RESPONSE TO

PUBLIC ADVOCATE'S INTERROGATORIES (SET III)

AND

REQUESTS FOR PRODUCTION OF DOCUMENTS

QUESTIONS 1-31

Dated: March 2023

PA-III-1. REFERENCE THE DISCUSSION ON PWD STATEMENT 2A AT PAGE 6, LINE 8, RELATING TO PWD'S CASH RESERVE. PLEASE PROVIDE PWD'S CASH RESERVE TARGETS FOR FY 2023, 2024 AND 2025.

RESPONSE:

Please see PWD Statement 2A (Schedule FP-1) PDF page 45. For additional information see also, PWD Statement 2B (Financial Advisors Memorandum) pages 3-4.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-2. ACCORDING TO PWD STATEMENT 2A AT PAGE 6, LINES 12 THROUGH 15, WITHOUT RATE RELIEF, THE DEPARTMENT WOULD NOT BE ABLE TO MEET THE 90% TEST IN FY 2025 AND COULD DEPLETE THE RATE STABILIZATION FUND BALANCE BY THE END OF FY 2025. PLEASE IDENTIFY AND EXPLAIN ALL COST CONTROL MEASURES AND SOLUTIONS THAT PWD HAS CONSIDERED AND HAS ON STANDBY IN THE EVENT THE PROJECTED OPERATING RESULTS MATERIALIZE. IF THE RATE INCREASE IS THE ONLY SOLUTION CONTEMPLATED BY PWD, PLEASE STATE SO.

RESPONSE:

PWD has a vigorous budget process through which all program managers submit and justify their budget to senior management. Most of the increases requested are related to non-discretionary expenses arising from external inflationary pressure. There are some increases that may be seen as under limited management control, but PWD believes that curtailing these costs will compromise the viability of the system. Areas that could be explored if a rate covenant violation were imminent might include the following:

A) Delay or make inadequate investment in the replacement of aging infrastructure (with associated risk of system failures).

B) Delay or make inadequate investment in critical maintenance (with associated risk of system failures).

C) Delay transfer of staff from capital to operating fund (deferring cost for now and increasing costs in future years).

D) Impose hiring freeze (with associated risk that such action may trigger higher overtime costs and/or increased costs for vendor services).

E) Further reduce SMIP/GARP (and potentially jeopardize meeting regulatory compliance metrics under the COA).

The above one-time fixes are examples of measures that might be explored, if a technical default was imminent.

There are other areas that management has undertaken and is actively pursuing for cost savings, but many of its actions have a longer term impact (spread over many years). For example, PWD succeeded in obtaining low-interest loans from PENNVEST and WIFIA for capital investment, the impact of which is reflected in the current rate filing. PWD is also pursuing grant opportunities for the capital programs, but even if these were to materialize they will have minimal impact on costs during the rate period.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-3. PLEASE INDICATE WHETHER ANY PORTION OF PWD'S MANAGEMENT COMPENSATION IS PEGGED TO COST CONTROL OR THE REVENUES OF THE UTILITY.

A. IF YES, PLEASE PROVIDE A COPY OF THE COMPENSATION PLAN DOCUMENT THAT DESCRIBES HOW THE PLAN WORKS AND IDENTIFIES THE SPECIFIC GOALS OR TARGETS THAT MUST BE MET BEFORE ANY PAYMENTS ARE MADE UNDER THE PLAN.

B. IF THE GOALS OR TARGETS VARY FROM YEAR TO YEAR, PLEASE PROVIDE THE GOALS OR TARGETS FOR FY 2023, 2024 AND 2025.

RESPONSE:

No. PWD's management compensation is not pegged to cost control or the revenues of the utility.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-4. IF NO PORTION OF MANAGEMENT COMPENSATION IS TIED TO COST CONTROL OR REVENUES GOALS, PLEASE IDENTIFY THE TOOLS THAT ARE USED TO INCENTIVIZE MANAGEMENT TO CONTROL COSTS.

RESPONSE:

Cost control at PWD starts with budgeting. PWD has a vigorous budget process through which all program managers submit and justify their budget to senior management. During the year, PWD Finance produces monthly budget monitoring reports that evaluate budget performance.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-5. REFERENCE PWD STATEMENT 2A AT PAGE 6, LINE 21. PLEASE DEFINE "UNDER STRESS" AS USED IN THIS SENTENCE. IN YOUR RESPONSE, PLEASE IDENTIFY AND QUANTIFY THE METRICS USED TO MEASURE THE AMOUNT OF STRESS BEING EXPERIENCED BY PWD.

RESPONSE:

In the context of the testimony set forth in PWD Statement 2A at page 6, line 11, the phrase "under stress" is a qualitative statement indicating that that financial metrics were pressured or worsened by increased costs in FY 2023 when comparing the estimates from the 2021 Rate Proceeding with the 2023 Rate Proceeding. These increased costs include increased expenditures relating to materials, supplies, equipment, chemicals, services and workforce costs. The fact that PWD was "under stress" financially is also evidenced by the need for a $14 million mid-year supplemental budget ordinance to support cost increases experienced in that year.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-6. ON PAGE 6, LINE 21 OF PWD STATEMENT 2A, IT STATES THAT PWD'S FINANCIAL CONDITION IS UNDER STRESS DUE TO INCREASED COSTS, SINCE THE 2021 GENERAL RATE CASE.

A. PLEASE EXPLAIN HOW PWD COULD BE UNDER STRESS WHEN THE FINANCIAL PANEL STATES ON PAGE 8 OF ITS TESTIMONY, THAT FY 2022 REVENUES WERE HIGHER THAN PROJECTED, AND EXPENSES WERE LOWER THAN PROJECTED.

B. DOES PWD AGREE THAT THE COMBINATION OF HIGHER REVENUES AND LOWER EXPENSES RESULTS IN HIGHER NET REVENUES? IF NO, PLEASE EXPLAIN.

RESPONSE:

A. The statement "…under stress due to increased costs, since the 2021 General Rate Case…" refers to the projection of increased costs in FY 2023, not FY 2022. When comparing the projections for operating expenses or costs for FY 2023 from the 2021 General Rate Proceeding to the 2023 General Rate Proceeding, the more recent projections are higher.

B. The statement on page 8 of PWD Statement 2A regarding "revenue results for FY 2022 were higher than projections" attributes such variance to federally funded programs (LIHWAP and PHCD) reflecting grants that are not expected to recur beyond FY 2023. The statement that "expenses for FY2022 were lower than projections" on the same page of PWD Statement 2A referenced above is partially attributable to the delay or deferral of maintenance contracts.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-7. PLEASE PROVIDE THE BASIS FOR THE STATEMENT BEGINNING ON PAGE 7, LINE 2 THAT DURING FY 2023, PWD REVENUE REQUIREMENTS INCREASED SIGNIFICANTLY ABOVE THE LEVEL OF AUTHORIZED REVENUES. PLEASE EXPLAIN HOW THIS STATEMENT CAN BE MADE AT THIS POINT IN TIME WHEN FY 2023 HAS NOT YET ENDED.

RESPONSE:

The statement on page 7, line 2 of PWD Statement 2A that "PWD revenue requirements increased significantly above the level of authorized revenues" is based upon actual results to date for FY 2023 for expenses incurred being higher than that which was projected.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-8. ON PAGE 13 OF PWD STATEMENT 2A, IT STATES "[F]ROM BOTH AN OPERATIONAL AND A CREDIT RATING PERSPECTIVE IT IS ESSENTIAL FOR THE DEPARTMENT TO SUSTAIN DEBT SERVICE COVERAGE LEVELS SIGNIFICANTLY ABOVE THE MINIMUM LEVELS REQUIRED BY THE RATE COVENANTS TO PROVIDE RATING AGENCIES AND BONDHOLDERS COMFORT THAT THE DEPARTMENT IS NOT CONTINUALLY OPERATING AT THE EDGE OF AN EVENT THAT WOULD CAUSE A VIOLATION OF THE RATE COVENANTS."

A. PLEASE PROVIDE ANY DOCUMENTED EVIDENCE THAT SUPPORTS THIS STATEMENT.

B. PLEASE INDICATE AND QUANTIFY WHAT WOULD BE CONSIDERED "SIGNIFICANTLY ABOVE THE MINIMUM LEVELS REQUIRED BY THE RATE COVENANTS".

RESPONSE:

A. For "operational perspective", the American Water Works Association, Principles of Water Rates, Fees, and Charges (7th Ed.) provides:

"It is common practice for utilities to finance a portion of its capital improvement program from annual revenues (sometimes referred to as pay-as-you-go, or PAYGO, capital funding" (pg. 39).

"Compliance with debt-service coverage covenants may provide cash funding of a portion of the annual capital improvement needs." (pg. 40).

For "credit rating" perspective:

In the Fitch Ratings report of August 1, 2022: "The system's liquidity profile is expected to remain neutral to the assessment with COFO (coverage of full obligations) of at least 1.3x." "Should projected rate increases fail to receive necessary approvals, Fitch anticipates PWD would adjust operating and /or capital spending and related debt plans to meet internal financial targets and maintain leverage consistent with the current assessment. Failure to make necessary adjustments while remaining compliant with regulatory mandates would pressure the financial profile assessment and rating." (PWD Statement 2A, pdf pg. 105) This means that if rates (adjustments) are not raised in an amount sufficient to both fund (via debt and pay-go) the capital program (regulatory mandates) and maintain the debt service coverage (1.3x viewed as neutral), the rating will be pressured (downward).

In the Moody's Ratings Action report of July 27, 2022: "The A1 rating incorporates our (Moody's) expectation of substantial future rate increases and debt issuances in the coming years to support the department's capital improvement plan." "Incorporated into the stable outlook is an expectation that the department will use its rate stabilization reserve to meet debt service coverage covenants in fiscal 2022 and 2023. However, we also anticipate that the reserve usage will be modest, temporary, consistent with rate covenants, and still in line with the current rating." (PWD Statement 2A, pdf pg. 109) This means that Moody's accepts the projected temporary draws from the RSF and lower than targeted 1.3x debt service coverage, but that the Moody's 'A1 stable' rating is predicated on thereafter returning to the Rate Board targeted 1.3x debt service coverage and Rate Board targeted $135 million balance in the Rate Stabilization Fund.

In the Moody's Credit Opinion report of August 2, 2022: "A rate increase of 10.4% in (FY) 2024, followed by increases of more than 8% each year thereafter through 2027, are projected to be required to stabilize coverage back to the department's preferred 1.3x threshold and rebuild reserves." "Our current credit view of the department includes its use of rate stabilization reserves through the next four fiscal years, with reserves expected to be drawn down to $117 million by next year from the department's typical $150 million position. Reserve draws beyond current expectations, due to prolonged or worsening customer delinquencies or an inability of the department to raise rates as needed to support rate covenant without further reserve draws will pressure the department's current credit profile." "Should future rate increases not be realized, or if reserves are drawn down beyond current expectations, PWD's current credit profile could be pressured." (PWD Statement 2A, pdf pgs. 114 & 117) This, again, means that the Moody's 'A1 stable' rating is predicated on returning to the Rate Board targeted 1.3x debt service coverage and Rate Board targeted $135 million balance or better in the Rate Stabilization Fund.

In the S&P report of July 28, 2022: "Setting rates to the legal minimum (1.2x) leaves little cushion for future revenue deviations, which could threaten compliance in any given year without additional unplanned use of the RSF." "Deferral of capital (funding) could result in infrastructure under-investment, creating additional risks." "The (A+) stable outlook is predicated on the city being able to generate margins that are generally in line with current financial projections, which show steadily improving DSC (debt service coverage) after consideration of both operating expenses and transfers for capital projects. While the outlook also incorporates some planned spend-down in the RSF as indicated in PWD's current projections, we (S&P) would also expect that along with the improving DSC, the RSF reductions will be no less than what current projections show. Our assessment that the financial projections are attainable is based on PWD's historical willingness to adjust rates to meet its financial targets while maintaining compliance with all required covenants." (PWD Statement 2A, pdf pgs. 124 & 125) S&P, like Moody's, while acknowledging certain short-term coverage and reserve balance deficiencies, is stating that the current rating and outlook are predicated on achieving planned debt service coverages (1.3x), not simply the bond covenant requirement (1.2x).

See also, PWD Statement 2A, Schedule FP-3 (Rating Agency Reports); PWD Statement 2B, Schedule FA-1 (Financial Advisors Memorandum) in this proceeding. See also, PWD Statement 1, Schedule ML-3 from the 2022 Special Rate Proceeding.

B. In the context of PWD Statement 2A (page 13), “significantly” means 0.1x or an increase from the General Ordinance required 1.20x coverage. Please note that the Rate Board concluded that the 1.30x coverage target was reasonable in its 2018 Rate Determination. Also, in this context, “minimum” means the 1.20x General Ordinance required rate covenant.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-9. ACCORDING TO PAGE 15, LINE 1 OF PWD STATEMENT 2A, "DUE TO CURRENT CIRCUMSTANCES, PWD PROPOSES TO FOREGO CERTAIN FINANCIAL TARGETS DURING THE RATE PERIOD". PLEASE IDENTIFY THE SPECIFIC CIRCUMSTANCES CAUSING PWD TO FOREGO THE FINANCIAL TARGETS.

RESPONSE:

PWD recognizes that increased rates burden our customers. Taking this into account, PWD has chosen to forgo meeting certain financial metrics (e.g., pay-go financing, 1.3x coverage), previously recommended by the Rate Board, to help manage the requested revenue adjustment.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-10. BEGINNING ON PAGE 12, LINE 24 OF PWD STATEMENT 2A, IT STATES "PWD IS REQUESTING THAT THE RATE BOARD AFFIRM ITS APPROVAL OF THE SPECIFIC FINANCIAL METRICS AUTHORIZED IN THE 2018 GENERAL RATE PROCEEDING. THESE METRICS ARE INCORPORATED IN THE DEPARTMENT'S UPDATED FINANCIAL PLAN AND INCLUDE THE FOLLOWING: (I) TARGETING PAY-GO FUNDING OF AT LEAST 20% OF THE DEPARTMENT'S CAPITAL PROGRAM FROM CURRENT REVENUES; (II) TARGETING A SENIOR DEBT SERVICE COVERAGE RATIO OF 1.30X; AND (III) MAINTAINING $150 MILLION AS THE COMBINED TARGET FOR CASH RESERVES IN THE RATE STABILIZATION AND RESIDUAL FUNDS". PLEASE EXPLAIN HOW THE BOARD CAN REAFFIRM THE METRICS LISTED ABOVE WHEN PWD PROPOSES TO FOREGO THE PERCENTAGE OF CAPITAL FUNDING FROM CURRENT REVENUES, THE TARGET RATE STABILIZATION FUND GOAL OF $135 MILLION, AND THE DEBT SERVICE COVERAGE OF 1.30 TIMES.

RESPONSE:

The Board's affirmation will indicate a continued commitment for reaching and maintaining these targets. PWD's proposal to forgo these targets in the short-term is to help lessen the burden on our ratepayers as we adjust to significant inflationary increases.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-11. GIVEN THAT PWD IS FORGOING MEETING THE TARGET FINANCIAL METRICS SPECIFIED IN THE 2018 GENERAL RATE CASE, PLEASE EXPLAIN HOW PWD WILL CONVINCE RATING AGENCIES AND BONDHOLDERS THAT PWD IS NOT CONTINUALLY OPERATING AT THE EDGE OF AN EVENT THAT WOULD CAUSE A VIOLATION OF THE RATE COVENANTS.

RESPONSE:

The Department (i) has developed its Financial Plan incorporating the requested rate adjustments to return to financial targets of 1.3x debt service coverage and $150 million rate stabilization fund/residual fund combined balances in the near term and (ii) has communicated this plan to the rating agencies (in the Department's presentations) and to prospective bondholders (in the Department's Official Statements). Thus far, the rating agencies have considered the Department's plan and associated projections to be reasonable contingent upon receiving the projected rate increase, as evidenced by the continued maintenance of the respective bond ratings and outlooks. The best way for the Department to continue to convince these entities that the financial targets included in the Financial Plan will be met is for the Rate Board to approve the requested rate increases. The request revenues adjustment puts the Department on the path to attain the targets in the future.

RESPONSE PROVIDED BY: Acacia Financial Group Inc and PFM Financial Advisors LLC.

PA-III-12. PLEASE IDENTIFY THE SPECIFIC FINANCIAL DIFFICULTIES THE DEPARTMENT IS FACING IN FY2023, AS STATED ON PAGE 16, LINE 17 OF PWD STATEMENT 2A AND PROVIDE EVIDENCE DEMONSTRATING THE FINANCIAL DIFFICULTIES.

RESPONSE:

Increasing costs related to labor, chemicals, materials and supplies are among the areas of increasing costs that PWD is facing in FY 2023 and is projected to face in FY 2024 and FY 2025. See also, PWD Statement 2A (Schedule FP-1) and response to PA-III-5.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-13. IS IT A CORRECT UNDERSTANDING OF PWD STATEMENT 2A THAT THE RATE INCREASE, AS REQUESTED BY PWD, WILL AVOID A "CREDIT RATING DOWNGRADE OR MARKET ACCESS DETERIORATION" EVEN THOUGH THAT PROPOSED RATE INCREASE WOULD RESULT IN TARGET FINANCIAL METRICS WHICH PWD PREVIOUSLY ARGUED WOULD CAUSE A RATINGS DOWNGRADE? PLEASE FULLY EXPLAIN.

RESPONSE:

The Department cannot make any blanket statements as to any action that the credit rating agencies may or may not take with respect to the assigned credit ratings and outlooks. By definition, rating agencies ratings are strictly opinions on the part of these parties and no representation is made on their part that such rating may or may not change in the future. However, the Department believes that it has fairly represented to the rating agencies its Financial Plan that includes the magnitude of the requested rate increases and that the rating agencies have considered these projections, inclusive of the proposed rate increases, in their consideration and rendering of the current ratings and outlooks. Please note that the outlook is inherently a forward looking metric and all three of the credit rating agencies currently have stable outlooks implying that the rating agencies view the ratings as 'stable' subject to the adoption of the proposed rate increases.

RESPONSE PROVIDED BY: Acacia Financial Group Inc and PFM Financial Advisors LLC.

PA-III-14. ACCORDING TO PWD STATEMENT 7, BEGINNING AT PAGE 10, LINE 21, THE REQUESTED RATE INCREASES AND ACCOMPANYING TAP-R SURCHARGE REVENUES WILL ALLOW PWD TO MEET TARGET FINANCIAL METRICS. PLEASE IDENTIFY AND QUANTIFY THE SPECIFIC TARGET FINANCIAL METRICS THAT BLACK & VEATCH BELIEVES PWD SHOULD ATTAIN.

RESPONSE:

Targeted financial metrics related to Debt Service Coverage are discussed on page 36 lines 17 to 25 of PWD Statement 7. Rate Stabilization Fund (RSF) and Residual Fund Target metrics are discussed on pages 37 to 38 of PWD Statement 7. For additional background please see, PWD Statement 2A (Schedule FP-1) and PWD Statement 2B (Schedule FA-1).

At this time, target financial metrics should adhere to the 2018 Rate Board Determination. As previously noted, PWD has chosen to forgo the debt service coverage target during the requested rate period.

Please note that Black & Veatch recommends that PWD seek to attain its targeted financial metrics over the long term. In addition, we recommend that in the future the RSF target balance be revisited as the current target of $135 million was established over 5 years ago prior to the current inflationary environment and based upon Water Fund costs at the time.

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

PA-III-15. ACCORDING TO PWD STATEMENT 7, BEGINNING AT PAGE 14, LINE 25, VICINITY PLANS TO REDUCE ITS OVERALL WATER USAGE WHICH WILL RESULT IN VICINITY RECEIVING LIMITED WATER SERVICE, SEWER AND STORMWATER SERVICES. PLEASE PROVIDE THE EXPECTED USAGE VOLUME AND REVENUES FOR EACH OF THESE SERVICES FOR FY 2024 AND 2025. PLEASE SHOW HOW THESE REVENUES WERE REFLECTED IN THE COST OF SERVICE.

RESPONSE:

Please note that the referenced statement ("When Vicinity reduces its overall water usage, it will receive limited water service along with sewer and stormwater services associated with its facilities") implies that only the water service will be limited.

Refer to Section 1.4.1 of Schedule BV-2: Water and Wastewater Cost of Service Report. As noted on page 1-9 of Schedule BV-2, Black & Veatch adjusted the projected FY 2024 commercial customer billed volume to reflect an estimate reduction of 90,000 Mcf associated with Vicinity's implementation of their own water treatment facility.
This adjustment was made by adjusting the demand escalation factor for commercial customers in FY 2024 to achieve the estimated reduction as detailed in Table 1-2 on Page 1-11 of Schedule BV-2.

This adjustment is reflected in the Financial Plan Model as provided along with the associated Workpapers included in PWD Exhibit 6. Refer to the following pages in the FINPLAN worksheet:

- Adjusted Water Service: Assumptions-2, Customer-3, Customer-4, Customer-6, and Customer-8.
- Adjusted Sewer Service (reflected in Sewer Only): Assumptions-11 (row 366 to 533), Customer-12, Customer-15, and Customer-17.

Stormwater service charges are not adjusted.

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

PA-III-16. PLEASE PROVIDE THE DATA USED TO CALCULATE THE 90,000,000 CUBIC FEET FOR EACH YEAR OF THE THREE YEARS USED IN THE AVERAGE RELATING TO THE LOSS OF VICINITY.

RESPONSE:

As noted in PWD Statement 7, Schedule BV-2, Vicinity is not leaving the system, they are building their own water treatment plant which will significantly reduce their reliance on PWD water service.

In the Limited Objection of Vicinity Energy Philadelphia Inc. dated June 3, 2020, Vicinity indicated that as a result of the withdrawal of the 2020 General Rate Proceeding, their intention to pursue During the 2020 General Rate Proceeding , "Vicinity will be forced to pursue the installation of a combined ultra-filtration and reverse osmosis system that will reduce Vicinity's consumption of PWD's water supply by approximately eighty percent (80%), as well as Vicinity's overall reliance on the PWD." [Link: Ltr-to-Judge-Chestnut-June-3-C1.pdf (phila.gov)]

As presented in response attachment PA-III-16, Vicinity purchased an average of 1,196,135 CCF of water from PWD during FY 2020 to FY 2022.

For purposes of developing the financial plan projections over the study period, the projected FY 2024 commercial customer billed volume is reduced by 90,000 Mcf and the projected FY 2024 Sewer Only billed volume is increased by 90,000 Mcf.

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

PA-III-17. PLEASE EXPLAIN WHAT ACTIONS WERE TAKEN BY PWD TO RETAIN VICINITY AS A CUSTOMER.

RESPONSE:

Vicinity remains a customer of PWD. The Department has been in continuing communication with Vicinity about its plans to build its own water treatment plant.

In 2020, Vicinity approached the Water Department about the potential to receive a Special Rate for their facilities and associated water usage. Vicinity was informed that PWD does not set rates and charges, as that is in the purview of the Rate Board. In addition, any "Special Rate" outside of the cost of service-based rates and charges, would likely also require City Council action to establish a special customer group.

Please also recall that Vicinity also filed a limited objection to PWD's request to withdraw the 2020 rate case as they indicated their desire to intervene a seek a "lower rate."

It is PWD's understanding that in addition to the reduction in purchased water costs resulting from Vicinity's own water treatment plant, treatment chemicals utilized in PWD's water production are not ideal for Vicinity's steam plant operations. Therefore, treating water to their own specifications and needs also provides benefit to Vicinity.

RESPONSE PROVIDED BY: Philadelphia Water Department and Black & Veatch Management Consulting, LLC.

PA-III-18. REFERENCE PWD STATEMENT 7, BEGINNING AT PAGE 15, LINE 9,

A. PLEASE PROVIDE THE BILLED VOLUMES AND LOADINGS DATA USED TO CALCULATE THE ESTIMATED THREE-YEAR AVERAGE.

B. IF NOT PROVIDED ABOVE, PLEASE PROVIDE THE SUPPORTING CALCULATION IN ELECTRONIC FORMAT WITH THE FORMULAE INTACT.

RESPONSE:

Please refer to the provided FINPLAN Model. The requested information is provided PWD Exhibit 6 Customer-19.

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

PA-III-19. PLEASE PROVIDE A NARRATIVE THAT EXPLAINS WHAT THE HYDRAULIC AND HYDROLOGIC ("H&H") MODELING IS. IN YOUR RESPONSE, PLEASE INCLUDE THE FOLLOWING:

A. PLEASE EXPLAIN HOW THE H&H MODELING RESULTS IN A LOWER ALLOCATION OF LTCPU COSTS.

B. AN EXPLANATION OF WHAT LTCPU COSTS ARE, WHETHER THEY ARE ASSESSED OF PWD OR THE WHOLESALE CUSTOMERS.

C. PLEASE EXPLAIN HOW THE WHOLESALE CUSTOMERS WERE BILLED FOR THESE COSTS.

D. SINCE THE H&H MODELING RESULTS IN A REDUCTION OF COSTS ALLOCATED TO WHOLESALE CUSTOMERS, WHAT HAPPENS TO THE COSTS THAT WERE FORMERLY ALLOCATED TO THE WHOLESALE CUSTOMERS?

RESPONSE:

Hydrologic processes are associated with the response of the land surface to events such as rainfall, evaporation, infiltration, and runoff. The hydraulic processes are those that govern what happens to stormwater and wastewater after it enters the City's sewer network. The sewer network not only contains pipe but also has flow control structures like dams, orifices, weirs, pumps, gates, storage, etc.

The City's combined sewer system is large, complex and interconnected. To evaluate the response of this complex sewer system during rainfall periods as well during dry periods, mathematical representations of the hydrology and major hydraulic elements were built. These mathematical representations are called the hydrologic and hydraulic (H&H) models.

The H&H models are further calibrated to match physical observations in the sewers using physical flow monitor measurements deployed in the sewer system. The calibrated H&H models provide insights into the current performance of the sewer system as well as help evaluate the potential impacts of system modifications.

The H&H models utilized by PWD are developed using the United States Environmental Protection Agency (US EPA) Storm Water Management Model (SWMM).

A. The City has revised the method used to assign the wholesale customer's portion of the cost associated with implementing Philadelphia's combined sewer overflow (CSO) Long Term Control Plan Update (LTCPU). The revised method is based on the impact a current wholesale customer's flow contribution has on the average annual CSO volume from the permitted CSO outfalls in the City of Philadelphia.

   The previous calculation method used to assign the wholesale customer's portion of the cost associated with implementing Philadelphia's CSO LTCPU was based on the ratio of the wholesale customer service agreement's peak flow limit to the total permitted peak wastewater treatment capacity available at Philadelphia's three water pollution control plants (WPCPs).

   The updated method accommodates the complexity of the wastewater collection system, the locations where the wholesale customer connects to the City's wastewater system, and their impact on the CSO volume. When the revised method is used in context of wholesale cost allocation, the wholesale customer's costs are lower when compared to the previous method.

   For the revised method, the average annual CSO volume is determined using the H&H models of PWD's wastewater collection and treatment system developed for

Philadelphia's CSO LTCPU. These models are simulated using the LTCPU "typical year" rainfall, which is a representation of the historical average annual rainfall condition used to support the LTCPU.

CSO volume impacts for each wholesale customer are determined by removing the dry-weather and wet-weather flows for each customer in the H&H models and then comparing the results to the base scenario. The CSO modeling results, for each of the ten wholesale customer flow removal scenarios, are compared to a base scenario representing existing conditions (as of 2021).

The allocations based on the H&H modeling provide a better representation of the wastewater collection system capacity.

B. In 2009, PWD submitted a federally mandated update to its Long-Term Control Plan (LTCPU) for combined sewer overflows. Following negotiations, PADEP issued a Consent Order and Agreement (COA) in 2011 requiring PWD to upgrade its wastewater collection and treatment infrastructure. The COA is a 25-year agreement with escalating five-year milestones requiring PWD to cumulatively implement close to 10,000 Greened Acres and reduce approximately 8 billion gallons of CSO on an average annual basis from baseline. To accomplish this, PWD will need to plan, design, construct, and maintain thousands of projects including green and traditional infrastructure and prepare and submit necessary regulatory documentation and deliverables per the COA. In addition, PWD administers various programs to track, monitor, and model CSO considerations and programs that regulate connections to the collection system.

The wholesale customers cost of service, which expresses costs on a utility basis, includes the following LTCPU related costs: depreciation and return on green infrastructure, green infrastructure maintenance, and SMIP/GARP. This approach is consistent with prior cost of service studies.

C. Service to customers located outside the City is provided on a wholesale basis through contracts with various municipalities, authorities, and townships. Each wholesale contract has been negotiated on a case-by-case basis and has an individualized structure and method for adjusting those wholesale charges to reflect changes in their cost of service.

Consistent with the terms of the wholesale contracts and prior cost of service studies, LTCPU costs are included in the wholesale customer's fixed monthly charge (expressed as an annual lump sum charge in the cost of service study).

D. Please see response to item B. Consistent with prior cost of service studies, the retail customer annual cost of service is determined as the annual system cost of service net of the costs allocated to wholesale customers. Holding all other factors constant, applying the updated LTCPU allocations to the annual system cost of service results in a lower allocation of LTCPU costs to wholesale customers and an increase to retail customers.

RESPONSE PROVIDED BY: Philadelphia Water Department and Black & Veatch Management Consulting, LLC.

PA-III-20. REFERENCE PWD STATEMENT 7 AT 15-16, IF THE ADJUSTMENTS TO REFLECT WHOLESALE WASTEWATER CUSTOMERS ANTICIPATED REVENUES IS INTENDED TO REFLECT A REDUCTION IN COSTS THAT WERE ALLOCATED TO WHOLESALE CUSTOMERS, DID PWD MAKE AN ADJUSTMENT TO THE COST OF SERVICE TO REMOVE THE COSTS THAT WERE PREVIOUSLY ALLOCATED? IF NO, PLEASE EXPLAIN WHY.

RESPONSE:

The adjustments referenced by this request do not include an adjustment to system costs. As explained in PWD Statement 7 as well as Schedule BV-2, the wholesale revenues under existing rates are adjusted to reflect the updated wholesale allocation beginning in FY 2024. For the cost of service analysis, the retail net revenue requirements are determined after accounting for (i.e. net of) wholesale cost allocations which reflect the updated basis for LTCPU cost allocations.

Please refer to the response to PA-III-19.

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

PA-III-21. REFERENCE PWD STATEMENT 7, BEGINNING AT PAGE 19, LINE 22. IN PWD FY 2022-2023 RATE INCREASE FILING, BLACK & VEATCH STATED ON PAGE 19, LINE 23, THAT THE FINANCE DEPARTMENT SPEND FACTOR SPECIFICALLY EXCLUDED FY 2020 DATA BECAUSE THE FY 2020 DATA INCLUDED NON-TYPICAL EXPENSES. WHY IS BLACK & VEATCH NOW INCLUDING FY 2020 IN DETERMINING THE FINANCE DEPARTMENT SPEND FACTOR IN THIS PROCEEDING?

RESPONSE:

In the FY 2022-2023 Rate Increase Filing, based on discussions with PWD, the spend factor for PWD Finance Division Class 800 costs excluded FY 2020 and FY 2017 because they included non-typical expense as FY 2020 expenses were low and FY 2017 expenses were high compared to FY 2016, FY 2018 and FY 2019.

If FY 2020 is excluded from the derivation of the actual to budget factor for PWD Finance Division Class 800 costs the actual to budget factor would be 94.22% compared to 79.12% reflected in the current analysis.

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

PA-III-22. REFERENCE PWD STATEMENT 7, BEGINNING AT PAGE 20, LINE 13. PLEASE IDENTIFY EACH OBJECT CLASS O&M EXPENSE FOR WHICH PWD DEVELOPED A PLANNED BUDGET INCREASE IN FY 2024. FOR EACH ITEM, IDENTIFY THE FY 2022 ACTUAL AMOUNT, THE FY 2023 BUDGET AMOUNT AND THE FY 2024 BUDGET AMOUNT. INCLUDE ALL SUPPORTING WORKPAPERS, CALCULATIONS AND ASSUMPTIONS.

RESPONSE:

Based upon PWD's budgeting process, PWD has developed an FY 2024 budget for all divisions within the Department. As the cost of service study was in development at the same time as the Department's internal FY 2024 budgeting process, the Water Department provided Black & Veatch with planned budgetary increases across the Department's Divisions and object class codes. See response attachment PA-III-22 FY 24 Planned Budgetary Increases (the specific FY 2024 planned budgetary increase incorporated into the cost of service study as an O&M adjustment are identified in the response attachment).

Black & Veatch incorporated those increases in identified areas, and as discussed in Schedule BV-2 (pages 1-16 to 1- 18). See response attachment PA-III-22 OM Adjustment Input and PWD Exhibit 6 FINPLAN OM Adjustments (pages 294 to 326). As reflected in the response attachment, the appropriate actual to budget factor (based on division and class of costs) was applied to each adjustment.

FY 2022 Actual Amounts are provided in PWD Exhibit 6 FINPLAN Direct O&M – 1 (pages 223 to 224).

FY 2023 Budget Amounts are provided in the FINPLAN model provided to the Public Advocate (Direct O&M – 1, Column AL). See response attachment PA-III-22 FY 23 PWD Budget.

FY 2024 Budget Amounts – See response attachment PA-III-22 FY 24 Planned Budgetary Increases.

RESPONSE PROVIDED BY: Philadelphia Water Department and Black & Veatch Management Consulting, LLC.

PA-III-23. REGARDING THE POWER AND GAS COSTS, PLEASE PROVIDE THE SUPPORTING DOCUMENTATION FOR THE FY 2023 AND 2024 AMOUNTS.

RESPONSE:

Black & Veatch utilized planned budgetary increases for 2023 and 2024 provided by the Water Department, as discussed in in PWD Statement 4 - Direct Testimony of the Operations Panel and documented in Schedule BV - 1, Table C-6 in PWD Statement 7.

See response to PA-III-22.

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

PA-III-24. PLEASE PROVIDE THE SUPPORTING DOCUMENTATION FOR THE FY 2023 AND 2024 CHEMICAL EXPENSE.

RESPONSE:

Black & Veatch utilizes planned budgetary increases for 2023 and 2024 provided by the Water Department, as discussed in in PWD Statement 4 - Direct Testimony of the Operations Panel and documented in Schedule BV - 1, Table C-6 in PWD Statement 7.

See response to PA-III-22.

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

PA-III-25. PLEASE PROVIDE THE SOURCE DOCUMENTATION FOR THE CHEMICAL COST ESCALATION FACTORS OF 23.82% AND 11.43% IDENTIFIED ON PAGE 23, LINES 11 AND 12 OF PWD STATEMENT 7.

RESPONSE:

The annual increases of 23.82% for FY 2025 and 11.43% thereafter, are based upon the U.S. Bureau of Labor Statistics (BLS) Producer Price Index for Industrial Chemicals. Schedule BV-2, Page F-2 in PWD Statement 7 shows the raw price index data from the BLS as well as the calculation of the 24-month and 36-month escalations as percentages.

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

PA-III-26. PLEASE PROVIDE THE SUPPORTING DOCUMENTATION FOR THE $8.9 MILLION INCREASE IN SERVICES COSTS IDENTIFIED ON PAGE 24, LINE 5 OF PWD STATEMENT 7.

RESPONSE:

See response to PA-II-22.

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

PA-III-27. PLEASE IDENTIFY AND PROVIDE COPIES OF EACH SERVICE CONTRACT SUBJECT TO INFLATION ESCALATION AND PROVIDE THE CURRENT ANNUAL COSTS.

RESPONSE:

See response attachment PA-III-27 for examples of major contracts with inflation escalation provisions.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-28. PLEASE PROVIDE THE SOURCE DOCUMENTS FOR THE 7.77%, 6.7% AND 4.69% ESCALATION FACTORS IDENTIFIED ON PAGE 24, LINES 12 TO 15 OF STATEMENT PWD STATEMENT 7.

RESPONSE:

The annual increases of 7.77% for FY 2024, 6.70% for FY 2025 and 4.69% thereafter, are based upon the U.S. Bureau of Labor Statistics (BLS) Producer Price Index for Construction Equipment and Machinery. Schedule BV-2, Page F-2 in PWD Statement 7 shows the raw price index data from the BLS as well as the calculation of the 12-month, 24-month and 36-month escalations as percentages.

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

PA-III-29. ACCORDING TO PWD STATEMENT 7, AT PAGE 24, LINES 19 TO 21, "[I]N ADDITION TO PLANNED INCREASES IN EQUIPMENT PURCHASES IN FY 2024, BLACK & VEATCH ALSO APPLIED ESCALATION FACTORS TO ESTIMATED FY 2023 EXPENSES TO PROJECT EQUIPMENT EXPENSES." PLEASE EXPLAIN HOW THIS WAS CALCULATED. DOES THIS MEAN THE FY 2024 EQUIPMENT PURCHASES AMOUNT WAS ADDED TO THE ESCALATED FY 2023 EXPENSES AMOUNT?

RESPONSE:

The FY 2024 expenses associated with additional budget items for equipment purchases were added to the escalated FY 2023 equipment expense.

See response to PA-III-22.

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

PA-III-30. PLEASE PROVIDE A BREAKDOWN OF THE ITEMS INCLUDED IN THE FY 2024 EQUIPMENT PURCHASES AND THE RELATED AMOUNT.

RESPONSE:

Please see response attachment PA-III-30.

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-III-31. PLEASE PROVIDE THE SOURCE DOCUMENTS FOR THE 10.12%, 9.41% AND 6.63% ESCALATION FACTORS IDENTIFIED ON PAGE 24, LINES 21 TO 24 OF STATEMENT PWD STATEMENT 7.

RESPONSE:

The annual increases of 10.12% for FY 2024, 9.41% for FY 2025 and 6.63% thereafter, are based upon the U.S. Bureau of Labor Statistics (BLS) Producer Price Index for Construction Equipment and Machinery. Schedule BV-2, Page F-2 in PWD Statement 7 shows the raw price index data from the BLS as well as the calculation of the 12-month, 24-month and 36-month escalations as percentages.

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