

To: Philadelphia Water Department	From: Black & Veatch Management Consulting, LLC
Task Name: TAP Rider Reconciliation	Schedule: BV-3
Document: TAP-R Reconciliation Assumptions	Date: May 15, 2020

This document summarizes the assumptions used in developing the Tiered Assistance Program (TAP) Rate Rider reconciliation calculations for October 1, 2020 to September 30, 2021 (the Next Rate Period), as it relates to the Philadelphia Water Department’s (PWD) TAP-R surcharge rates. These assumptions are based upon currently available data.

Definitions

Per *Section 10 of PWD Rates and Charges Effective September 1, 2019*, the following list of terms is used in this assumptions document:

- **C** – (or C-Factor) The cost in dollars of the estimated TAP Billing Loss for the Next Rate Period.
- **E** – (or E-Factor) The net over or under-collection of the TAP-R surcharge amount for the Most Recent Period.
- **I** – (or I-Factor) Interest on any over or under-collection of the TAP-R for the Most Recent Period.
- **S** – (or S-Factor) Projected sales in thousand cubic feet (MCF) for Non-TAP customers.
- **Most Recent Period** – The Current Fiscal Year and/or the period for which TAP-R reconciliation is performed. For this reconciliation filing, the Most Recent Period is September 1, 2019 to September 30, 2020.
- **Next Rate Period** – The fiscal year and/or the period that immediately follows the Most Recent Period, and in which the proposed TAP-R is effective. Also referred to as the Projected Period. For this reconciliation filing, the Next Rate Period comprises October 1, 2020 to September 30, 2021.
- **TAP Participants** – The number of unique customers issued a TAP bill during the period in question.
- **TAP-R** – The TAP Rider water and sewer surcharge rates.

Current TAP-R Rates

The current TAP-R rates, as stated in *Section 10 of PWD Rates and Charges Effective September 1, 2019*, were utilized in the TAP-R reconciliation calculations for the Most Recent Period:

- **Water TAP-R:** \$0.71 per MCF
- **Sewer TAP-R:** \$1.16 per MCF

Codified Factors

The following codified factors, as stated in *Section 10 of PWD Regulations Rates and Charges Effective September 1, 2019*, were utilized in the TAP-R reconciliation calculations:

- **Allocation of TAP Discounts (i.e., Lost Billings):**
 - The costs of TAP discounts for the Most Recent Period and the Next Rate Period proportioned to water and sewer, based on the following allocation percentages:
 - Water Tap Cost Allocation: 41 percent
 - Sewer Tap Cost Allocation: 59 percent
- **Collection Factor:**
 - TAP Revenue Loss and TAP-R billings for the Most Recent Period adjusted for collections based upon the following:
 - Collection Factor: 96.54 percent
- **Interest Rate:**
 - Interest on under/over-collection (i.e., I-Factor) uses the 1-year interest rate for constant maturity U.S. Treasury Securities as published in the Federal Reserve Statistical Release H.15 (519) on May 1, 2020.
 - Interest Rate: 0.17 percent

Appendix A provides a snapshot of the current interest rate, as noted above.

TAP Assumptions

PWD Exhibit No. 1 details the actual TAP reporting data and TAP projections.

Most Recent Period

For the Most Recent Period, actual data was available for September 2019 through February 2020 and estimates were developed to cover the months of March 2020 through September 2020. The estimates utilized the following approach:

- **TAP Participants** – Projected to remain constant at January 2020 levels.
- **TAP Billing Loss** – Estimated based upon the projected number of monthly participants and the average monthly bill discount of \$51.25 per TAP participant.
- **TAP Billed Volumes** – Estimated based upon the projected number of TAP Participants and the average monthly consumption of 796 cubic feet (cf) per TAP Participant.

Note - Estimates for the period of March 2020 through September 2020 will be reconciled as part of the next reconciliation filing.

Next Rate Period

For the Next Rate Period, projections of TAP Participants and TAP Billing Loss were developed for October 2020 through September 2021.

- **TAP Participants** – For reconciliation purposes, the level of monthly TAP Participants was assumed to remain flat at 15,180 based upon the estimated participation at the end of the Most Recent Period.

- **TAP Billing Loss** – Estimated based upon the projected number of TAP Participants for the Next Rate Period and the average monthly bill discount of \$51.25 per TAP Participant. Total TAP Billing Loss for the Next Rate Period was assumed to be approximately \$9.3 million.

Note – TAP Billing Loss for the Next Rate Period serves as the basis for the C-Factor in the reconciliation calculations.

Non-TAP Billed Volumes

Actual water and sewer billed volumes for Non-TAP customers are detailed in PWD Exhibit No. 1 for September 2019 through February 2020.

Most Recent Period

For the Most Recent Period, actual data was available for September 2018 through February 2020. For reconciliation purposes, water and sewer billed volumes for March 2020 through September 2020 were estimated based upon the average monthly sales for prior twelve months. Estimated monthly sales for March 2020 through September 2020 are as follows:

- **Monthly Billed Water Volume** - 4,806,428 hundred cubic feet (ccf)
- **Monthly Billed Sewer Volume** - 4,521,886 ccf

Note – Billed Volumes are used to estimate revenues from Non-TAP customers in developing the E-Factor in the reconciliation calculations. Estimates for the period of March 2020 through September 2020, will be reconciled as part of the next reconciliation filing.

Next Rate Period

For the Next Rate Period, projections for total Non-TAP water and sewer sales volumes were developed for the period of October 2020 through September 2021.

- Projections for Non-TAP water and sewer sales volume for the Next Rate Period are based upon the overall annualized sales¹ for the Most Recent Period; and
- Assume a decrease in total sales of 1.05 percent in accordance current sales information.
 - PWD continues to experience a decrease in overall usage. For the purposes of the TAP-R reconciliation calculations, PWD is utilizing an estimated decline in sales based upon the current conditions.

Note – Projected Sales Volumes for Non-TAP customers are the S-Factor in the reconciliation calculations.

¹ Total sales for the Most Recent Period represents 13 months. Overall annualized sales are determined by dividing the total sales by 13 and multiplying by 12.

APPENDIX A

1-year interest rate for constant maturity U.S. Treasury Securities as published in the Federal Reserve Statistical Release H.15 (519) on May 1, 2020

H.15 Selected Interest Rates [RSS](#) [Data Download](#)

The release is posted daily Monday through Friday at 4:15pm. The release is not posted on holidays or in the event that the Board is closed.

Release date: May 6, 2020

Selected Interest Rates

Yields in percent per annum

Instruments	2020 Apr 29	2020 Apr 30	2020 May 1	2020 May 4	2020 May 5
Federal funds (effective) 1 2 3	0.04	0.05	0.05	0.05	0.05
Commercial Paper 3 4 5 6					
Nonfinancial					
1-month	0.21	0.22	0.15	0.20	0.12
2-month	0.43	0.14	0.19	0.21	0.19
3-month	0.66	0.78	0.21	0.18	0.19
Financial					
1-month	n.a.	n.a.	n.a.	0.10	n.a.
2-month	n.a.	n.a.	n.a.	n.a.	n.a.
3-month	n.a.	n.a.	n.a.	n.a.	n.a.
Bank prime loan 2 3 7	3.25	3.25	3.25	3.25	3.25
Discount window primary credit 2 8	0.25	0.25	0.25	0.25	0.25
U.S. government securities					
Treasury bills (secondary market) 3 4					
4-week	0.10	0.10	0.10	0.10	0.09
3-month	0.10	0.09	0.12	0.13	0.13
6-month	0.12	0.11	0.12	0.14	0.15
1-year	0.18	0.16	0.17	0.16	0.16
Treasury constant maturities					
Nominal 9					
1-month	0.10	0.10	0.10	0.10	0.09
3-month	0.10	0.09	0.12	0.13	0.13
6-month	0.12	0.11	0.12	0.14	0.15
1-year	0.18	0.16	0.17	0.16	0.16
2-year	0.20	0.20	0.20	0.19	0.19
3-year	0.24	0.24	0.25	0.24	0.24

Accessed via: <https://www.federalreserve.gov/releases/h15/>