

RESPONSE TO TRANSCRIPT REQUEST NO. 2

BEFORE THE
PHILADELPHIA WATER, SEWER AND STORM WATER RATE BOARD

In the Matter of the Philadelphia Water Department's Proposed Change in Water, Wastewater and Stormwater Rates and Related Charges	Fiscal Years 2019-2021
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Response to Transcript Request No. 2

on behalf of

The Philadelphia Water Department

Dated: May 17, 2018

1 **PHILADELPHIA WATER DEPARTMENT RESPONSE TO TRANSCRIPT REQUEST**

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4 **TR-2.** PLEASE PROVIDE THE RATE DESIGN IMPACTS OF THE PROPOSED TAP
5 RIDER.
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7 **RESPONSE:**

8 Please refer to the attached tables, which present the following:

- 9 • Comparison of Typical Bills for Residential Customers and Example Bills for Non-
10 Residential Customers based upon:
11 ○ PWD’s Proposed TAP Rider
12 ○ Public Advocate’s Proposed TAP Rider
13 • Estimated Surcharge Rates based upon:
14 ○ PWD’s Proposed TAP Rider
15 ○ Public Advocate’s Proposed TAP Rider
16 • “Base” Rates and Charges reflecting the implementation of the TAP Surcharge Rate
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19 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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TABLE C-4

**COMBINED UTILITY: COMPARISON OF TYPICAL
BILL FOR RESIDENTIAL CUSTOMERS
UNDER EXISTING AND PROPOSED RATES**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		FY 2018	FY 2019		FY 2020		FY 2021	
Meter Size	Monthly Use	Existing Rates	Proposed Rates	% Proposed of Existing	Proposed Rates	% Proposed of FY 2019	Proposed Rates	% Proposed of FY 2020
Inches	Mcf	\$	\$	%	\$	%	\$	%
5/8	0.0	28.73	28.65	(0.3)	30.46	6.3	32.08	5.3
5/8	0.2	43.84	43.90	0.1	46.33	5.5	48.53	4.7
5/8	0.3	51.39	51.53	0.3	54.27	5.3	56.76	4.6
5/8	0.4	58.95	59.15	0.4	62.21	5.2	64.99	4.5
5/8	0.5	66.50	66.78	0.4	70.15	5.0	73.21	4.4
5/8	0.6	74.05	74.41	0.5	78.08	4.9	81.44	4.3
5/8	0.7	81.61	82.03	0.5	86.02	4.9	89.66	4.2
5/8	0.8	89.16	89.66	0.6	93.96	4.8	97.89	4.2
5/8	1.7	157.15	158.29	0.7	165.39	4.5	171.93	3.9
5/8	2.7	228.90	230.24	0.6	240.50	4.5	249.93	3.9
5/8	3.3	270.98	272.31	0.5	284.47	4.5	295.63	3.9

Mcf - Thousand cubic feet

TABLE C-5

**COMBINED UTILITY: COMPARISON OF EXAMPLE BILLS
FOR NON-RESIDENTIAL CUSTOMERS
UNDER EXISTING AND PROPOSED RATES**

(1) Meter Size	(2) Monthly Use	(3) Impervious Area	(4) Gross Area	(5)	(6)	(7)	(8)	(9)	(8)	(9)
				FY 2018 Existing Rates	FY 2019 Proposed Rates	% Proposed of Existing	FY 2020 Proposed Rates	% Proposed of FY 2019	FY 2021 Proposed Rates	% Proposed of FY 2020
Inches	Mcf	sf	sf	\$	\$	%	\$	%	\$	%
5/8	0.0	1,794	2,110	39.72	40.20	1.2	42.94	6.8	45.33	5.6
5/8	0.2	1,794	2,110	54.83	55.45	1.1	58.82	6.1	61.78	5.0
5/8	0.3	1,794	2,110	62.38	63.07	1.1	66.75	5.8	70.01	4.9
5/8	0.4	1,794	2,110	69.93	70.70	1.1	74.69	5.6	78.23	4.7
5/8	0.5	1,794	2,110	77.49	78.33	1.1	82.63	5.5	86.46	4.6
5/8	0.6	4,000	5,500	108.48	111.46	2.7	118.26	6.1	124.16	5.0
5/8	0.7	4,000	5,500	116.04	119.09	2.6	126.20	6.0	132.39	4.9
5/8	0.8	26,000	38,000	380.80	406.62	6.8	438.05	7.7	464.01	5.9
5/8	1.7	26,000	38,000	448.78	475.25	5.9	509.49	7.2	538.05	5.6
5/8	2.7	4,000	5,500	263.33	267.30	1.5	280.69	5.0	292.65	4.3
5/8	3.3	4,000	5,500	305.41	309.37	1.3	324.65	4.9	338.35	4.2
5/8	11.0	7,000	11,000	881.83	888.88	0.8	932.01	4.9	970.73	4.2
1	1.7	7,700	7,900	242.87	250.75	3.2	265.34	5.8	278.01	4.8
1	5.0	22,500	24,000	638.60	660.81	3.5	701.01	6.1	735.53	4.9
1	8.0	7,700	7,900	686.31	694.28	1.2	728.85	5.0	759.73	4.2
1	17.0	22,500	24,000	1,480.16	1,502.12	1.5	1,580.41	5.2	1,649.60	4.4
2	7.6	1,063	1,250	618.89	622.25	0.5	650.41	4.5	676.16	4.0
2	16.0	22,500	24,000	1,442.73	1,466.36	1.6	1,543.04	5.2	1,610.82	4.4
2	33.0	66,500	80,000	3,137.98	3,205.38	2.1	3,382.91	5.5	3,537.89	4.6
2	100.0	7,700	7,900	7,170.97	7,178.66	0.1	7,506.80	4.6	7,805.04	4.0
4	30.0	7,700	7,900	2,373.97	2,386.53	0.5	2,497.64	4.7	2,598.41	4.0
4	170.0	10,500	12,000	11,636.59	11,641.13	0.0	12,196.57	4.8	12,702.08	4.1
4	330.0	26,000	38,000	21,704.93	21,704.93	0.0	22,779.11	4.9	23,756.26	4.3
4	500.0	140,000	160,000	33,479.97	33,568.74	0.3	35,294.34	5.1	36,854.02	4.4
6	150.0	10,500	12,000	10,560.12	10,573.24	0.1	11,073.39	4.7	11,528.64	4.1
6	500.0	41,750	45,500	32,531.42	32,529.34	(0.0)	34,159.14	5.0	35,641.99	4.3
6	1,000.0	26,000	38,000	63,249.76	63,167.95	(0.1)	66,349.30	5.0	69,249.59	4.4
6	1,500.0	140,000	160,000	95,408.90	95,372.63	(0.0)	100,239.62	5.1	104,666.24	4.4
8	750.0	10,500	12,000	47,807.63	47,750.08	(0.1)	50,139.36	5.0	52,318.79	4.3
8	1,500.0	66,500	80,000	94,771.23	94,671.11	(0.1)	99,470.17	5.1	103,842.73	4.4
8	2,000.0	26,000	38,000	125,205.27	125,000.39	(0.2)	131,324.47	5.1	137,092.94	4.4
8	3,000.0	140,000	160,000	187,449.41	187,224.57	(0.1)	196,791.29	5.1	205,496.09	4.4
10	600.0	22,500	24,000	38,904.68	38,885.56	(0.0)	40,827.69	5.0	42,598.10	4.3
10	1,700.0	41,750	45,500	107,070.42	106,926.29	(0.1)	112,336.18	5.1	117,269.14	4.4
10	3,300.0	26,000	38,000	204,695.76	204,327.80	(0.2)	214,723.64	5.1	224,194.04	4.4
10	6,000.0	140,000	160,000	370,588.90	369,978.28	(0.2)	388,927.56	5.1	406,162.29	4.4

(a) Examples with gross area less than 5,000 square feet reflect an impervious area of 85% of the gross area consistent with PWD Regulations section 304.3.

Mcf - Thousand cubic feet
sf - square feet

TABLE C-4

**COMBINED UTILITY: COMPARISON OF TYPICAL
BILL FOR RESIDENTIAL CUSTOMERS
UNDER EXISTING AND PROPOSED RATES**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Meter Size	Monthly Use	FY 2018	FY 2019		FY 2020		FY 2021	
		Existing Rates	Proposed Rates	% Proposed of Existing	Proposed Rates	% Proposed of FY 2019	Proposed Rates	% Proposed of FY 2020
Inches	Mcf	\$	\$	%	\$	%	\$	%
5/8	0.0	28.73	28.65	(0.3)	30.46	6.3	32.08	5.3
5/8	0.2	43.84	43.93	0.2	46.34	5.5	48.51	4.7
5/8	0.3	51.39	51.56	0.3	54.28	5.3	56.72	4.5
5/8	0.4	58.95	59.20	0.4	62.23	5.1	64.94	4.4
5/8	0.5	66.50	66.84	0.5	70.17	5.0	73.15	4.2
5/8	0.6	74.05	74.48	0.6	78.11	4.9	81.36	4.2
5/8	0.7	81.61	82.12	0.6	86.05	4.8	89.58	4.1
5/8	0.8	89.16	89.75	0.7	93.99	4.7	97.79	4.0
5/8	1.7	157.15	158.49	0.9	165.47	4.4	171.71	3.8
5/8	2.7	228.90	230.57	0.7	240.62	4.4	249.59	3.7
5/8	3.3	270.98	272.71	0.6	284.62	4.4	295.22	3.7

Mcf - Thousand cubic feet

TABLE C-5

**COMBINED UTILITY: COMPARISON OF EXAMPLE BILLS
FOR NON-RESIDENTIAL CUSTOMERS
UNDER EXISTING AND PROPOSED RATES**

(1) Meter Size	(2) Monthly Use	(3) Impervious Area	(4) Gross Area	(5)	(6)	(7)	(8)	(9)	(8)	(9)
				FY 2018 Existing Rates	FY 2019 Proposed Rates	% Proposed of Existing	FY 2020 Proposed Rates	% Proposed of FY 2019	FY 2021 Proposed Rates	% Proposed of FY 2020
Inches	Mcf	sf	sf	\$	\$	%	\$	%	\$	%
5/8	0.0	1,794	2,110	39.72	40.20	1.2	42.94	6.8	45.33	5.6
5/8	0.2	1,794	2,110	54.83	55.47	1.2	58.83	6.0	61.76	5.0
5/8	0.3	1,794	2,110	62.38	63.11	1.2	66.77	5.8	69.97	4.8
5/8	0.4	1,794	2,110	69.93	70.75	1.2	74.71	5.6	78.18	4.7
5/8	0.5	1,794	2,110	77.49	78.39	1.2	82.65	5.4	86.40	4.5
5/8	0.6	4,000	5,500	108.48	111.53	2.8	118.29	6.1	124.09	4.9
5/8	0.7	4,000	5,500	116.04	119.17	2.7	126.23	5.9	132.30	4.8
5/8	0.8	26,000	38,000	380.80	406.72	6.8	438.09	7.7	463.91	5.9
5/8	1.7	26,000	38,000	448.78	475.46	5.9	509.56	7.2	537.84	5.5
5/8	2.7	4,000	5,500	263.33	267.63	1.6	280.80	4.9	292.31	4.1
5/8	3.3	4,000	5,500	305.41	309.76	1.4	324.80	4.9	337.94	4.0
5/8	11.0	7,000	11,000	881.83	890.20	0.9	932.48	4.8	969.35	4.0
1	1.7	7,700	7,900	242.87	250.95	3.3	265.41	5.8	277.80	4.7
1	5.0	22,500	24,000	638.60	661.41	3.6	701.23	6.0	734.90	4.8
1	8.0	7,700	7,900	686.31	695.24	1.3	729.19	4.9	758.73	4.1
1	17.0	22,500	24,000	1,480.16	1,504.16	1.6	1,581.14	5.1	1,647.48	4.2
2	7.6	1,063	1,250	618.89	623.16	0.7	650.73	4.4	675.21	3.8
2	16.0	22,500	24,000	1,442.73	1,468.28	1.8	1,543.73	5.1	1,608.82	4.2
2	33.0	66,500	80,000	3,137.98	3,209.34	2.3	3,384.33	5.5	3,533.76	4.4
2	100.0	7,700	7,900	7,170.97	7,190.66	0.3	7,511.10	4.5	7,792.54	3.7
4	30.0	7,700	7,900	2,373.97	2,390.13	0.7	2,498.93	4.6	2,594.66	3.8
4	170.0	10,500	12,000	11,636.59	11,661.53	0.2	12,203.88	4.7	12,680.83	3.9
4	330.0	26,000	38,000	21,704.93	21,744.53	0.2	22,793.30	4.8	23,715.01	4.0
4	500.0	140,000	160,000	33,479.97	33,628.74	0.4	35,315.84	5.0	36,791.52	4.2
6	150.0	10,500	12,000	10,560.12	10,591.24	0.3	11,079.84	4.6	11,509.89	3.9
6	500.0	41,750	45,500	32,531.42	32,589.34	0.2	34,180.64	4.9	35,579.49	4.1
6	1,000.0	26,000	38,000	63,249.76	63,287.95	0.1	66,392.30	4.9	69,124.59	4.1
6	1,500.0	140,000	160,000	95,408.90	95,552.63	0.2	100,304.12	5.0	104,478.74	4.2
8	750.0	10,500	12,000	47,807.63	47,840.08	0.1	50,171.61	4.9	52,225.04	4.1
8	1,500.0	66,500	80,000	94,771.23	94,851.11	0.1	99,534.67	4.9	103,655.23	4.1
8	2,000.0	26,000	38,000	125,205.27	125,240.39	0.0	131,410.47	4.9	136,842.94	4.1
8	3,000.0	140,000	160,000	187,449.41	187,584.57	0.1	196,920.29	5.0	205,121.09	4.2
10	600.0	22,500	24,000	38,904.68	38,957.56	0.1	40,853.49	4.9	42,523.10	4.1
10	1,700.0	41,750	45,500	107,070.42	107,130.29	0.1	112,409.28	4.9	117,056.64	4.1
10	3,300.0	26,000	38,000	204,695.76	204,723.80	0.0	214,865.54	5.0	223,781.54	4.1
10	6,000.0	140,000	160,000	370,588.90	370,698.28	0.0	389,185.56	5.0	405,412.29	4.2

(a) Examples with gross area less than 5,000 square feet reflect an impervious area of 85% of the gross area consistent with PWD Regulations section 304.3.

Mcf - Thousand cubic feet
sf - square feet

TAP RIDER WATER SURCHARGE

	FY 2019	FY 2020	FY 2021
	Charge	Charge	Charge
<u>Monthly Water Usage</u>	<u>per Mcf</u>	<u>per Mcf</u>	<u>per Mcf</u>
	\$	\$	\$
All Billable Water Usage	0.672	0.954	1.200

TAP RIDER SEWER SURCHARGE

	FY 2019	FY 2020	FY 2021
	Charge	Charge	Charge
<u>Monthly Water Usage</u>	<u>per Mcf</u>	<u>per Mcf</u>	<u>per Mcf</u>
All Billable Water Usage	0.937	1.329	1.673

Mcf - Thousand cubic feet

TAP RIDER WATER SURCHARGE

<u>Monthly Water Usage</u>	<u>FY 2019 Charge per Mcf</u>	<u>FY 2020 Charge per Mcf</u>	<u>FY 2021 Charge per Mcf</u>
	\$	\$	\$
All Billable Water Usage	0.677	0.894	1.036

TAP RIDER SEWER SURCHARGE

<u>Monthly Water Usage</u>	<u>FY 2019 Charge per Mcf</u>	<u>FY 2020 Charge per Mcf</u>	<u>FY 2021 Charge per Mcf</u>
All Billable Water Usage	1.052	1.432	1.712

Mcf - Thousand cubic feet

TABLE W-18**PROPOSED WATER RATES FOR
GENERAL SERVICE****SERVICE CHARGE**

<u>Meter Size</u>	<u>FY 2019 Monthly Charge</u>	<u>FY 2020 Monthly Charge</u>	<u>FY 2021 Monthly Charge</u>
Inches	\$	\$	\$
5/8	6.13	6.18	6.17
3/4	7.09	7.12	7.11
1	9.43	9.46	9.43
1-1/2	14.66	14.64	14.59
2	21.69	21.63	21.54
3	37.25	37.10	36.91
4	64.88	64.68	64.37
6	125.56	125.09	124.47
8	195.87	195.01	194.02
10	284.18	282.99	281.59
12	497.48	494.69	492.06

QUANTITY CHARGE

<u>Monthly Water Usage</u>	<u>FY 2019 Charge per Mcf</u>	<u>FY 2020 Charge per Mcf</u>	<u>FY 2021 Charge per Mcf</u>
	\$	\$	\$
First 2 Mcf	43.80	43.88	44.03
Next 98 Mcf	37.65	37.79	37.94
Next 1,900 Mcf	29.18	29.28	29.40
Over 2,000 Mcf	28.38	28.47	28.57

Mcf - Thousand cubic feet

TABLE W-19**PROPOSED RATES FOR
FIRE PROTECTION****PRIVATE FIRE PROTECTION**

<u>Size of Meter or Connection</u>	<u>FY 2019 Monthly Charge</u>	<u>FY 2020 Monthly Charge</u>	<u>FY 2021 Monthly Charge</u>
Inches	\$	\$	\$
4" or less	26.21	26.45	26.47
6	48.22	48.63	48.67
8	72.12	72.68	72.74
10	106.30	107.15	107.23
12	164.89	165.95	166.09

TABLE W-19A**PROPOSED RATES FOR
FIRE PROTECTION****RESIDENTIAL PRIVATE FIRE PROTECTION**

Size of Meter or Connection	FY 2019 Monthly Charge	FY 2020 Monthly Charge	FY 2021 Monthly Charge
Inches	\$	\$	\$
Water Service Charge Including Fire Protection			
3/4	9.99	10.00	10.00
1	12.33	12.34	12.32
1-1/4	15.25	15.25	15.21
1-1/2	17.56	17.52	17.48
2	24.59	24.51	24.43
Sewer Service Charge			
3/4	6.96	7.41	7.91
1	6.96	7.41	7.91
1-1/4	6.96	7.41	7.91
1-1/2	6.96	7.41	7.91
2	6.96	7.41	7.91

Table WW-18**WASTEWATER: PROPOSED RATES
FOR GENERAL SERVICE
SANITARY SEWER****METER BASED SERVICE CHARGE**

<u>Meter Size</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>
<u>Inches</u>	<u>Monthly</u>	<u>Monthly</u>	<u>Monthly</u>
	<u>Charge</u>	<u>Charge</u>	<u>Charge</u>
	\$	\$	\$
5/8	6.96	7.41	7.91
3/4	8.85	9.44	10.09
1	12.96	13.85	14.77
1-1/2	22.74	24.37	25.98
2	35.05	37.60	40.05
3	63.15	67.79	72.19
4	107.36	115.20	122.70
6	211.57	227.07	241.82
8	334.70	359.32	382.62
10	483.10	518.61	552.25
12	877.66	942.78	1,003.68

QUANTITY CHARGE

	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>
	<u>Charge</u>	<u>Charge</u>	<u>Charge</u>
	<u>per Mcf</u>	<u>per Mcf</u>	<u>per Mcf</u>
	\$	\$	\$
All Billable Water Usage	30.85	33.21	35.36
Groundwater Charge	13.78	14.76	15.56

SURCHARGE RATES

BOD (\$/lb in excess of 250 mg/l)	0.395	0.419	0.445
SS (\$/lb in excess of 350 mg/l)	0.384	0.408	0.436

Mcf - Thousand cubic feet
mg/l - milligrams per liter

Table SW-19A**STORMWATER: PROPOSED RATES
FOR RESIDENTIAL SERVICE****STORMWATER MANAGEMENT SERVICE CHARGE**

	FY 2019 Monthly Charge	FY 2020 Monthly Charge	FY 2021 Monthly Charge
	\$	\$	\$
Charge Per Parcel	13.79	15.01	16.01

BILLING & COLLECTION CHARGE

	FY 2019 Monthly Charge	FY 2020 Monthly Charge	FY 2021 Monthly Charge
	\$	\$	\$
Charge per Bill	1.77	1.86	1.99

Table SW-19B**STORMWATER: PROPOSED RATES
FOR NON-RESIDENTIAL****STORMWATER MANAGEMENT SERVICE CHARGE**

	FY 2019 Monthly Charge	FY 2020 Monthly Charge	FY 2021 Monthly Charge
	\$	\$	\$
Min Charge	13.79	15.01	16.01
GA (\$/500 sf)	0.703	0.765	0.815
IA (\$/500 sf)	5.323	5.777	6.146

BILLING & COLLECTION CHARGE

	FY 2019 Monthly Charge	FY 2020 Monthly Charge	FY 2021 Monthly Charge
	\$	\$	\$
Charge per Bill	2.30	2.42	2.59