RESPONSE TO PUBLIC ADVOCATE'S INTERROGATORIES AND REQUESTS FOR PRODUCTION OF DOCUMENTS

PA-IV-1. REFERRING TO PWD STATEMENT NO. 2, PAGE 4, LINES 10 AND 11, THE COMPANY STATES THAT IT HAS REDUCED DEBT AND OTHER COSTS WHERE IT IS POSSIBLE TO DO SO. PLEASE IDENTIFY THE SPECIFIC DEBT AND OTHER COSTS THAT PWD HAS REDUCED.

RESPONSE:

Please refer to PWD Statement 2 (Direct Testimony of Melissa LaBuda), page 8, lines 7 through 21 for details regarding debt refinancing.

Please refer to PWD Statement 4 (Direct Testimony of Donna Schwartz) pages 6 through 8 for examples of operational efficiency.

RESPONSE PROVIDED BY: Melissa LaBuda and Donna Schwartz, Philadelphia Water Department

PA-IV-2. REFERRING TO PWD STATEMENT NO. 2, PAGE 4, LINES 20 AND 21, PLEASE IDENTIFY THE “UNAVOIDABLE INCREASES IN WORKFORCE COSTS” AND THE RELATED AMOUNT EXPERIENCED BY PWD.

RESPONSE:

The Water Fund personal service costs have increased as follows:

Fiscal Year 2016 (Actual) - $224.8 million,

Fiscal Year 2017 (Actual) - $246.5 million,

Fiscal Year 2018 (Budget) - $276.9 million.

RESPONSE PROVIDED BY: Melissa LaBuda, Philadelphia Water Department

PA-IV-3. REFERRING TO PWD STATEMENT NO. 2, PAGE 4, LINES 20 AND 21, PLEASE IDENTIFY THE COSTS RELATED TO THE SPECIFIC “LONG-TERM CONTROL PLAN PROJECTS, PERMITS AND REGULATIONS” EXPERIENCED BY PWD.

RESPONSE:

Please refer to PWD Statement 1 (Direct Testimony of Debra McCarty) page 22 at lines 1 through 6.

There is also an additional impact to rates resulting from stormwater credits related to the SMIP/GARP program. For the details regarding these impacts on stormwater credits, please see PWD Statement 9A Direct Testimony of Black & Veatch, pdf page 246 of 366.

Please see the further added impact from the staffing described in PWD Statement 9A Direct Testimony and Schedules of Black & Veatch (pdf pages 281 of 366).

RESPONSE PROVIDED BY: Melissa LaBuda, Philadelphia Water Department

PA-IV-4. REFERRING TO PWD STATEMENT NO. 2, PAGE 5, LINES 15 THROUGH 23, PLEASE EXPLAIN THE NET EFFECT ON PWD THAT RESULT FROM THE CHANGE IN THE USE OF CAPITAL FUNDS TO PURCHASE CERTAIN TYPES OF VEHICLES. WOULDN'T THE OPERATING COSTS INCREASE BY THE SAME AMOUNT AS THE CAPITAL COSTS, RESULTING IN NO NET CHANGE TO PWD? PLEASE FULLY EXPLAIN YOUR RESPONSE.

RESPONSE:

No, the net change is not neutral.

Note the overall capital program was not reduced, rather funding is to be directed to other capital needs.

RESPONSE PROVIDED BY: Melissa LaBuda, Philadelphia Water Department

PA-IV-5. PLEASE PROVIDE THE AVERAGE MONTHLY CONSUMPTION FOR GENERAL SERVICE CUSTOMER CONSUMPTION IN PWD'S SERVICE TERRITORY FOR 2013 THROUGH 2017.

RESPONSE:

Please refer to PA-ADV-54 for information regarding average monthly consumption for general service customer.

RESPONSE PROVIDED BY: Melissa LaBuda, Philadelphia Water Department

PA-IV-6. REFERRING TO PWD STATEMENT NO. 2, PAGE 7, LINES 14 THROUGH 19, THERE IS NO MENTION OF PWD'S EFFORTS TO REDUCE OPERATIONAL COSTS. IS IT FAIR TO SAY THAT PWD DID NOT IMPLEMENT ANY PROGRAMS OR INITIATIVES SPECIFICALLY DESIGNED TO REDUCE OPERATIONAL COSTS?

A. IF THERE WERE SUCH PROGRAMS, PLEASE IDENTIFY EACH INITIATIVE, THE TARGETED SAVINGS AND THE ACTUAL SAVINGS ACHIEVED.

B. IF THERE WERE NO SUCH PROGRAMS, PLEASE EXPLAIN WHY.

RESPONSE:

Please refer to PWD Statement 4, Direct Testimony of Donna Schwartz, pages 6 through 8 for operational efficiency.

RESPONSE PROVIDED BY: Donna Schwartz, Philadelphia Water Department

PA-IV-7. PLEASE EXPLAIN HOW THE ANNUAL SAVINGS RESULTING FROM THE REFINANCED DEBT DISCUSSED ON LINES 6 THROUGH 13 OF PWD STATEMENT NO.2, PAGE 8 HAVE BEEN REFLECTED IN THE COST OF SERVICE.

RESPONSE:

The annual savings from the refinanced debt are already captured as part of debt service costs. The debt service schedule associated with the above referenced debt refinancing is provided in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls – DS-1g (page 352) under the Series 2016A Refunding.

The above referenced page is provided in response attachment PA-IV-7.pdf. Additionally, the debt service savings due to the refinancing are presented below.

$192,680,000 Water and Wastewater Revenue Refunding Bonds, Series 2016

Date	Prior Debt Service	Refunding Debt Service	Savings
6/30/2017	5,342,363	5,334,435	7,927
6/30/2018	10,684,725	9,011,138	1,673,588
6/30/2019	20,853,975	18,095,038	2,758,938
6/30/2020	15,033,225	12,269,313	2,763,913
6/30/2021	15,029,675	12,265,313	2,764,363
6/30/2022	15,029,350	12,266,438	2,762,913
6/30/2023	18,511,425	15,747,813	2,763,613
6/30/2024	30,636,650	27,873,063	2,763,588
6/30/2025	31,615,350	28,855,563	2,759,788
6/30/2026	31,600,363	28,837,938	2,762,425
6/30/2027	29,753,500	26,988,063	2,765,438
6/30/2028	16,630,375	13,866,313	2,764,063
6/30/2029	11,429,850	8,665,188	2,764,663
6/30/2030	11,431,375	8,669,938	2,761,438
6/30/2031	11,431,900	8,667,938	2,763,963
6/30/2032	11,430,375	8,666,088	2,764,288
6/30/2033	11,430,750	8,666,888	2,763,863
6/30/2034	11,431,713	8,665,488	2,766,225
6/30/2035	11,431,950	8,667,113	2,764,838
6/30/2036	11,430,150	8,668,769	2,761,381
Total	332,169,038	280,747,829	51,421,208

$279,865,000 Water and Wastewater Revenue Refunding Bonds, Series 2017A

Date	Prior Debt Service	Refunding Debt Service	Savings
6/30/2018	9,130,238	9,124,254	5,984
6/30/2019	10,342,400	8,560,250	1,782,150
6/30/2020	10,344,200	8,560,250	1,783,950
6/30/2021	17,680,700	14,390,750	3,289,950
6/30/2022	13,247,325	11,322,750	1,924,575
6/30/2023	17,883,950	14,529,500	3,354,450
6/30/2024	18,850,500	15,472,375	3,378,125
6/30/2025	17,898,625	14,521,875	3,376,750
6/30/2026	16,442,200	13,994,750	2,447,450
6/30/2027	18,332,650	15,786,625	2,546,025
6/30/2028	18,313,525	15,776,625	2,536,900
6/30/2029	11,461,425	9,976,000	1,485,425
6/30/2030	45,585,388	36,432,500	9,152,888
6/30/2031	44,641,206	35,571,375	9,069,831
6/30/2032	45,966,769	35,828,375	10,138,394
6/30/2033	5,274,750	3,848,000	1,426,750
6/30/2034	5,320,125	3,897,875	1,422,250
6/30/2035	5,365,875	3,946,250	1,419,625
6/30/2036			
Total	332,081,850	271,540,379	60,541,471

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

PA-IV-8. REFERRING TO PWD STATEMENT NO. 2, PAGE 16, LINES 9 THROUGH 24,

A. PLEASE PROVIDE THE SUPPORTING DOCUMENT FOR THE STATEMENT THAT "FITCH STATED THAT DIFFICULTY IN ACHIEVING TIMELY AND SUFFICIENT RATE RECOVERY WOULD LIKELY PROMPT NEGATIVE RATING ACTION".

B. PLEASE PROVIDE THE SUPPORTING DOCUMENT FOR THE STATEMENT THAT "MOODY'S INVESTOR SERVICE IDENTIFIED A RELATIVELY UNTESTED RATE BOARD AS A CREDIT CHALLENGE, AND LISTED FAILURE TO INCREASE RATES COMMENSURATE WITH COVERAGE REQUIREMENTS, MATERIAL REDUCTIONS IN DEBT SERVICE REQUIREMENTS, AND NOTABLE DETERIORATION IN CASH AND LIQUIDITY AS FACTORS THAT COULD LEAD TO A DOWNGRADE".

C. PLEASE PROVIDE THE SUPPORTING DOCUMENT FOR THE STATEMENT THAT "STANDARD & POOR'S RATING SERVICE VIEWED THE SIZEABLE CAPITAL IMPROVEMENT PLAN COMBINED WITH THE HIGH DEBT-TO CAPITALIZATION RATIO AS CREDIT WEAKNESSES AND STATED THAT IT COULD LOWER ITS RATING OR REVISE THE OUTLOOK TO NEGATIVE IF FINANCIAL METRICS DETERIORATE OR IF A SIGNIFICANT AMOUNT OF ADDITIONAL CAPITAL SPENDING IS ADDED TO THE CAPITAL IMPROVEMENT PLAN".

RESPONSE:

Please see PWD Statement No. 2, Direct Testimony and Schedules of Melissa LaBuda, specifically schedule ML-4 "Rating Agency Reports", Fitch Ratings Report which states: "The Stable Outlook reflects Fitch's expectation that consistent rate action will be taken to support planned capital spending. However, if Philadelphia Water Department experiences any difficulty in achieving timely and sufficient rate recovery, financial margins could decline, which would likely prompt negative rating action."

Please see PWD Statement No. 2, Direct Testimony and Schedules of Melissa LaBuda, specifically schedule ML-4 "Rating Agency Reports", Moody's Ratings Report which states: "Credit Challenges: Relatively untested rate board; continued rate increases are required to support debt and capital plan" and "Factors that Could Lead to a Downgrade: Failure to increase rates commensurate with coverage requirements, Material reductions in debt service coverage levels, Notable deterioration in cash and liquidity."

Please see PWD Statement No. 2, Direct Testimony and Schedules of Melissa LaBuda, specifically schedule ML-4 "Rating Agency Reports", Standard & Poor's Report which states: "We view as credit weaknesses the following: Income levels for Philadelphia city and county that are weaker than surrounding areas and a sizeable capital improvement plan (CIP) combined with an already high debt-to-capitalization ratio" and "Downside scenario: If financial metrics deteriorate, or a significant amount of additional capital spending is added to the city's CIP, we could lower the rating or revise the outlook to negative."

RESPONSE PROVIDED BY: Melissa LaBuda, Philadelphia Water Department

PA-IV-9. REFERRING TO PWD STATEMENT NO. 2, PAGE 17, LINES 16 AND 17, PLEASE PROVIDE THE SUPPORTING DOCUMENT FOR THE CLAIM THAT PWD HAS RELATIVELY LOW COVERAGE RATIOS COMPARED TO ITS PEERS.

RESPONSE:

Please refer to PWD Statement 2 (Direct Testimony of Melissa LaBuda) at Schedule ML-2 "Financial Plan". Please also see the response attachment PA IV 9 Moody's median report.

RESPONSE PROVIDED BY: Melissa LaBuda, Philadelphia Water Department

PA-IV-10. REFERRING TO PWD STATEMENT NO. 2, PAGE 18, LINES 10 AND 11 PLEASE PROVIDE THE SUPPORTING DOCUMENTATION FOR THE CLAIM THAT RATING AGENCY REPORTS HAVE EMPHASIZED THE NEED FOR PWD TO IMPROVE ITS COVERAGE.

RESPONSE:

Please see PWD Statement No. 2, Direct Testimony and Schedules of Melissa LaBuda, schedule ML-3 "Rating Agency Reports" which includes specifically from Fitch: "PWD generates narrow but consistent financial margins.", "While below Fitch's median for the rating category, PWD's consistency in setting rates annually to achieve 1.3X DSC and healthy liquidity levels support the 'A+' rating," and "if Philadelphia Water Department experiences any difficulty in achieving timely and sufficient rate recovery, financial margins could decline, which would likely prompt negative rating action."; from Moody's "Factors that Could Lead to an Upgrade: Considerable improvement in debt service coverage" and "The Department's commitment over the past decade to consistently increase rates has led to stable debt service coverage, though coverage is moderately more narrow than peers"; and from S&P: "A very strong financial risk profile supported by…debt service coverage (DSC) that exceeds the covenanted minimum levels." and "Downside scenario: If financial metrics deteriorate … we could lower the rating or revise the outlook to negative."

RESPONSE PROVIDED BY: Melissa LaBuda, Philadelphia Water Department

PA-IV-11. PWD STATEMENT NO. 2, PAGE 21, LINES 12 AND 15, STATES: "[I]F THE DEPARTMENT'S REVENUES EXCEED PROJECTIONS, THE DEPARTMENT SHOULD USE THE EXCESS REVENUES TO GROW COVERAGE BEYOND THE STATED MINIMUMS TO IMPROVE THE CASH FUNDING AND THE BOARD'S DECISION SHOULD ENABLE THE DEPARTMENT TO GROW COVERAGE IF THIS OCCURS". WOULD PWD BE WILLING TO FORGO A SCHEDULED RATE INCREASE IN THAT YEAR?

RESPONSE:

No

RESPONSE PROVIDED BY: Melissa LaBuda, Philadelphia Water Department

PA-IV-12. REGARDING SCHEDULE ML-2, FINANCIAL PLAN, FY2017 PRELIMINARY EXPENSE SUMMARY, PLEASE EXPLAIN IN DETAIL THE FOLLOWING VARIANCES BETWEEN PROJECTED AND ACTUAL EXPENSE:

A. ELECTRICITY AND GAS: -22.7%;

B. CHEMICALS: -18.2%;

C. INDEMNITIES: +21.8%; AND

D. GENERAL FUND REIMBURSEMENT: +41.6%.

RESPONSE:

A. The City sets budget billing rates based on a combination of hedges and forward market projections. FY 2017 rates were set after the completion of the prior cost of service study using a combination of the hedges purchased earlier (with 80% hedged for FY 17) and a projection of what energy prices might be for the remaining unhedged portion (approximately 20%). At the point when budget billing rates were set, the energy market had just gone through two winters where spot market prices were extremely high and the forward market was projecting high costs for future winters. The City budgeted accordingly, but as shown in the chart below (Average monthly PECO energy market costs in $/Megawatt-hour), the higher costs budgeted for the FY 17 winter never materialized and instead modest prices per MWh were experienced.

Average Monthly RT ATC LMP - PECO										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Jan	$ 76.31	$ 68.42	$ 57.40	$ 60.84	$ 34.67	$ 35.35	$ 140.81	$ 39.30	$ 26.92	$ 31.07
Feb	$ 71.16	$ 47.89	$ 46.60	$ 48.86	$ 29.74	$ 34.03	$ 73.65	$ 88.86	$ 22.17	$ 22.94
Mar	$ 72.91	$ 42.61	$ 38.47	$ 41.76	$ 26.76	$ 38.91	$ 78.02	$ 40.17	$ 16.72	$ 31.01
Apr	$ 77.11	$ 36.23	$ 39.71	$ 47.11	$ 25.38	$ 37.37	$ 38.95	$ 25.41	$ 21.30	$ 27.69
May	$ 72.11	$ 33.53	$ 45.58	$ 49.27	$ 31.08	$ 37.39	$ 34.94	$ 30.12	$ 21.63	$ 28.75
Jun	$ 103.72	$ 32.88	$ 52.44	$ 52.99	$ 28.65	$ 38.16	$ 39.86	$ 22.12	$ 23.34	$ 24.02
Jul	$ 100.99	$ 33.50	$ 73.48	$ 66.09	$ 48.77	$ 49.42	$ 37.57	$ 25.84	$ 29.33	$ 27.84
Aug	$ 78.95	$ 38.05	$ 55.27	$ 45.23	$ 37.15	$ 34.93	$ 29.44	$ 25.25	$ 29.08	$ 24.23
Sep	$ 79.75	$ 31.48	$ 46.54	$ 41.42	$ 34.88	$ 33.61	$ 32.00	$ 28.40	$ 20.19	
Oct	$ 53.53	$ 36.91	$ 34.95	$ 37.23	$ 35.72	$ 35.85	$ 29.98	$ 22.56	$ 18.44	
Nov	$ 60.04	$ 33.53	$ 37.55	$ 35.59	$ 44.16	$ 33.92	$ 39.06	$ 19.92	$ 22.05	
Dec	$ 54.62	$ 44.81	$ 60.41	$ 32.20	$ 31.30	$ 37.90	$ 28.83	$ 18.11	$ 30.72	
Average	$ 75.10	$ 39.99	$ 49.03	$ 46.55	$ 34.02	$ 37.24	$ 50.26	$ 32.17	$ 23.49	$ 27.19

B. The Unit Price of carbon dropped by 14.5% in the new contract period for calendar years 2017 & 2018. This price drop affected half of FY17. As noted in response "A" above, 2016/2017 was a mild winter resulting in overall lower chemical demand for that period. Additionally, the unit price of ferric chloride dropped by 17.21% in new contract period for calendar years 2016 & 2017. This price drop affected all of FY17.

C. The Department experienced higher Indemnities than projected in Fiscal Year 2017.

D. In 2011, the City entered into an Amended and Restated Development and Tax and Claim Settlement Agreement (the "Sugarhouse Agreement") with Sugarhouse HSP Gaming, L.P. ("HSP"). Under the terms of the Sugarhouse Agreement, HSP is required to fund the development and expansion of the Laurel Street Combined Sewer Overflow Project. For the development and expansion of the project, HSP has been allotted a five-year credit against real estate taxes and settlement payments otherwise due to the City. The amount of the credit corresponds to the amount expended by HSP on the Laurel Street Combined Sewer Overflow Project. The Laurel Street Combined Sewer Overflow Project is a capital asset of the Water Department, and the credit awarded to HSP is an expenditure of the Water Department payable to the City. The Water Department paid the City $7,028,842 in Fiscal Year 2017, which sum included its payment obligations for both Fiscal Years 2017 and 2018 combined as the project was completed in Fiscal Year 2017.

RESPONSE PROVIDED BY: Melissa LaBuda and Donna Schwartz, Philadelphia Water Department

PA-IV-13. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-35, ANNUAL ESCALATION FACTORS FOR LABOR COSTS:

RESPONSE:

Please refer to PWD Statement 9A – Schedule BV-E5:WP-1 “Financial Plan – Revenue Requirement Assumptions”. The basis for labor escalation factors is provided beginning on page 4.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-14. PLEASE PROVIDE A TABLE DETAILING THE ANNUAL ESCALATION FACTORS FOR LABOR COSTS BY FISCAL YEAR;

RESPONSE:

Please refer to PWD Statement 9A – Schedule BV-E5:WP-1 "Financial Plan – Revenue Requirement Assumptions." A table presenting the labor escalation factors is provided on page 5. The table below is an excerpt from the above referenced document.

Fiscal Year	Annual Escalation
FY 2019	2.5%
FY 2020	3.0%
FY 2021	3.0%
FY 2022	3.0%
FY 2023	3.0%

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-15. PLEASE PROVIDE THE SOURCE PAGES (NOT A REFERENCE) FROM THE CITY'S FIVE YEAR FINANCIAL AND STRATEGIC PLAN FOR FY 2018 THROUGH FY 2022 (FIVE-YEAR PLAN), WHICH DETAIL THE ANNUAL ESCALATION FACTORS FOR LABOR.

RESPONSE:

The City's Five Year Financial and Strategic Plan was incorporated into the proceeding by reference as part of PWD Exhibit 4. The five year plan document is available at the following web-site:

http://www.phila.gov/finance/pdfs/FY18-22-Five-Year-Plan.pdf

Please refer to Page No. 337 of the document for the requested detail regarding escalation factors. This same page is also provided as response attachment PA-IV-15.pdf.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-16. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-35, PLEASE PROVIDE THE PROJECTION (NOT A REFERENCE) OF PENSIONS, PENSION OBLIGATION, AND BENEFITS BASED ON THE CITY'S FIVE-YEAR PLAN.

RESPONSE:

PWD Statement No. 9A Schedule BV-E1 Table C-6 provides the projected pensions, pension obligations and benefits in Line. No. 2.

The projected pensions, pension obligations, and benefits, based upon the FY 2018 budgeted level of staffing (after accounting for the spend factor reduction), are presented in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls Other Dept O&M - 1 (page 223) under City Finance (020) and City Finance (270).

The projected pensions, pension obligations, and benefits, associated with additional staffing, are presented in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls Other Dept O&M - 2 (page 227) under City Finance (020).

The total projected pensions, pension obligations and benefits for the Water Fund are presented in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls Other Dept O&M - 3 (page 230) under City Finance (020) and City Finance (270).

Response attachment PA-IV-16.pdf provides the above referenced pages.

In addition, the escalation factors for pensions, pension obligations and benefits are presented in Figure 7 of PWD Statement PA – Schedule BV-E5:WP-1 "Financial Plan – Revenue Requirement Assumptions" on Page 6.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-17. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-35, PLEASE PROVIDE DETAIL OF THE ADDITIONAL STAFFING DURING THE STUDY PERIOD AS ANTICIPATED BY THE WATER DEPARTMENT.

RESPONSE:

Fiscal Year	**Additional Full-Time Equivalent (FTE) Staff (Cumulative)**
FY 19	11 FTEs in Operations for green stormwater infrastructure (GSI) maintenance 2 FTEs in Engineering and Environmental Services for regulatory compliance
FY 20	22 FTEs in Operations for GSI maintenance 4 FTEs in Engineering and Environmental Services for regulatory compliance
FY 21	33 FTEs in Operations for GSI maintenance 5 FTEs in Engineering and Environmental Services for regulatory compliance
FY 22 - 23	44 FTEs in Operations for GSI maintenance 5 FTEs in Engineering and Environmental Services for regulatory compliance

The salaries and wages associated with the above additional staffing is detailed in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls O&M Adjustment – 3 (page 252) and O&M Adjustments - 6 (page 261).

Response attachment PA-IV-17.pdf provides these referenced pages.

As noted in the response to PA-IV-16, the projected pensions, pension obligations and benefits associated with this additional staffing is presented in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17xls Other Dept O&M - 2 (page 227) under City Finance (020).

Note – the additional staffing is also discussed in PWD Statement PA – Schedule BV-E5:WP-1 "Financial Plan – Revenue Requirement Assumptions".

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

PA-IV-18. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-35, PLEASE PROVIDE A DETAILED SCHEDULE (NOT A REFERENCE) SHOWING PENSION, PENSION OBLIGATION, AND BENEFITS, WHICH ARE DIRECTLY RELATED TO PERSONAL SERVICES EXPENSES, WHICH WERE ESTIMATED BASED UPON CURRENT LEVELS OF SUCH EXPENSES AND THE GROWTH RATE REFLECTED IN THE CITY'S 5-YEAR PLAN.

RESPONSE:

Please refer to the response provided to PA-IV-16. As noted, the projected pensions, pension obligations and benefits based upon the FY 2018 budgeted level of staffing (after accounting for the spend factor reduction) is presented in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls Other Dept O&M - 1 (page 223) under City Finance (020) and City Finance (270).

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-19. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-36, PLEASE EXPLAIN IN DETAIL WHY AN ANNUAL ESCALATION FACTOR OF TWO AND A HALF PERCENT (2.5%) FOR FY 2019 AND THREE PERCENT (3.0%) FOR FY 2020 THROUGH 2023 ARE USED TO PROJECT PERSONNEL BUDGET COSTS.

RESPONSE:

Please refer to PWD Statement 9A – Schedule BV-E5:WP-1 “Financial Plan – Revenue Requirement Assumptions” page 5. As noted, the annual escalation factors for personnel budget (i.e. salaries & wages) is based on the City’s Five Year Plan for FY 2019 and FY 2020. The majority of Water Fund employees are represented by American Federation of State, County and Municipal Employees Union District Council # 33 and the planned increase in wages for these employees in FY 19 and FY 20 are 2.5% and 3.0% respectively; therefore, these escalation factors were applied to PWD’s FY 2018 budget for personnel services (after accounting for the spend factor reduction).

As of December 31, 2017, the Water Department employed approximately 2,132 permanent employees, of whom 1,537 are represented by District Council 33 and 400 by District Council 47, both of the American Federation of State, County and Municipal Employees. The balance (195 permanent employees) represents the Water Department’s upper management, supervisory and senior engineering and administrative personnel who are not eligible for union membership. The wages and salaries of approximately 232 employees in the Water Revenue Bureau are funded by the Water Department. Union representation in the Water Revenue Bureau parallels that of the Water Department

Since the City’s Five Year Plan does not contemplate wage increases beyond FY 21, a 3% annual escalation is assumed for FY 21 through FY 23. Given current general inflation and historic annual increases, it is reasonable to assume PWD will experience some level of increase in salary costs beginning in FY 21 and thereafter. It is important to note that the City's 2-year average increase in salaries and wages from FY 14 to FY 16 was 4.28%, as detailed in PWD Statement PA – Schedule BV-E5:WP-1 "Financial Plan – Revenue Requirement Assumptions" Appendix 4. Note **–** FY 2021 through FY 23 are outside of the requested rate period.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-20. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-36, PER CITY POLICY, PLEASE PROVIDE A SCHEDULE DETAILING A CALCULATION (SHIFTING) OF $12.5 MILLION FROM CAPITAL TO OPERATING EXPENDITURES REFLECTING, THAT EFFECTIVE FY 2017, FRINGES FOR PERSONNEL ASSOCIATED WITH THE CAPITAL PROGRAM CAN NO LONGER BE FUNDED VIA CAPITAL FINANCING.

RESPONSE:

Per City of Philadelphia Bill No. 170958, $15,305,865 was transferred to the Director of Finance – Fringe Benefits for employee benefits as the result of the policy change of reallocating Capital fringe benefits to Operating Budgets.

The shift of $12.5 million from capital to operating expenditures is detailed in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls Other Depart O&M – 1 (page 223) as shown under City Finance (270). Response attachment PA-IV-20.pdf provides the referenced page.

Note the overall capital program was not reduced, rather funding is to be directed to other capital needs.

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

PA-IV-21. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-36, POWER COSTS:

A. PLEASE PROVIDE DETAILS OF THE ESTIMATES PROVIDED BY THE CITY ENERGY OFFICE, WHICH RESULTED IN NO ESCALATION APPLIED FOR FY 2019 AND FY 2020; AND

B. PLEASE PROVIDE DETAILED WORKPAPERS SUPPORTING THE ASSUMPTION BY BLACK & VEATCH FOR AN ANNUAL ESCALATION OF THREE PERCENT (3%) FOR FY 2021 THROUGH FY 2023.

RESPONSE:

In response to parts A and B of the above question: The City's Office of Sustainability – Energy Office provided utility escalation factors for PWD's use based upon the City's recent experience and current hedging as detailed in their memo provided in PWD Statement 9A - Schedule BV-E5:WP-1 Appendix 8.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-22. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-36, CHEMICAL COSTS:

A. PLEASE PROVIDE DETAILED WORKPAPERS SUPPORTING AN INCREASE BY 6.8% IN FY2019 AND 3.7% IN FY 2020, BASED ON THE WATER DEPARTMENT'S EXPECTATIONS FOR THESE COSTS; AND

B. PLEASE PROVIDE DETAILED WORKPAPERS SUPPORTING THE ANNUAL ESCALATION OF ONE PERCENT (1%) USED TO PROJECT COSTS FOR FY 2021 THROUGH FY 2023.

RESPONSE:

A. The basis for chemical cost escalation factors is discussed in PWD Statement 9A – Schedule BV-E5:WP-1 "Financial Plan – Revenue Requirement Assumptions" on page 5. The annual increases of 6.8% and 3.7% for FY 2019 and FY 2020 respectively, is based upon PWD's recent experience and unit costs provided during the procurement process. PWD's chemical contracts are on a two year cycle. For FY2019, all chemical costs are known except for activated carbon, which was estimated using the previous bid information and current market conditions. The contracted price for ferric chloride, the chemical that represents 30% of the chemical budget for water treatment increased 31.29% in January 2018. This increase will affect FY 2019 and half of FY 2020.

FY2020 will be a new contract period for all chemical contracts except activated carbon and new bid pricing will be submitted to PWD in the summer/fall of 2019. The estimated cost used for FY2020 comes from PWD's recent experience and unit costs provided during the procurement process that just occurred in the summer/fall of 2017.

B. Black & Veatch assumed a nominal annual escalation of 1% for FY 2021 through FY 2023 based upon a review of the overall consumer price index and PWD's recent experience.

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

PA-IV-23. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-36, SMIP/GARP COSTS, PLEASE PROVIDE DETAILED SUPPORT FOR THE ASSUMPTION THAT THE WATER DEPARTMENT EXPECTS TO PROVIDE AN ANNUAL GRANT AMOUNT OF $25.0 MILLION DURING FY 2019 THROUGH FY 2023 TOWARDS THE STORMWATER MANAGEMENT INCENTIVE PROGRAM (SMIP) AND GREENED ACRES RETROFIT PROGRAM (GARP).

RESPONSE:

As noted in PWD Statement 9A – Schedule BV-E5:WP-1 "Financial Plan – Revenue Requirement Assumptions" on page 7, beginning in FY 2019, PWD plans to increase the overall annual funding available for SMIP/GARP by $10 million from the current FY 2018 SMIP/GARP budget level of $15 million. Therefore, the SMIP/GARP annual budget is estimated at $25 million during FY 2019 through FY 2023. This adjustment is detailed in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls O&M Adjustment – 1 (page 245). Response attachment PA-IV-23.pdf provides the referenced page.

As detailed in the table below, the Department has a list of projects in various phases demonstrating that approximately $75 million of SMIP and GARP projects are either approved, currently being considered for funding or are known and are anticipated to apply in the near future. In addition to the list below, PWD expects many other applications to be submitted given the recent uptick in property owners, engineers and contractors interested in this program. PWD is aware of many companies that are actively soliciting new property owners to participate in SMIP or GARP, and PWD communicates regularly with these companies to understand the size and scope of their future projects.

Approved Applications without Allocated Funding	Acres Managed	Greened Acres	Grant Requested
Newman Paper Company	7.90	7.90	$1,460,000
Computer Components	3.20	3.20	$296,875
11500 E Roosevelt Stormwater Basin	58.31	58.31	$3,850,000
Bakers Bay Condominiums	10.69	10.69	$1,726,604
6801 New State Holdings	6.15	9.23	$1,135,800
DiGiacomo Funeral Home	0.88	0.88	$113,549
Hong Fa	3.99	5.99	$1,131,984
Wolf Investments Phase 2	7.68	15.36	$1,052,088
Infrastructure Solution Services GARP	42.57	61.65	$8,849,660
Total	**141.37**	**173.21**	**$19,616,560**
Submitted Application Being Considered for Funding	**Acres Managed**	**Greened Acres**	**Grant Requested**
Darien Crossings	33.92	67.84	$13,093,120
Philadelphia School District - Grover Washington	0.60	0.90	$173,000
Philadelphia School District - Edison	3.40	5.02	$777,000
Philadelphia School District - Motivation	1.67	2.07	$312,000
Philadelphia School District - Greenberg	1.72	1.72	$103,759
Philadlephia School District - Cook-Wissahickon	1.15	1.15	$248,000
Muslim American Society	3.09	4.63	$121,400
Missionary Servants of the Most Blessed Trinity Phase 2	1.22	2.44	$412,000
Overbrook School For the Blind Phase 2 (design only)	n/a	n/a	$31,200
Awbury Arboetum Phase 2	1.13	1.13	$300,000
Target Corporation/Opti RTC	7.78	11.67	$1,499,705
PEER GARP	1.69	2.54	$405,600
Temple Towers	1.49	2.24	$371,700
Delaire Landing Complex Association	13.76	13.76	$1,970,000
Calvary Chapel	7.83	7.83	$551,114
Philly Office Retail - 133 Berkley St	1.66	2.48	$300,000
Philly Office Retail - 4701 Germantown Ave	0.74	1.06	$165,000
Fountain St	0.05	0.05	$34,000
Riverwards Development Group	0.30	0.45	$20,000
Total	**83.20**	**128.99**	**$20,888,598**
Known Future Applications	**Acres Managed**	**Greened Acres**	**Grant Requested**
4 Oregon Avenue	41.36	62.04	*$9,306,000*
Liberty Coke	25.38	38.08	*$5,711,550*
ISS GARP	89.37	90.00	$17,595,450
American Street Parcels	8.93	13.39	*$900,000*
Total	**165.04**	**203.51**	**$33,513,000**
Grand Total			**$74,018,158**

The increase in the annual SMIP/GARP budget to $25 million is necessary for the following key reasons:

- The need to accelerate greened acres to meet Consent Order and Agreement compliance requirement milestones (see PWD Statement No.6 – Page 8); and
- The cost per greened acre achieved through the SMIP/GARP program is lower than what PWD can achieve with implementing greened acres in public space.

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

PA-IV-24. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-37, INDEMNITIES, PLEASE PROVIDE DETAILED SUPPORT FOR THE STATEMENT THAT, PER DISCUSSIONS WITH THE WATER DEPARTMENT, NO ESCALATION IN INDEMNITIES IS EXPECTED DURING FY 2019 AND FY 2023, AND HENCE THE ANNUAL EXPENDITURE IS PROJECTED TO REMAIN AT $5.6 MILLION.

RESPONSE:

As noted in PWD Statement 9A – Schedule BV-E5:WP-1 "Financial Plan – Revenue Requirement Assumptions" on page 5, no escalation factor is applied to indemnities for the period of FY 2019 through FY 2023. This assumption is consistent with that of prior proceedings, where the projected costs associated with indemnities were not escalated.

The total projected expense associated with indemnities is presented in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls - Other Dept O&M - 7 (page 241) under Class 500 Indemnities. In FY 2019 an anticipated adjustment of $500,000 was included for indemnities from FY 2018 budget levels. This adjustment is detailed in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls O&M Adjustment – 16 (page 299). Response attachment PA-IV-24.pdf also provides these referenced pages.

Note – Per the response provided to PA-ADV-13, PWD increased its overall indemnities budget to $8.5 million for FY 2018, after the development of the cost of service study. The $5.6 million annual actual spend that is projected for indemnities, for FY 2019 through FY 2023, is based on PWD's original FY 2018 budget level of $6.5 million. Therefore, the $5.6 million expense is actually lower than PWD's currently anticipated indemnities costs.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-25. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-38, CAPITAL IMPROVEMENT PROGRAM:

A. PLEASE PROVIDE DETAILED SUPPORT FOR THE ANNUAL INFLATION ALLOWANCE OF TWO AND ONE-HALF PERCENT (2.5%) THAT HAS BEEN APPLIED TO THE CIP COSTS BEGINNING WITH FY 2019, WITH THE EXCEPTION OF ENGINEERING AND ADMINISTRATION WHICH ALREADY REFLECTS INFLATION.

B. PLEASE PROVIDE DETAILED COPIES OF BLACK & VEATCH'S REVIEW OF INDUSTRY COST INDICES INCLUDING THE ENR CONSTRUCTION COST INDEX AND THE HANDY-WHITMAN CONSTRUCTION COST INDEX UPON WHICH THE INFLATION ALLOWANCE IS BASED.

RESPONSE:

A. The annual inflation allowance of 2.5% that is applied to capital improvement costs is based upon the McGraw-Hill (ENR) Construction Cost index, and a review of Capital Cost escalation factors as discussed in PWD Statement 9A – Schedule BV-E5:WP-1 "Financial Plan – Revenue Requirement Assumptions" on page 9 and detailed in Appendix 7 – Capital Cost Industry Indices Data.

B. Please see above response. Appendix 7 provides the information relied upon for the review of construction costs indices. Supporting documentation for Handy Whitman and ENR Construction Costs Indices can be obtained through subscription to these organizations. Note the material is copyright protected. This information is available for review in person at the Water Department's Offices.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-26. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-38, PLEASE PROVIDE A DETAILED CALCULATION OF THE CASH FLOW ADJUSTMENT INDICATED IN LINE 9 OF TABLE W-3 AND LINE 10 OF TABLE WW-3 WHICH REPRESENTS THE UNSPENT ENCUMBRANCES THAT DO NOT BECOME A CASH EXPENDITURE UNTIL A SUBSEQUENT YEAR.

RESPONSE:

Line 12 of Table C-7: Projected Capital Improvement Program (as provided in PWD Statement 9A – Schedule BV-E1) represents the amount of the annual capital budget not expended during the fiscal year. This is based upon the differences between the projected annual Capital Improvement Program expenditures (Line 13) and the projected inflated annual Capital Budget (Line 11).

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-27. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-38, PLEASE PROVIDE A DETAILED CALCULATION SUPPORTING THE STATEMENT THAT, IN ADDITION TO FUNDING CAPITAL CONSTRUCTION COSTS, THE BOND ISSUANCE PROCEEDS ARE ALSO USED TO FUND REQUIRED DEPOSITS INTO THE DEBT RESERVE FUND AND PAY THE COSTS OF BOND ISSUANCE. THE ANNUAL DEBT RESERVE FUND BALANCE MUST EQUAL THE MAXIMUM FUTURE ANNUAL DEBT SERVICE ESTIMATED FOR THE OUTSTANDING AND PROPOSED BONDS.

RESPONSE:

Please refer to Table C-8: Projected Flow of Funds – Capital Improvements Program as provided in PWD Statement 9A – Schedule BV-E1. Lines 2, 3 and 4 present the disposition of bond proceeds to the debt service reserve fund, the cost of bond issuance and the transfer to the construction for each projected bond issuance.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-28. REGARDING PWD STATEMENT NO. 9A, TABLE W-4, PROJECTED FLOW OF FUNDS- CAPITAL IMPROVEMENT FUND, PLEASE PROVIDE DETAILED CALCULATION SUPPORTING:

A. LINE 8, CAPITAL ACCOUNT DEPOSIT;

B. LINE 10, TRANSFER FROM RESIDUAL FUND; AND

C. LINE 11, INTEREST INCOME ON CONSTRUCTION FUND.

RESPONSE:

A. Calculations supporting the capital account deposit for the water system are provide in in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls – Assumptions - 21 (page 47). The annual capital account deposit is calculated as 1.0% of the projected total water system net plant investment for FY 2018. For FY 2019 through FY 2023, the annual capital account deposit is calculated as 1.5% of the projected total system net plant investment of the respective fiscal year.

B. The annual Residual Fund transfers are projected based on the level of available funds in the Residual Fund while maintaining the water funds share of the end of year Residual Fund Balance (approximately $6.0 million) as presented on Line 36 of Table W-6. The detailed workpapers supporting the transfer from residual fund for Water as shown in Table W-4 Line 10 are presented in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers: Finplan17.xls Funds - 2 under Projected Flow of Funds - Construction Fund (page 383) and Projected Flow of Funds – Residual (page 384).

C. The detailed workpapers supporting interest income on the construction fund (Table W-4 Line 11) are presented in the following references from PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers:

- Finplan17.xls Assumptions - 3 (page 23) - Interest Income.

- Finplan17.xls Funds - 2 (page 383) under Projected Flow of Funds - Construction Fund.

The projected Construction Fund interest income is calculated based on the average of the projected beginning fund balance and projected ending fund balance excluding the interest earnings for each fiscal year and the estimated interest earnings rate of 0.36%.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-29. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-39 AND TABLE W 5, PROJECTED DEBT SERVICE, PLEASE PROVIDE DETAILED SUPPORT FOR THE UTILIZATION OF AN ANNUAL INTEREST RATE OF 5.50 PERCENT FOR FY2019; 5.75 PERCENT FOR FY 2020; AND 6.25 PERCENT FOR EACH OF THE BOND ISSUES PROPOSED DURING FY 2021 THROUGH FY 2023.

RESPONSE:

As stated in the response to PA-I-9, the decision regarding interest rate assumptions were made in consultation with the Department's financial advisors, PFM and Acacia Financial by reviewing historic interest rates trends over an extended time horizon while including a moderate increase to develop projected debt service.

Note: As stated in response to PA-ADV-31, the interest rate for each of the bond issues proposed during FY 2021 through FY 2023 is 6.00%.

RESPONSE PROVIDED BY: Melissa LaBuda, Philadelphia Water Department

PA-IV-30. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-40 AND TABLE W 5, PROJECTED DEBT SERVICE LINE 11, PLEASE PROVIDE DETAILED SUPPORT FOR THE APPLICABLE REVENUE BOND DEBT SERVICE ON PENNVEST LOANS ALLOCABLE TO THE WATER AND WASTEWATER UTILITIES.

RESPONSE:

The detailed support for the applicable revenue bond debt service on PennVest Loans allocable to the water and wastewater utilities is presented in PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers Finplan17.xls DS – 2a to DS – 2f (pages 353-358).

Response attachment PA-IV-30.pdf provides the above referenced pages.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-31. REGARDING PWD STATEMENT NO. 9A, PAGES 9A-40 THROUGH 41, PLEASE PROVIDE DETAILED WORKPAPERS SUPPORTING THE INTEREST EARNINGS PAYMENT (SEE TABLE C-1, DEPOSIT FOR TRANSFER TO CITY GENERAL FUND, LINE 32).

RESPONSE:

The detailed workpapers supporting interest earnings payment (Table C-1, Deposit for Transfer to City General Fund, Line 32) are presented in the following references from PWD Exhibit 6 Supplemental Financial, Engineering and Other Data Black & Veatch Workpapers:

- Finplan17.xls Assumptions - 3 (page 23) - Debt Service Reserve Interest Income.
- Finplan17.xls Funds - 1 (page 381) under Projected Flow of Funds - Debt Service Reserve.

The projected Debt Service Reserve interest is calculated based on the average of the projected beginning fund balance and projected ending fund balance excluding the interest earnings for each fiscal year and the estimated interest earnings rate of 0.36%. For example, as presented in PWD Exhibit-6: Black & Veatch Corporation Cost of Service Work Papers, FINPLAN17, FUNDS-1, the FY 2018 projected Debt Service Reserve interest for the combined water and wastewater utility of $756,018 is calculated based on the average of the Debt Service Reserve FY 2019 Beginning Balance of $219,505,031 and the Debt Service Reserve FY 2019 Ending Balance of $200,505,031 and the projected interest earnings rate of 0.36%.

FY 2018 Interest = [($219,505,031 + $200,505,031) / 2] x 0.0036 = $756,018

Response attachment PA-IV-31.pdf provides the above referenced pages.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-32. REGARDING PWD STATEMENT NO. 9A, PAGE 9A-42, PLEASE PROVIDE SUPPORT FOR THAT STATEMENT THAT THE RATE OF CAPITAL SPENDING DURING FY 2010 THROUGH FY 2016 IS 1.62 TIMES THAT OF THE CAPITAL SPENDING DURING FY2004 THROUGH FY 2009.

RESPONSE:

Please refer to PWD Statement 9A – Schedule BV-E5:WP-3 "Capital Account Deposit." Table 1 on page 3 presents support for the statement that the rate of capital spending during FY 2010 through FY 2016 is 1.62 times that of the capital spending during FY 2004 through FY 2009. The table below is an excerpt from the above referenced document.

Line No.	Description	Result	Notes
1	Avg. Annual Capital Spend (2010-2016)	$ 155,994	Exhibit 1, Ln. 7 – Ln. 13
2	Avg. Annual Capital Spend (2004-2009)	$ 96,483	Exhibit 1, Ln. 1 – Ln. 6
3	Avg. Annual Capital Spend Ratio	1.62	Table 1, Ln. 1 / Ln. 2

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-33. REGARDING PWD STATEMENT NO. 9A, TABLE C-1, PROJECTED REVENUE AND REVENUE REQUIREMENTS, PLEASE PROVIDE A SIMILAR TABLE FOR FISCAL YEARS FY 2003-2006.

RESPONSE:

Our understanding is the Public Advocate's request is for Fiscal Years 2013 to 2016. The below response is provided accordingly.

Attachment B of PWD Exhibit 2 (page 11 of 15) from the April 2, 2016 Technical Hearing associated with the FY 2017 – FY 2018 Rate Proceedings provides the Projected Revenue and Revenue Requirements of the combined Water and Wastewater utilities for FY 2013 to FY 2016, which is similar to PWD Statement 9A Schedule BV-E1 Table C-1.

Attachment B of PWD Exhibit 2 (page 11 of 15) from the April 2, 2016 Technical Hearing associated with the FY 2017 – FY 2018 Rate Proceedings is provided in response attachment PA-IV-33.pdf and is available at http://www.phila.gov/water/rateboard/Transcripts/4.5.16-Exhibit-II.pdf.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-34. REGARDING PWD STATEMENT NO. 9A, TABLE C-2, COMBINED UTILITY: PROJECTED RATE STABILIZATION FUND AND COVENANTS METRICS PERFORMANCE, PLEASE PROVIDE A SIMILAR TABLE FOR FISCAL YEARS FY 2003-2006.

RESPONSE:

Our understanding is the Public Advocate's request is for Fiscal Years 2013 to 2016. The below response is provided accordingly.

Attachment B of PWD Exhibit 2 (page 11 of 15) from the April 2, 2016 Technical Hearing associated with the FY 2017 – FY 2018 Rate Proceedings provides the Projected Revenue and Revenue Requirements of the combined Water and Wastewater utilities for FY 2013 to FY 2016, which provides the following information as presented in PWD Statement 9A Schedule BV-E1 Table C-2:

Item	BV-E1 Table C-2	Attachment B of Exhibit PWD II
Rate Stabilization Fund Flow of Funds	Lines 1 to 3	Lines 42 to 44
1989 General Bond Ordinance Covenants – Senior Debt Coverage	Line 4	Line 27
1989 General Bond Ordinance Covenants – Total Debt Coverage	Line 5	Line 33

The following table provides the FY 2013 to FY 2016 Insurance Covenant - Senior Debt Coverage from Current Revenues based on the data provided in Attachment B of PWD Exhibit 2:

	FY 2013	FY 2014	FY 2015	FY 2016
Total Revenues	642,147	658,099	665,807	695,252
Operating Expenses	396,119	406,230	408,437	421,148
Transfer to Rate Stabilization Fund	43,615	20,325	3,675	575
Senior Debt Service	203,323	206,446	209,238	221,044
Insurance Covenant - Senior Debt Coverage from Current Revenues (a)	0.99	1.12	1.21	1.23

(a) Senior Debt Coverage from Current Revenues = (Total Revenues - Operating Expenses - Transfer to Rate Stabilization Fund) divided by Senior Debt.

The following remaining items from PWD Statement 9A Schedule BV-E1 Table C-2 are not readily available for FY 2013 to FY 2016:

- O&M Actual to Budget Ratio
  - Projected O&M Budget
  - O&M Actual to Budget Ratio
- Rate Board Ordinance Requirements
  - Projected Total Appropriations
  - Ordinance Requirement Compliance
- Cash Funded Capital

Attachment B of PWD Exhibit 2 (page 11 of 15) from the April 2, 2016 Technical Hearing associated with the FY 2017 – FY 2018 Rate Proceedings is provided in response attachment PA-IV-33.pdf and is available at http://www.phila.gov/water/rateboard/Transcripts/4.5.16-Exhibit-II.pdf.

RESPONSE PROVIDED BY: Black & Veatch Management Consulting, LLC

PA-IV-35. REGARDING THE REPLY TO PA-ADV-11, PLEASE STATE WHICH OF THE ORGANIZATIONS REPRESENT PWD.

RESPONSE:

As of December 31, 2017, the Water Department employed approximately 2,132 permanent employees, of whom 1,537 are represented by District Council 33 and 400 by District Council 47, both of the American Federation of State, County and Municipal Employees. The balance (195 permanent employees) represents the Water Department's upper management, supervisory and senior engineering and administrative personnel who are not eligible for union membership. The wages and salaries of approximately 232 employees in the Water Revenue Bureau are funded by the Water Department. Union representation in the Water Revenue Bureau parallels that of the Water Department.

RESPONSE PROVIDED BY: Melissa LaBuda, Philadelphia Water Department

PA-IV-36. REGARDING THE REPLY TO PA-ADV-14, "BRINGDOWN", PLEASE EXPLAIN IN DETAIL THE FOLLOWING VARIANCES BETWEEN THE BOARD DECISION AND ACTUALS FOR FY2016:

A. DIVISION OF TECHNOLOGY-PURCHASE OF SERVICES: -$3,209,000

B. WATER-PERSONAL SERVICES: -$4,803,000

C. WATER PURCHASE OF SERVICES: -$6,684,000

D. WATER-MATERIALS SUPPLIES & EQUIPMENT: -$2,540,000

RESPONSE:

A. The Division of Technology under spent as compared to projections for FY2016 for professional services.
B. The Water Department was unable to fill critical vacancies which resulted in underspending of salaries.
C. The Department underspent in both natural gas and electricity.
D. The Department underspent in both chemicals and general equipment**.**

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-IV-37. REGARDING THE REPLY TO PA-ADV-14, "BRINGDOWN", PLEASE EXPLAIN IN DETAIL THE FOLLOWING VARIANCES BETWEEN THE BOARD DECISION AND ACTUALS FOR FY2017:

A. DIVISION OF TECHNOLOGY-PURCHASE OF SERVICES: -$1,022,000

B. WATER-PERSONAL SERVICES: -$5,167,000

C. WATER PURCHASE OF SERVICES: -$2,089,000

D. WATER-MATERIALS SUPPLIES & EQUIPMENT: -$3,617,000

E. FINANCE: PERSONAL SERVICES-FRINGE BENEFITS: +$8,843,000

RESPONSE:

A. The Division of Technology under spent as compared to projections for FY2017 for commercial off the shelf software and professional services.
B. The Water Department was unable to fill critical vacancies which resulted in underspending of salaries and due to the mild winter, the Department did not utilize the full overtime budget.
C. Two divisions within the Department were unable to fully utilize their professional services budget for FY2017.
D. Please see response to PA-IV-12 (b).

RESPONSE PROVIDED BY: Philadelphia Water Department

PA-IV-38. REGARDING THE REPLY TO PA-ADV-17, PLEASE EXPLAIN IN DETAIL THE FOLLOWING VARIANCES FOR CAPITAL PROGRAM EXPENDITURES BETWEEN THE RATE CASE PROJECTION AND CAPITAL PROJECT EXPENSES:

A. FY2016: -$63,857,199

B. FY2017: -$42,249,953

RESPONSE:

The Water Department had several large Capital projects that started FY2016 and FY2017, please see Top fifteen Capital Projects by Estimated Cost listing in PWD Exhibit 5 Official Statement City of Philadelphia Water and Wastewater Revenue Refunding Bonds Series 2017B, PDF page 43 of 489. While these projects started construction in FY2016 and FY2017, the first progress payment were made in subsequent fiscal years.

RESPONSE PROVIDED BY: Steve Furtek, Philadelphia Water Department

PA-IV-39. WITH REFERENCE TO PWD STATEMENT NO.3, PAGE 2, PLEASE PROVIDE A WORKPAPER SIMILAR TO THE CHART ON LINE 16 THROUGH 22 WITH ACTUAL DATA FOR 2013 THROUGH 2017.

RESPONSE:

See response attachment PA-IV-39.pdf.

RESPONSE PROVIDED BY: Steve Furtek, Philadelphia Water Department

PA-IV-40. PWD STATEMENT NO.3, PAGE 6, LINES 3 AND 4 STATES THAT 438 MILES OF MAINS HAVE BEEN REPLACED. IS THERE SPECIFIC AMOUNT OF MAINS BEING TARGETED? IF SO, HOW MANY MILES ARE THERE REMAINING TO BE REPLACED, AND OVER WHAT REPORT DOES PWD INTEND TO REPLACE THESE MAINS.

RESPONSE:

The Water Department has approximately 2,092 miles of water mains installed prior to 1965. The Department has a goal of replacing the pre-1965 mains by 2065 and therefore is increasing the annual replacement rate from 32 miles/yr. in FY 2019 to 42 miles/yr. in FY 2024 and beyond.

RESPONSE PROVIDED BY: Steve Furtek, Philadelphia Water Department