000 gal.	Revenue	Fixed per unit. Metered per 1000 gal.	FY19 Revenue	Dollar Difference	Percentage Difference	Fixed per unit. Metered per 1000 gal.	Revenue	Fixed per unit. Metered per 1000 gal.	FY19 Revenue	Dollar Difference	Percentage Difference
Residential													
Fixed Rate	30%	\$111.33	\$46,536	\$116.52	\$48,587	-\$5.19	-4.5%	\$190.66	\$79,124	\$194.64	\$80,580	-\$3.98	-2.0%
Metered	70%	\$11.85	\$108,583	\$12.45	\$113,371	-\$0.60	-4.8%	\$20.32	\$184,623	\$20.80	\$188,019	-\$0.49	-2.3%
Total Rev.			\$155,118		\$161,958				\$263,748		\$268,599		
Commercial & Government													
Fixed Rate	40%	\$636.57	\$47,106	\$594.72	\$42,820	\$41.85	7.0%	\$577.08	\$41,549	\$562.56	\$41,630	\$14.52	2.6%
Metered	60%	\$10.16	\$70,659	\$10.67	\$64,229	-\$0.52	-4.8%	\$17.41	\$62,324	\$17.83	\$62,444	-\$0.42	-2.3%
Total Rev.			\$117,765		\$107,049				\$103,874		\$104,074		
School													
Fixed Rate	50%	\$5,277.83	\$15,833	\$5,615.14	\$16,845	-\$337.31	-6.0%	\$4,450.03	\$13,350	\$4,892.44	\$14,677	-\$442.42	-9.0%
Metered	50%	\$17.21	\$15,833	\$17.05	\$16,845	\$0.16	0.9%	\$14.51	\$13,350	\$14.86	\$14,677	-\$0.35	-2.3%
Total Rev.			\$31,667		\$33,691				\$26,700		\$29,355		

Revenue Analysis

	Water	Sewer
Revenue Through Fixed Fees (Water: rates, fire, hook-on, int. Sewer: rates, 50% septage, hook-on, int.)	\$162,389	\$240,053
Revenue Through Variable Fees (Water: rates, sale of water Sewer: rates, 50% septage)	\$196,576	\$366,334
Total	\$358,965	\$606,387
Double Check to ensure the revenue raised by fees equals budgeted revenue goal (field should equal zero)	\$0	\$0
Capital Budget	\$200,802	\$163,302
Percent of Capital Budget that is covered by revenue raised by fixed fees	80.87%	147.00%

Sample Rate Changes

	FY21		FY20	
	Water	Sewer	Water	Sewer
Residential				
Metered	\$259.77	\$444.88	\$271.87	\$454.15
Fixed	\$111.33	\$190.66	\$116.52	\$194.64
Total	\$371.10	\$635.54	\$388.39	\$648.79
Total Combined	\$1,006.63		\$1,037.18	
Total Combined Dollar Change	-\$30.54			
Total Combined Percentage Change	-2.94%			
Commercial & Government				
Metered	\$954.85	\$865.61	\$892.08	\$843.84
Fixed	\$636.57	\$577.08	\$594.72	\$562.56
Total	\$1,591.42	\$1,442.69	\$1,486.79	\$1,406.40
Total Combined	\$3,034.11		\$2,893.19	
Total Combined Dollar Change	\$140.92			
Total Combined Percentage Change	4.87%			
School				
Metered	\$5,277.83	\$4,450.03	\$5,615.14	\$4,892.44
Fixed	\$5,277.83	\$4,450.03	\$5,615.14	\$4,892.44
Total	\$10,555.66	\$8,900.05	\$11,230.29	\$9,784.89
Total Combined	\$19,455.71		\$21,015.17	
Total Combined Dollar Change	-\$1,559.46			
Total Combined Percentage Change	-7.42%			

FY2020 Water and Sewer Rate Sheet approved by Water and Sewer Commission on May 21, 2019

Billed 4/1/19 - 3/31/20

Budget

	Water	Sewer	Combined
FY19	\$345,137	\$562,000	\$907,137
FY20	\$357,985	\$600,152	\$958,137
Total Change FY19/FY20	\$12,848	\$38,152	\$51,000
Percent Change FY19/FY20	3.72%	6.79%	5.62%

Revenue from Non-Core User Groups

Non-Core User Groups

Industry and Allocated Accounts Fixed Rate Calculator

Industry fixed rate for Sewer is the Commercial and Government plus 15%	\$646.95
Allocated Accounts fixed rate for Water is half the Commercial and Government	\$297.36
Allocated Accounts fixed rate for Sewer is half the Commercial and Government	\$281.28

	Water						Sewer					
	FY20		FY19		Change FY19 to FY20		FY20		FY19		Change FY19 to FY20	
	Fixed Rate	Revenue	Fixed Rate	Revenue	Dollar Difference	Percentage Difference	Fixed Rate	Revenue	Fixed Rate	FY19 Revenue	Dollar Difference	Percentage Difference
Industry												
Fixed Rate							\$646.95	\$647	\$235.00	\$235	\$411.95	175.30%
Metered/Industry Usage								\$1,853		\$2,500		
Total Rev.								\$2,500		\$2,735		
Allocated Accounts												
Fixed Rate	\$297.36	\$1,487	\$238.00	\$1,190	\$59.36	24.94%	\$281.28	\$1,125	\$276.00	\$1,104	\$5.28	1.91%
Total Rev.		\$1,487		\$1,190				\$1,125		\$1,104		

Non-User Group Revenue

	Water				Sewer			
	FY20 Revenue		FY19 Revenue		FY20 Revenue		FY19 Revenue	
Sale of Water		\$1,500		\$1,500				
Fire Protection/Tank Fee		\$50,300		\$45,637				
Septage Revenue					\$190,000		\$170,000	
Gateway Revenue		\$0		\$0	\$0		\$0	
Hook-on Fees		\$500		\$500	\$1,000		\$1,000	
Miscellaneous Fees		\$0		\$0	\$0		\$0	
Interest on Investments		\$1,500		\$0	\$3,500		\$0	
Total Other Revenue		\$53,800		\$47,637	\$194,500		\$171,000	

Total Revenue from Non-Core Users	\$55,287	\$48,827	\$198,125	\$174,839
Total Revenue remaining to be raised by core users	\$302,698	\$296,310	\$402,027	\$387,161

Data Used to Build Rates for Core User Groups

Percentage of use in past 4 quarters

	Water				Sewer			
	Future Use Adjustment as Percentage of Gallons				Future Use Adjustment as Percentage of Gallons			
	Gallons	Percentage	98%	Users	Gallons	Percentage	98%	Users
Residential	9,292,000	56.52%	9,106,160	417	9,222,400	66.81%	9,037,952	414
Commercial & Government	6,141,700	37.35%	6,018,866	72	3,573,400	25.89%	3,501,932	74
School	1,007,900	6.13%	987,742	3	1,007,900	7.30%	987,742	3
Industry				0				1
Allocated Accounts				5				4
total	16,441,600	100.00%	16,112,768		13,803,700	100.00%	13,527,626	

Percentage of use Adjustments for Water Rates to offset for fire protection allocation to school

	Water			
	Adjustment	Adjusted FY20	Adjusted FY19	
Residential	-3.01%	53.50%	57.70%	
Commercial & Government	-1.99%	35.36%	30.55%	
School	5.00%	11.13%	11.75%	
Total		100.00%	100.00%	

Formula for determining split of 5 percentage points between Residential and Commercial & Government Based on percent of water used by each

	Gallons Used	Percentage of Use
Residential	9,292,000	60.21%
Commercial & Government	6,141,700	39.79%
Total	15,433,700	

Budget Allocations Per Core User Group

	FY20		FY19	
	Water	Sewer	Water	Sewer
Revenue to be raised from Core Users	\$302,698	\$402,027	\$296,310	\$387,161.00
Residential	\$161,958.32	\$268,598.50	\$172,347.02	\$257,191.11
Commercial & Government	\$107,049.01	\$104,073.77	\$89,069.45	\$100,646.76
School	\$33,690.86	\$29,354.66	\$34,823.82	\$29,323.13

Rates for Core User Groups

	Percent of Rev.	Water						Sewer					
		FY20		FY19		Change FY19 to FY20		FY20		FY19		Change FY19 to FY20	
		Fixed per unit. Metered per 1000 gal.	Revenue	Fixed per unit. Metered per 1000 gal.	FY19 Revenue	Dollar Difference	Percentage Difference	Fixed per unit. Metered per 1000 gal.	Revenue	Fixed per unit. Metered per 1000 gal.	FY19 Revenue	Dollar Difference	Percentage Difference
Residential													
Fixed Rate	30%	\$116.52	\$48,587	\$141.20	\$58,598	-\$24.68	-17.5%	\$194.64	\$80,580	\$187.28	\$77,157	\$7.36	3.9%
Metered	70%	\$12.45	\$113,371	\$12.24	\$113,749	\$0.21	1.7%	\$20.80	\$188,019	\$19.53	\$180,034	\$1.26	6.5%
Total Rev.			\$161,958		\$172,347			\$268,599		\$257,191			
Commercial & Government													
Fixed Rate	40%	\$594.72	\$42,820	\$475.04	\$35,628	\$119.68	25.2%	\$562.56	\$41,630	\$551.49	\$40,259	\$11.07	2.0%
Metered	60%	\$10.67	\$64,229	\$10.23	\$53,442	\$0.44	4.3%	\$17.83	\$62,444	\$16.57	\$60,388	\$1.26	7.6%
Total Rev.			\$107,049		\$89,069			\$104,074		\$100,647			
School													
Fixed Rate	50%	\$5,615.14	\$16,845	\$5,803.97	\$17,412	-\$188.83	-3.3%	\$4,892.44	\$14,677	\$4,887.19	\$14,662	\$5.26	0.1%
Metered	50%	\$17.05	\$16,845	\$16.56	\$17,412	\$0.49	3.0%	\$14.86	\$14,677	\$13.95	\$14,662	\$0.91	6.5%
Total Rev.			\$33,691		\$34,824			\$29,355		\$29,323			

Revenue Analysis

	Water	Sewer
Revenue Through Fixed Fees (Water: rates, fire, hook-on, int. Sewer: rates, 50% septage, hook-on, int.)	\$162,039	\$238,158
Revenue Through Variable Fees (Water: rates, sale of water Sewer: rates, 50% septage)	\$195,946	\$361,994
Total	\$357,985	\$600,152
Capital Budget	\$193,866	\$171,010
Percent Fixed Fees above or below capital budget	-16.42%	39.27%

Sample Rate Changes

	FY20		FY19	
	Water	Sewer	Water	Sewer
Residential				
Metered	\$271.87	\$454.15	\$274.09	\$436.98
Fixed	\$116.52	\$194.64	\$141.20	\$187.28
Total	\$388.39	\$648.79	\$415.29	\$624.25
Total Combined	\$1,037.18		\$1,039.54	
Total Combined Dollar Change	-\$2.37			
Total Combined Percentage Change	-0.23%			
Commercial & Government				
Metered	\$892.08	\$843.84	\$712.56	\$827.23
Fixed	\$594.72	\$562.56	\$475.04	\$551.49
Total	\$1,486.79	\$1,406.40	\$1,187.59	\$1,378.72
Total Combined	\$2,893.19		\$2,566.32	
Total Combined Dollar Change	\$326.88			
Total Combined Percentage Change	12.74%			
School				
Metered	\$5,615.14	\$4,892.44	\$5,803.97	\$4,887.19
Fixed	\$5,615.14	\$4,892.44	\$5,803.97	\$4,887.19
Total	\$11,230.29	\$9,784.89	\$11,607.94	\$9,774.38
Total Combined	\$21,015.17		\$21,382.31	
Total Combined Dollar Change	-\$367.14			
Total Combined Percentage Change	-1.72%			

FY19 FINAL RATES

FY2019 Final Rate
Billed 4/1/18 - 3/31/19

Richmond Water and Sewer Commission
 Rate Structure and Estimated Budget Revenue
 2018 approved June 4, 2018
 Billable by class

% use in past 4 quarters		98% future use adjustment		W	WW	TOTAL		
		W	WW					
res	9,483,200	59.70%	9,407,700	66.26%	17-18	\$327,104	\$583,270	\$910,374
G+C	5,328,700	33.55%	3,718,100	26.19%	18-19	\$345,137	\$562,000	\$907,137
school	1,072,600	6.75%	1,072,600	7.55%	\$ +	\$18,033	-\$21,270	-\$3,237
total	15,884,500	100.00%	14,198,400	100.00%	% +	5.51%	-3.65%	-0.36%

		100.00%							
		% of usage	Water	% of usage	Wastewater				
			\$345,137 2019 budget		\$562,000 2019 budget				
Residential	actual water % minus 1.5% to offset school fire \$	57.70%	415 units	66.26%	412 units				
Base Rate account/year		(FY18 56.77)	\$141.20	(FY18 66.85)	\$187.28				
Annual Fixed Revenue Generated	app. 30% of class revenues	\$172,347	(FY18 \$139.92)	\$257,191	(FY18 \$198.48)	\$58,597.99		\$77,157.33	
Total residential metered W/WW sold	app. 70% of class revenues	(FY18 166,671)	9,293,536 est. gallons	(FY18 266,622)	9,219,546 est. gallons				
	User rate per 1000 gallons		\$12.24 (FY18 9,976,400)		\$19.53 (FY18 9,782,164)				
	Annual Res.usage revenue generated		(FY18 \$11.03)		(FY18 \$19.08)	\$113,749.03		\$180,033.78	
			-\$27.57		\$50.33	-\$8,952.98	-5%	\$20,737.11	8.8%
						\$172,347.02		\$257,191.11	
Commercial and Govt	actual water % minus 2.5% to offset school fire \$	30.55%	75 units	26.19%	73 units				
Base Rate account/year		(FY18 32.38)	\$475.04	(FY18 26.37)	\$551.49				
Annual Fixed Revenue Generated	app. 40% of class revenues	\$89,069	(FY18 \$469.81)	\$100,647	(FY18 \$541.20)	\$35,627.78		\$40,258.71	
Total C. & G. metered W/WW sold	app. 60% of class revenues	(FY18 92,788)	5,222,126 est. gallons	(FY18 104,182)	3,643,738 est. gallons				
	User rate per 1000 gallons		\$10.23 (FY18 6,004,852)		\$16.57 (FY18 3,859,044)				
	Annual C. & G. usage revenue generated		(FY18 \$9.27)		(FY18 \$16.20)	\$53,441.67		\$60,388.06	
			\$139.27		-\$34.32	-\$2,505.24	-2.43%	\$100,646.76	
Schools	5.85% actual plus 4% (app \$13k) added for fire protection \$ in lieu of taxes	11.75%	3 units	7.55%	3 units				
Base Rate account/year	app. 50% of class revenues	(FY18 10.85)	\$5,803.97	(FY18 6.78)	\$4,887.19				
Annual Fixed Revenue Generated	app. 50% of class revenues	\$34,824	(FY18 \$5262.70)	\$29,323	(FY18 \$4510.13)	\$17,411.91		\$14,661.56	
Total School metered W/WW sold		(FY18 31,576)	1,051,148 est. gallons	(FY18 27,061)	1,051,148 est. gallons				
	User rate per 1000 gallons		\$16.56 (FY18 992,838)		\$13.95 (FY18 992,838)				
	Annual School usage revenue generated		(FY18 \$15.90)		(FY18 \$13.63)	\$17,411.91		\$14,661.56	
			\$1,903.27		-\$2,967.62	\$5,709.82	19.6%	\$34,823.82	
Industry									
Base Rate account/year					1 unit				
	Annual Fixed Revenue Generated				\$235			\$235.00	
	Annual Industry usage revenue generated				(FY18 \$225)			\$235.00	
					separate bill estimate			\$2,500.00	
								\$2,735.00	
Allocated accounts			5 units		4 units				
Base Rate account/year			\$238		\$276				
***Fee based on 1/2 of C & G ***	Annual Fixed Revenue Generated		(FY18 \$210)		(FY18 \$280)	\$1,190.00		\$1,104.00	
						\$1,190.00		\$1,104.00	
Total Annual Revenue generated through User Rates:						\$297,430.28		\$391,000.00	
Total gallons W/WW usage rate(s) are % of 4/1/15 - 3/31/16 actuals:			15,566,810 water		13,914,432 wastewater				
			(FY18 16,974,090)		(FY18 14,634,046)				
Sale of water			\$1,500					na	
Note: FY18 water sales moderately higher than budgeted			(FY18 \$1500)						
Town Fire Protection/Tank Fee (5% water budget + % tank bond)			\$45,637					na	
			(FY18 \$32,796)						
Septage Revenue (est)			na					\$170,000	
Note: FY17 septage revenue somewhat lower than budgeted								(FY18 \$180,000)	
est Creamery Revenue	have increased account totals above by 10 res units and 1 comm unit		\$0					\$0	
est. Gateway Revenue			\$0					\$0	
Hook-on fees			\$500					\$1,000	
Miscellaneous Fees			\$0					\$0	
Interest on investments			\$0					\$0	
Grand Total Revenues FY17			Water		Sewer			\$662,000	
			\$345,067						
Fixed costs generated Water	From rates		W capital budget			\$205,869		\$158,965	
						-23%		\$111,638	
Fixed costs generated Wastewater	From rates				WW capital budget	\$162,712		\$219,417	
						35%		\$132,078	
Variable costs generated Water	From rates							\$186,103	
								\$184,603	
Variable costs generated Wastewater	From rates							\$342,583	
								\$255,083	
			12.20%			-1.93%			
			\$37,519			\$11,049			
			(FY18 \$327,104)			(FY18 \$583,270)			
			budget			budget		est. revenue	
			\$345,137			\$562,000		\$625,000	
			est. revenue			est. revenue		\$625,000	
			-\$70			\$0			
			-0.02%			0.00%			

Notes:
 Each class of user will pay close to the class % of total usage; calculated separately for W and WW
 Class % use of W and WW is likely to change due to changes in usage and possible growth (Creamery, Gateway) and thus will be reviewed/revised annually
 Forecast of future gallons is based on the gallons by class in the most recent complete year but is also influenced by other factors eg trends of usage or anticipated new users
 Other principles include:
 Fixed revenues approximately equal to capital expenses
 Rate stability is generally desirable, thus:
 Revenues somewhat lower than expected (eg in water sales and septage revenues) may reduce investments in reserve funds - rather than rate increases
 Revenues somewhat higher than expected may be used to make capital purchases, pay down debt, or increase reserve funds - rather than rate decreases