

RESPONSE TO
PUBLIC ADVOCATE'S INTERROGATORIES
AND
REQUESTS FOR PRODUCTION OF DOCUMENTS
QUESTIONS 1-22

Dated: February 2021

1 **PA-VII-1.**

- 2 A. IS ALL LAND IN THE CITY INCLUDED IN THE PWD'S GROSS AND
3 IMPERVIOUS AREA CALCULATIONS (E.G., STREETS, CITY PARKS)? IF
4 NO, IDENTIFY THE LAND THAT IS EXCLUDED; AND
5 B. IF THE RESPONSE TO SUBPART (A) IS NO, PLEASE PROVIDE AN
6 ESTIMATE OF THE EXCLUDED GROSS AND IMPERVIOUS AREA, AND
7 EXPLAIN HOW THE COSTS ASSOCIATED STORMWATER SERVICE
8 PROVIDED TO THE EXCLUDED AREA IS RECOVERED.

9
10 **RESPONSE:**

11 A. Not all land in the City is included in the Water Department's Gross Area (GA) and
12 Impervious Area (IA) calculations. Specifically, areas outside of parcels, such as:
13 Streets, Medians and Public Rights-of-way, portions of City Parks, land without OPA
14 accounts, as well as streams and rivers are not included. In addition, the following GA
15 and IA is included in PWD's data sets and excluded from the stormwater units of service
16 analysis: Parcels owned by the Water Department, Cemeteries, Residential Sideyards,
17 City-Owned Vacant Properties, Community Gardens, Streets, Medians and Public
18 Rights-of-way and parcels without OPA accounts.

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20 The above areas are treated in a manner consistent with the underlying determinations
21 and policy decisions associated with the establishment of the stormwater parcel area-
22 based fee structure, subsequent rate determinations and applicable City Code
23 requirements. These areas are not considered billable as they are either exempt or
24 receive a full discount.

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26 B. The estimated amounts of GA and IA for the land noted in response to Part A of this
27 interrogatory are 1,521 million square feet and 739 million square feet, respectively.
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1 Stormwater costs are allocated as described in the Cost of Service Study (see PWD
2 Statement 7A, Schedule BV-5: Water & Wastewater Cost of Service Report, Section
3 7.10). Stormwater costs are recovered from billable parcels as defined in prior Rate
4 Determinations and the Water Department's existing Rates and Charges and not
5 recovered from the areas noted in response to Part A of this interrogatory.
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7 **RESPONSE PROVIDED BY:** Philadelphia Water Department and Black & Veatch
8 Management Consulting, LLC
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1 **PA-VII-2.** REFERENCE THE EXCEL FILE WCOS21_22.XLS, TAB “LAGRATE,” ROW
2 1008. PLEASE EXPLAIN WHY THE PWD HAS NOT PROPOSED RATES
3 FOR HANDBILLED CUSTOMERS WHICH ARE CLOSER TO THE
4 INDICATED COST OF SERVICE.

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6 **RESPONSE:**

7 Handbilled customers include surcharge and customers with sewer return factor
8 adjustments and are tracked separately for billing purposes only. The Cost of Service
9 Study proposes a rate schedule for all customers, which provides reasonable cost recovery
10 by customer type. The proposed FY 2022 and FY 2023 rate schedules were developed
11 based on balancing the overall cost recovery for Residential and Non-Residential
12 customers. Note – Handbilled customers are billed based upon a combination of the
13 overall rates established via costs of service as well as their surcharge amounts, which are
14 determined using the specific pollutant loadings associated with their wastewater effluent.

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16 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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1 **PA-VII-3.** REFERENCE THE RESPONSE TO PA-IV-20. PLEASE PROVIDE AN
2 ESTIMATE OF THE COSTS ASSOCIATED WITH ADDRESSING THE
3 BILLING SYSTEM LIMITATIONS CONCERNING CUSTOMER TYPES AND
4 VERIFYING ALL CUSTOMER TYPES.

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6 **RESPONSE:**

7 A full estimate of the cost associated with addressing the billing system limitations is not
8 available at this time. An initial scoping and pricing effort is expected to commence in FY
9 2021.

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11 **RESPONSE PROVIDED BY:** Water Revenue Bureau

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1 **PA-VII-4.** PLEASE PROVIDE AN ESTIMATE OF THE ANNUAL COSTS INCURRED
2 BY THE PWD TO MANAGE AND IMPLEMENT THE STORMWATER
3 MANAGEMENT CREDIT PROGRAM BY TYPE, INCLUDING COSTS FOR
4 CONSTRUCTION OF FACILITIES FOR FY 2017 – FY 2020. SEPARATELY
5 IDENTIFY AMOUNTS FOR WHICH THE PWD WAS DIRECTLY
6 RESPONSIBLE AND AMOUNTS OFFSET OR FUNDED BY OTHER
7 SOURCES.

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9 **RESPONSE:**

10 Stormwater credits are not a capital or an operating expense. Stormwater credits result in a
11 reduction in certain customer bills and therefore reduce revenue for the Water Department.
12 The bill reduction related to stormwater credits is detailed in PWD Exhibit 5, table 12 and
13 also provided below.

14

15 Program	16 Program Type	17 FY2020	18 FY 2019	19 FY 2018	20 FY 2017
21 Stormwater Credits	22 Bill Reduction	23 \$18,740,626	24 \$17,988,320	25 \$16,038,856	26 \$13,819,758

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The above amounts are inclusive of SMIP/GARP credits.

RESPONSE PROVIDED BY: Philadelphia Water Department

1 **PA-VII-5.** PLEASE IDENTIFY THE AMOUNTS INCLUDED IN THE STORMWATER
2 REVENUE REQUIREMENT FOR TEST YEAR 2022 FOR THE
3 STORMWATER MANAGEMENT CREDIT PROGRAM BY TYPE, AND
4 INDICATE WHERE THOSE COSTS ARE INCLUDED IN THE
5 STORMWATER COST OF SERVICE STUDY. SEPARATELY IDENTIFY
6 AMOUNTS FOR WHICH THE PWD WILL BE DIRECTLY RESPONSIBLE
7 AND AMOUNTS OFFSET OR FUNDED BY OTHER SOURCES.
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9 **RESPONSE:**

10 Administrative costs associated with the Stormwater Management Credit Program
11 included in the Department’s overall budget and included in the GSI Implementation Unit
12 of the Planning and Environmental Services Division. The overall GSI Implementation
13 Unit costs are allocated to 100% to wastewater and allocated under conveyance
14 maintenance costs with 40% allocated to sanitary and 60% to stormwater. This process
15 described in the Cost of Service study (see PWD Statement 7A, Schedule BV-5: Water &
16 Wastewater Cost of Service Report) following the projection of overall revenue
17 requirements. These costs are not isolated by “Type.”
18

19 Other than the overall miscellaneous and wholesale customer revenues, which reduce the
20 overall net wastewater revenue requirements, there are no amounts offset or funded by
21 other sources included in the Test Year 2022 revenue requirements. Stormwater credits
22 provided to customers are treated as a reduction in the billable units of service, as
23 described in the Cost of Service study noted above and further elaborated upon in the
24 Stormwater Units of Service white paper (see PWD Statement 7A, Schedule BV-6:WP-2
25 Stormwater Units of Service).
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27 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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1 **PA-VII-6.** PLEASE PROVIDE AN ESTIMATE OF THE ANNUAL COSTS ASSOCIATED
2 WITH THE GREEN ACRES RETROFIT PROGRAM BY TYPE FOR FY 2017 –
3 FY 2020. SEPARATELY IDENTIFY AMOUNTS FOR WHICH THE PWD
4 WAS DIRECTLY RESPONSIBLE AND AMOUNTS OFFSET OR FUNDED BY
5 OTHER SOURCES.

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7 **RESPONSE:**

8 See table below for an estimate of associated costs:

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FISCAL YEAR	PWD OPERATING COST (PIDC ADMIN FEE)	PWD OPERATING COST (GARP GRANTS)	ACT 13 GRANT	ASSOCIATED CREDITS
2017	\$ 406,830.00	\$ 17,332,512.00	\$ 614,727	\$ 1,161,500
2018	\$ 630,813.00	\$ 20,290,963.00	\$ 562,653	\$ 1,354,700
2019	\$ 583,473.52	\$ 29,152,327.48	\$ 698,175	\$ 2,163,100
2020	\$ 581,076.85	\$ 16,775,708.15	\$ 859,675	\$ 2,391,300

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20 **RESPONSE PROVIDED BY:** Philadelphia Water Department
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1 **PA-VII-7.** PLEASE IDENTIFY THE AMOUNTS INCLUDED IN THE STORMWATER
2 REVENUE REQUIREMENT FOR TEST YEAR 2022 FOR THE GREEN
3 ACRES RETROFIT PROGRAM BY TYPE, AND INDICATE WHEN THOSE
4 COSTS ARE INCLUDED IN THE STORMWATER COST OF SERVICE
5 STUDY. SEPARATELY IDENTIFY AMOUNTS FOR WHICH THE PWD
6 WILL BE DIRECTLY RESPONSIBLE AND AMOUNTS OFFSET OR
7 FUNDED BY OTHER SOURCES.
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9 **RESPONSE:**

10 The combined SMIP/GARP cost for Test Year 2022 is \$25.0 million. SMIP/GARP costs,
11 which include both grant amounts and Philadelphia Industrial Development Corporation
12 administration costs, are allocated between the sewer and stormwater revenue requirements.
13 Approximately 60% of these costs is recovered from all stormwater customers. This process
14 described in the Cost of Service study (see PWD Statement 7A, Schedule BV-5: Water &
15 Wastewater Cost of Service Report) following the projection of overall revenue
16 requirements. These costs are not isolated by “Type.”
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18 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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1 **PA-VII-8.** PLEASE PROVIDE AN ESTIMATE OF THE ANNUAL COSTS ASSOCIATED
2 WITH GREEN CITY CLEAN WATERS BY TYPE FOR FY 2017 – FY 2020.
3 SEPARATELY IDENTIFY AMOUNTS FOR WHICH THE PWD WAS
4 DIRECTLY RESPONSIBLE AND AMOUNTS OFFSET OR FUNDED BY
5 OTHER SOURCES.

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7 **RESPONSE:**

8 From July 1, 2011 through and including June 30, 2020, the Water Department’s capital
9 spending for COA projects was approximately \$235 million. During the same period, the
10 Water Department spent \$329 million from its operating budget and \$5.5 million was
11 funded through Act 13 Marcellus Shale Grant.

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13 **RESPONSE PROVIDED BY:** Philadelphia Water Department
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1 **PA-VII-9.** PLEASE IDENTIFY THE AMOUNTS INCLUDED IN THE STORMWATER
2 REVENUE REQUIREMENT FOR TEST YEAR 2022 FOR GREEN CITY
3 CLEAN WATERS BY TYPE, AND INDICATE WHERE THOSE COSTS ARE
4 INCLUDED IN THE STORMWATER COST OF SERVICE STUDY.
5 SEPARATELY IDENTIFY AMOUNTS FOR WHICH THE PWD WILL BE
6 DIRECTLY RESPONSIBLE AND AMOUNTS OFFSET OR FUNDED BY
7 OTHER SOURCES.

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9 **RESPONSE:**

10 Consistent with prior rate proceedings, Green City Clean Waters costs are not isolated
11 within the Cost of Service Study. Operating and capital revenue requirements are allocated
12 as described in the Cost of Service study (see PWD Statement 7A, Schedule BV-5: Water
13 & Wastewater Cost of Service Report) following the projection of overall revenue
14 requirements. Further, these costs are not isolated by “Type.”

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16 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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1 **PA-VII-10.** PLEASE UPDATE THE RESPONSE TO PA-IV-17 TO PRESENT.
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3 **RESPONSE:**

4 The requested data was provided in response to PA-V-3. Please see response attachment
5 PA-V-3.
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7 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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1 **PA-VII-11.** PLEASE PROVIDE A COPY OF THE CAPACITY FACTOR ANALYSIS(ES)
2 DESCRIBED IN THE RESPONSE TO PA-I-23 AND PA-IV-18.

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4 **RESPONSE:**

5 The capacity Factor Analysis(es) is not discussed in the response to PA-I-23.

6 As stated in the response to PA-IV-18, Black & Veatch continued to utilize the results of
7 the capacity factor analysis performed for the prior rate proceeding:

- 8 - The FY 2018 system peak maximum day to average day ratio of 1.39 is consistent with
9 the historical peak maximum day to average day ratio of 1.40 reflected in the capacity
10 factor analysis from the prior rate proceedings.
- 11 - The FY 2016 system peak maximum hour to average day ratio of 1.92 remains the
12 historical peak; this data point is reflected in the capacity factor analysis from the prior
13 rate proceedings.
- 14 - A high-level review of the FY 2018 monthly billing data by customer type revealed that
15 the maximum month for some customer types was impacted by a change in the number
16 of bills issued during the monthly billing period, which resulted in overstating the
17 maximum month to average day ratio of the corresponding customer types. Therefore,
18 we do not feel it is appropriate to use FY 2018 in the context of this analysis. This data
19 is under further review.
- 20 - Feedback provided by participants during the Alternative Rate Structure suggested that
21 PWD should further evaluate the customer impacts of potential rate structure changes
22 related to further adjustments with respect to the current declining block rate structure
23 for water usage. Therefore, additional adjustments were not included as part of this rate
24 proposal.

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26 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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1 **PA-VII-12.** REFERENCE THE RESPONSE TO PA-I-33. IN PWD STATEMENT 7A,
2 SCHEDULE BV-5 DOES NOT INCLUDE PAGES 140 AND 145, BUT
3 RATHER CHAPTER SPECIFIC NUMBERED PAGES. PLEASE PROVIDE
4 THE CHAPTER SPECIFIC NUMBERED PAGES REFERENCED IN THE
5 RESPONSE.

6

7 **RESPONSE:**

8 The response to PA-I-33 does not reference PWD Statement 7A, Schedule BV-5.

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10 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC

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1 **PA-VII-13.** REFERENCE THE RESPONSE TO PA-IV-14 AND WCOS21_22.XLS.
2 PLEASE EXPLAIN WHY THE VOLUMES REFLECTED IN RESPONSE TO
3 PA-IV-4 DIFFER FROM THOSE REFLECTED IN TAB WPLTALLO
4 WCOS21_22.XLS, ALLOCFAC1-ALLOCATION FACTORS-PAGE 1 AND
5 PAGE 2. ALSO EXPLAIN THE DIFFERENCES IN THE FACTORS
6 REFLECTED IN PAGES 1 AND 2, AND EXPLAIN HOW THE FACTORS IN
7 PAGES 1 AND 2 ARE USED IN THE COST OF SERVICE STUDY.
8

9 **RESPONSE:**

10 The volumes reflected in the response to PA-IV-14 do not differ from those reflected in tab
11 WPLTALLO WCOS21_22.xls, ALLOCFAC1-Allocation Factors-Page 1 and Page 2. As
12 noted in the response to PA-IV-4:

- 13 - Items A and B (System Average Day and System Maximum Day Water Production,
14 respectively) are presented as “Plant Output – Total” in “Allocation Factors – Page 1.”
15 These flows represent the water production from the water treatment plants.
16 - Item C (System Maximum Hour Water Production) is presented as “Total Districts Incl.
17 Bucks Co” in “Allocation Factors – Page 2.” These flows represent the water delivered
18 to the system from the water treatment plants and storage facilities.

19 The water system cost of service allocation factors are presented in Sections 4.6.1 (Retail
20 Allocation of O&M Expense) and 4.7.1 (Retail Allocation of Net Plant Investment) of PWD
21 Statement 7A, Schedule BV-5 and are consistent with prior rate proceedings. The following
22 allocations are based on the factors in tab WPLTALLO WCOS21_22.xls, ALLOCFAC1-
23 Allocation Factors-Page 1 and Page 2:

- 24 - Raw Water Pumping (other than purchased power) and Water Treatment (exclusive of
25 exclusive of power, chemical costs, and sludge treatment and disposal costs) maximum
26 day based allocation factors are based on the “Raw Water Pumping” Maximum Day and
27 Average Day flows presented on “Allocation Factors – Page 1.”
28

- 1 - Treated water pumping (exclusive of power costs) and Transmission and Distribution
2 maximum hour based allocation factors are based on the “Total Districts Incl. Bucks
3 Co” Maximum Hour, Maximum Day and Average Day flows presented on “Allocation
4 Factors – Page 2.”

5 Please note that the information referenced in this interrogatory request can be found in the
6 following pages of PWD Exhibit-6: Black & Veatch Management Consulting, LLC,
7 Calculations Supporting Schedules BV-1, BV-2, BV-3, and BV-5:

- 8 - “Allocation Factors – Page 1” - WCOS21_22, Wpltallo-3 (page 820)
9 - “Allocation Factors – Page 2” - WCOS21_22, Wpltallo-4 (page 821)

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12 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC

1 **PA-VII-14.** PLEASE UPDATE THE RESPONSE TO PA-IV-22 AS APPLICABLE.
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3 **RESPONSE:**

4 Refer to provided response to PA-IV-22.
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6 **RESPONSE PROVIDED BY:** Philadelphia Water Department
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1 **PA-VII-15.** REFERENCE THE RESPONSE TO PA-IV-25:

2 A. PLEASE EXPLAIN WHETHER THESE WATER QUALITY TESTING COSTS
3 WOULD INCREASE ON A MAXIMUM DAY OR DURING MAXIMUM
4 HOUR ABOVE THOSE EXPERIENCED DURING AN AVERAGE DAY OR
5 HOUR. IF THEY WOULD CHANGE, PLEASE IDENTIFY THE SPECIFIC
6 MAXIMUM DAY- AND MAXIMUM HOUR-RELATED TESTING
7 CONDUCTED BY THE COMPANY; AND

8 B. PLEASE PROVIDE A DETAILED DESCRIPTION OF THE COST INCLUDED
9 IN LINES 11 AND 15 THAT ARE QUALITY TESTING RELATED.
10

11 **RESPONSE:**

12 A. Preparation of this response is in progress and will be provided in the future.

13 B. As noted in the response to PA-VIII-15, the quality testing related costs included in Lines
14 11 and 15 include an allocation of the Bureau of Lab Services (BLS). BLS provides a
15 variety of analytical services to support the Water Department's water quality requirement
16 and environmental initiatives.
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18 **RESPONSE PROVIDED BY:** Philadelphia Water Department, and Black & Veatch
19 Management Consulting, LLC
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1 **PA-VII-16.** REFERENCE PA-IV-26. PLEASE IDENTIFY ALL WATER QUALITY TESTS
2 WHICH THE FREQUENCY OF PERFORMANCE DEPENDS ON WHETHER
3 A MAXIMUM DAY OR MAXIMUM HOUR HAS OCCURRED OR IS BEING
4 INCURRED. IS THE FREQUENCY OF WATER QUALITY TESTING
5 GENERALLY BASED ON QUANTITIES PRODUCED OR MAXIMUM
6 DAY/HOUR DEMANDS?
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8 **RESPONSE:**

9 Preparation of this response is in progress and will be provided in the future.
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11 **RESPONSE PROVIDED BY:** Philadelphia Water Department
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1 **PA-VII-17.** REFERENCE THE RESPONSE TO PA-IV-29. PLEASE IDENTIFY THE
2 NUMBER OF FIRES, FIRE FLOWS, AND FIRE DURATIONS USED IN THE
3 NEW ORLEANS AND CHARLESTON COST STUDIES.
4

5 **RESPONSE:**

6 New Orleans:

- 7 • Fire 1 – 12,000 gallons per minute (gpm) max fire flow, 10 hours/day duration
- 8 • Fire 2 – 6,000 gpm max fire flow, 6 hours/day duration

9
10 Charleston:

- 11 • Fire 1 – 5,900 gpm max fire flow, 4 hours/day duration
- 12 • Fire 2 – 5,500 gpm max fire flow, 4 hours/day duration

13
14 New Orleans is currently conducting a cost of service study and the above figures are
15 subject to change.
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17 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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1 **PA-VII-18.** PLEASE EXPLAIN HOW THE GROUNDWATER CHARGE IS ASSESSED
2 (SCHEDULE BV-5, ES-10).
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4 **RESPONSE:**

5 Groundwater charges are assessed in accordance with PWD Rates and Charges, Section
6 7.1.
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8 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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1 **PA-VII-19.** PLEASE IDENTIFY THE AMOUNT INCLUDED IN THE WATER,
2 WASTEWATER AND STORMWATER COST OF SERVICE STUDIES FOR
3 UNCOLLECTIBLE EXPENSES. IDENTIFY THE LOCATION OF THOSE
4 AMOUNTS IN EACH STUDY.

5
6 **RESPONSE:**

7 Consistent with prior rate proceedings, the cost of service analyses develops projected
8 annual revenues based on receipts which reflect payments of billings from the test year and
9 prior years. Since the projected test year revenues include the payment of billings from prior
10 years, the cost of service analyses provides comparisons of the cost of service rates prior to
11 adjusting for receipts. In addition, as noted in PWD Statement 7A on page 41 (lines 8 to
12 14), the cost of service utilized for rate design is adjusted based on annualizing the 10-month
13 period for which the proposed rates are effective. The annualized cost of service utilized for
14 rate design should not be compared to revenues proposed to be collected from each customer
15 class during the test years, since the revenues to be collected reflect the September 1st
16 implementation of proposed rates (i.e. not a full 12 months of revenues at the proposed
17 rates).

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20 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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1 **PA-VII-20.** REFERENCE THE RESPONSE TO PA-IV-17. ARE THE FIRE SERVICE
2 QUANTITIES REFLECTED IN THE ATTACHMENT PRIVATE FIRE
3 VOLUMES? IF NO, EXPLAIN WHAT THESE VOLUMES REPRESENT.
4

5 **RESPONSE:**

6 Yes, the billed volume quantities reflected as “Fire Service” in the response attachment
7 PA-IV-17 are flows from metered private service meters.
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9 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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1 **PA-VII-21.** REFERENCE THE RESPONSE TO PA-I-33. PLEASE IDENTIFY WHERE
2 THIS ALLOCATION CAN BE FOUND IN THE WASTEWATER COST OF
3 SERVICE STUDY SCHEDULES.

4

5 **RESPONSE:**

6 PA-I-33 does not discuss allocations used in the Cost of Service Study.

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8 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC.

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1 **PA-VII-22.** PLEASE PROVIDE A COMPARISON OF REVENUES AT PRESENT RATES
2 AND AT PROPOSED RATES FOR EACH RATE CLASS INCLUDED IN THE
3 COST OF SERVICE STUDIES FOR WATER, WASTEWATER AND STORM
4 WATER SERVICE. INCLUDE THE SUPPORTING CALCULATIONS FOR
5 PROPOSED REVENUES IN EXCEL FORMAT WITH ALL FORMULAS
6 INTACT.

7
8 **RESPONSE:**

9 See response attachment PA-VII-22 which provides the FY 2022 and FY 2023 projected
10 revenue under existing and proposed rates. These results are developed with the model file
11 (Finplan21_22.xlsx) provided in response to PA-IV-11 utilizing the projected revenue under
12 existing rates sections and revising the rates to reflect the proposed rate schedules.

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14 **RESPONSE PROVIDED BY:** Black & Veatch Management Consulting, LLC
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