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

PA-EXE-1. Please explain what is meant by the statement: "Total system accounts are anticipated to remain stable over the projection period", and provide detailed support for the statement.

Response: The accounts are anticipated to remain stable over the projection period based on the historical trends (3-year) for customer accounts, as referenced in PWD Statement 9A-Direct testimony of Black &Veatch Corporation Q 22 (Pages 20-21). The detail regarding the historical number of accounts and that over the projection period is provided in PWD Exhibit 6: Black &Veatch Corporation Cost of Service Work papers: Customer-1 (PDF Page # 91).

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

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

PA-EXE-2. Please provide the supporting documentation showing the derivation of the 0.6% annual decrease in usage for 5/8" meter General Service Customers for FY 2016 through 2019. Please provide the requested data in electronic format with the formulae intact.

Response: The 0.6% annual decrease referenced is applicable to the total retail water volume projected for FY 2016 through 2019 and is not intended to represent projected usage for 5/8" meter General Service Customers for FY 2016 through 2019.

Please refer to PWD Exhibit 6: Black &Veatch Corporation Cost of Service Work papers for details regarding the projected usage for the study period of FY 2016 through FY 2021. Please refer to the total projected billed volume in Customer-3 (PDF Page # 97).

The projected billed volume data details are available in an electronic format with formulae intact in the "Customer" worksheet of the Financial Plan model provided in response to PA-EXE-74. Please see the response to PA-EXE-74 for further information.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

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

PA-EXE-3. Please provide the supporting documentation showing the derivation of the 1.5% annual decrease in usage for 5/8" meter General Service Customers for FY 2010 through 2015. Please provide the requested data in electronic format with the formulae intact.

Response: The 1.5% annual decrease in average usage per account for 5/8" meter General Service Customers for FY 2016 through 2019 is based on the historical annual average decrease in usage per account. The annual average decrease per account over a six-year historical period of FY 2010 through FY 2015 is 1.57% as referenced in the Financial Plan Assumptions Document (BV-S1, Page 1 in the PWD Statement 9-B: Supplemental Direct Testimony and Exhibits of Black & Veatch Corporation).

The details regarding the historical billed usage and the average usage per account for the period of FY 2010 through FY 2015 is provided in PWD Exhibit 6: Black &Veatch Corporation Cost of Service Work papers. Please refer to the historical number of accounts in Customer-3 (PDF Page# 93); billed usage in Customer-3 (PDF Page # 96); and average usage per account in Customer -4 (PDF Page #98), for the 5/8" meter General Service customers.

The historical and projected accounts and usage data details are available in an electronic format with formulae intact in the Assumptions (Assumptions #s) and Customer worksheets of the Financial Plan model provided in response to PA-EXE-74. Please see the response to PA-EXE-74 for further information.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-4. Please provide the quantification of the annual increase in the 5/8" meter General Service volume usage during FY 2019, 2020 and 2021 resulting from the decrease in theft due to implementation of the Advanced Metering Infrastructure (AMI). In your response include an explanation the cause of the significant growth from year to year.

Response: Please see PWD's General Objections to PA-EXE: 4-8 (the "Interrogatories and Requests") on January 13, 2016 on the Water Rate Board's Webpage: http://www.phila.gov/water/rateboard/Pages/filing.aspx

Response Provided by: Debra McCarty, Philadelphia Water Department

PA-EXE-5. Please provide an electronic worksheet showing the derivation of the annual addition revenue relating to the implementation of the AMI for FY 2019, 2020 and 2021 of $0.4 million, $1.25 million and $2.1 million, respectively.

Response: Please see PWD's General Objections to PA-EXE: 4-8 (the "Interrogatories and Requests") on January 13, 2016 on the Water Rate Board's Webpage: http://www.phila.gov/water/rateboard/Pages/filing.aspx

Response Provided by: Debra McCarty, Philadelphia Water Department

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

PA-EXE-6. Please provide any business case or presentations made to management regarding the AMI project

Response: Please see PWD's General Objections to PA-EXE: 4-8 (the "Interrogatories and Requests") on January 13, 2016 on the Water Rate Board's Webpage: http://www.phila.gov/water/rateboard/Pages/filing.aspx

Response Provided by: Debra McCarty, Philadelphia Water Department

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

PA-EXE-7. Please explain the planned implementation of the AMI project and include in the explanation the estimated number of meters that will be affected and annual capital expenditures by year and in total for the project through its completion.

Response: Please see PWD's General Objections to PA-EXE: 4-8 (the "Interrogatories and Requests") on January 13, 2016 on the Water Rate Board's Webpage: http://www.phila.gov/water/rateboard/Pages/filing.aspx

Response Provided by: Debra McCarty, Philadelphia Water Department

PA-EXE-8. Please provide a narrative that explains the specific functionalities and capabilities of the AMI employed by PWD. Also in your response, explain how the system will reduce theft.

Response: Please see PWD's General Objections to PA-EXE: 4-8 (the "Interrogatories and Requests") on January 13, 2016 on the Water Rate Board's Webpage: http://www.phila.gov/water/rateboard/Pages/filing.aspx

Response Provided by: Debra McCarty, Philadelphia Water Department

PA-EXE-9. Please provide the supporting documentation showing how the impervious and gross area storm water credits are converted into a reduction of the billable square footage area of 18.3 million sq. ft. for gross area and 10.4 million sq. ft. for impervious area.

Response: Please refer to Q7 (Page 4), Q16 (Page 11) and Q17 (Page 14) in the PWD Statement 9-B: Supplemental Direct Testimony and Exhibits of Black & Veatch Corporation for an overview of stormwater credit program and a discussion on the reduction of billable gross area and impervious square footage due to stormwater credits.

A summary of the projected reduction in billable units of service due to impervious and gross area stormwater credits by fiscal year is presented in Table SW-5 of Exhibit BV-E3, attached to PWD Statement 9-A: Direct Testimony and Exhibits of Black & Veatch Corporation.

The 18.3 million sq. ft. for gross area and 10.4 million sq. ft. for impervious area are the *average annual incremental reduction in billable square footage* projected during the five year period of fiscal year 2017 through fiscal year 2021. These *average annual incremental reduction* due to credits, which are stated in the Financial Plan Assumptions Document (BV-S1), can be calculated from the subtotals of impervious area and gross area credits square footage presented in Table SW-5

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-10. Please provide the supporting documentation for the projected revenue reduction of $15.1 million and $25.2 million for FY 2017 to FY 2021 related to impervious and gross area storm water. Please identify the specific amount for each year.

Response: Please refer to Q7 (Page 4), Q16 (Page 11) and Q17 (Page 14) in the PWD Statement 9-B: Supplemental Direct Testimony and Exhibits of Black & Veatch Corporation for an overview of stormwater credit program and a discussion on the reduction of billable gross area and impervious square footage due to stormwater credits.

The projected revenue reduction due to impervious and gross area stormwater credits is provided for each fiscal year in the Financial Plan: Revenue & Revenue Requirements Assumptions (Ref # BV-S1 at Page 1) attached to PWD Statement 9-B: Supplemental Direct Testimony and Exhibits of Black & Veatch Corporation. Please also refer to Ref. BV-S1, Appendix 6: COS Fee Reductions – Contra Revenue.

The projected revenue reduction due to credits was calculated by applying the projected IA and GA cost of service rates for Fiscal Year (FY) 2017 and FY 2018 and the expected IA and GA rates for FY 2019 through FY 2021(based upon the projected revenue adjustment increase for FY 2019 to 2021), to the gross area and impervious area square footage of credits projected for each of those fiscal years. These calculations for the projected revenue reduction due to credits are in the requested Financial Plan model provided in response to PA-EXE-74.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

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

PA-EXE-11. Please identify the annual amount of storm water customer assistance program revenue for each year of the study period.

Response: Please refer to PWD Statement 9B, Ref. BV-SI, Appendix 6: COS Fee Reductions – Contra Revenue for the annual amount of stormwater customer assistance program revenue reduction, projected for each year of the study period.

Response Provided By: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-12. Please provide detailed support for the statement: "The stormwater Customer Assistance Program is projected as an additional $3.4 M to $3.0 M projected revenue reduction over the study period."

Response: Please refer to PWD Statement 9-B, Ref. BV-S1, Appendix 6: COS Fee Reductions – Contra Revenue for the annual amount of stormwater customer assistance program revenue reduction, projected for each year of the study period.

Please refer to Q9 and Q10 in PWD Statement 9-B: Supplemental Direct Testimony and Exhibits of Black & Veatch Corporation (Page 8) for additional details on the approach used to project the annual revenue reduction over the study period due to the Customer Assistance Program.

Response Provided By: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-13. With regard to the retail collection factor excluding storm water, it is understood that the difference between the "Current Year %" and the "Collection Ever %" for FY 2015 is related to certain prepaid revenue. Please explain whether the prepaid revenue relates to service provided during FY 2015 or another year and how the prepaid amount is isolated and identified in each year.

Response: Please refer to PWD Statement 8: Direct Testimony and Exhibits of Raftelis Financial Consultants, Inc. Appendix D: Consolidated Digest for Reports 1 through 4 Generated for Cost of Service.

The isolation of pre-payments is discussed on Page 15 of the Summary Digest Cost of Service Reports. Per the report, pre-payments are payments made prior to the fiscal year for which billings were developed. Pre-payments are customer driven and primarily due to overpayment of prior bills within a given fiscal year.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-14. With regard to the retail collection factor for only storm water:

a. Please explain why the second year collection factor is an estimate based upon the projected collections relative to the actual system revenues instead of the historical receipts, done for the retail collection factor excluding storm water.

b. Please provide workpapers and supporting documentation showing the derivation of second year collection factor based on the estimate of projected collections relative to the actual system revenues.

c. Please explain the collection percentage for storm water only is significantly less than retail excluding storm water.

Response: The following responses are provided for question PA-EXE-14, with regard to retail collection factor for stormwater only:

a) Please refer to PWD Statement 2: Direct Testimony of Melissa LaBuda Page 15. Water Department revenues are recorded on a receipt basis. The "actual system revenues" referenced in the assumptions document are historical receipts. The derivations of the second year collection factors for both "Retail Stormwater Only" and "Retail Excluding Stormwater" are based on historical receipts.

b) The work papers and supporting documentation of projected (calculated) collections based on the collection factors relative to the actual system revenues are provided in PWD Exhibit 6: Black &Veatch Corporation Cost of Service Work Papers. See workpaper Customer-20 (PDF Page #131).

c) Stormwater only accounts are customers that do not have water or sewer service associated with their property. Historically, the collections for these types of accounts have been lower than accounts with water and sewer service. This has been attributed to the limited payment enforcement options for stormwater only accounts as these accounts do not have water service. Therefore, water shut-off cannot be utilized for enforcement purposes. These properties must be placed under a lien in order to collect payment.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-15. Please provide support for the 0.4% interest earning rate related to the operating fund and the rate stabilization fund.

Response: Please refer to PWD Statement-9A: Direct Testimony of Black &Veatch Corporation: Q24 (Page 30). The 0.4% interest earning rate related to the operating fund and the rate stabilization fund is based on historical average interest rate earned by PWD. Please also refer to Response Attachment PA-EXE-15, the City of Philadelphia Investment Policy. The Cost of Service Study used an interest rate of 0.36%. The Revenue and Revenue Requirements Assumptions document in Ref. BV-S1 rounded the interest to 0.4%.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-16. Please provide detailed supporting documentation showing the projected buildup of the Operating Fund and Rate Stabilization Fund at the 0.4% interest rate during the rate period.

Response: Please refer to PWD Exhibit - 6: Black & Veatch Corporation Cost of Service Work Papers on work paper Funds-1 (PDF Page #339 - 340) for the details regarding the projected buildup of the Operating Fund and Rate Stabilization Fund Interest income at the 0.4% interest rate during the rate period. See also the response to PA-EXE-15.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-17. Please provide supporting documentation for the penalties rate of 1.45% of billing.

Response: Please refer to PWD Exhibit 6: Black &Veatch Corporation Cost of Service Work Papers. The historical water and wastewater penalty revenues for FY 2013 to FY 2015 and the associated ratio of penalties to general service billings are provided on work paper Other Revenue-3 Worksheet (PDF Page # 189).

The general service billings for water, sewer and stormwater under existing rates are presented on work papers Customer -8 (PDF Page#106), Customer-16 (PDF Page #119) and Customer-39 (PDF Page # 157), respectively.

The "Penalties – Percentage of Billings" may be calculated as follows for each respective fiscal year:

- For Water, take the historical penalties revenue from work paper Other Revenue – 1 (PDF Page #188) and divide it by the historical total General Service Billings excluding City and Fire from "Water – General Service Collections" work paper Customer -8 (PDF Page #106).
- For Wastewater, take the historical penalties revenue from Other Revenue Worksheet – 2 (PDF Page #188) and divide it by the sum of the following:
    - The historical total sewer billings excluding city and fire from work paper Customer–16 (PDF Page # 120); and
    - The historical total stormwater charge non-city from work paper Customer–39 (PDF Page #157).

During the development of this response, it was discovered that the Other Revenue work papers did not present the years for the data provided and the ratio of total water and wastewater penalty revenues to billings ratio was incorrect. Please see Response Attachment PA-EXE-17 for the corrected Other Revenue work papers.

The average ratio of penalties to billings for FY 2013 (1.46%), FY 2014 (1.44%), and FY 2015 (1.42%) is 1.44%.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-18. With reference to Miscellaneous Revenues:

a. Please provide the supporting workpapers in electronic format with the formulae intact showing the derivation of the projected amounts for each classification of miscellaneous revenues as presented on Figure 3.

b. Please show the support for the general service cost of service adjustment factor of 1.01 used in the derivation of the Affordability Program Discounts.

c. Please identify the revenues that were projected based on historical data and those that were projected based upon budgeted data.

Response: The following response is for Question PA-EXE-18, with regard to the Miscellaneous Revenues:

a) The supporting workpapers showing the derivation of projected amounts of miscellaneous revenues for each classification are provided as part of PWD Exhibit 6: Black &Veatch Corporation Cost of Service Work Papers. See work paper Other Revenue-3 (PDF Page # 189). An electronic format with formulae intact of workpaper Other Revenue-3 is provided in the "Customer" worksheet of the Financial Plan model provided in response to PA-EXE-74. Please see the response to PA-EXE-74 for further information.

b) The anticipated revenue loss associated with affordability program discounts of $14.3M as provided by Raftelis Financial Consultants was based upon existing FY 2015 rates. To account for increased revenue losses associated with subsequent rate increases, a reasonable adjustment factor of 1.01 was applied to the overall system revenue increase to address typical bill impacts associated with proposed cost of service rates. The general service cost of service adjustment factor of 1.01 is reasonable based on a comparison with the ratio of the projected overall increase to the typical bill based on residential 5/8" meter with 6 ccf billed volume from FY 2016 to FY 2018 (1.1198) to the overall cumulative system wide revenue increase (1.1113), which is 1.008. The projected overall increase to the typical bill based on residential 5/8" meter with 6 ccf billed volume from FY 2016 to FY 2018 (1.1198) is based on the FY 2018 typical residential bill ($75.51) divided by the FY 2016 typical residential bill ($67.43). [Source: PWD Statement 9A, Exhibit BV-E1, Table C-4.] The overall cumulative system wide revenue increase (1.1113) is based on the cumulative effective increase (1.0542 x 1.0542) of the proposed overall system wide annual revenue increases of 5.42% in both FY 2017 and FY 2018. [Source: PWD Statement 9A, Exhibit BV-E1, Table C-1.]

c) The basis for each of the miscellaneous revenue projections presented in Figure 3 is provided in the table below.

Description	Projection Methodology
Miscellaneous City Revenue	Based upon 3-year historical average for FY 2013 to FY 2015
Other Miscellaneous Income	Based upon a review of the 3-year and 5-year historical average
State and Federal Grants	Based upon a review of the 3-year and 5-year historical average
License and Inspection Permits	The FY 2016 projection is based upon the 5-year historical average from FY 2011 to 2015.
	Based upon a review of the 3-year and 5-year historical averages and the anticipated return of revenues to FY 2009-2012 levels of $2.3 million.
Miscellaneous Procurement	Based upon the 5-year historical average from FY 2011 to 2015.
Affordability Program Discounts	Based upon estimated revenue loss due to new affordability program as provided by Raftelis Financial Consultants

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-19. Please provide a schedule detailing estimated (unaudited) vs. actual (audited) total Operating Expenses for each of the past five fiscal years.

Response: The actual (audited) Operating Expenses for fiscal years FY 2011-FY2014 are provided with PA-EXE-42 Response Attachment 1. The actual (not estimated) unaudited Operating Expenses for the fiscal year FY 2011 to FY 2015 are provided in the City of Philadelphia Unaudited Annual Financial Reports. The City of Philadelphia Unaudited Annual Financial Reports for the past five years are available on the City's website: http://www.phila.gov/investor/Annual_Financial_Rep.html.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

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

PA-EXE-20. Please provide copies of PWD's FY 2015 and 2016 operating and capital budgets.

Response: See PWD Exhibit 4 (SI- 10, 16 and 17) for the most recent operating and capital budgets and related testimony.

Response Provided by: Melissa LaBuda, Philadelphia Water Department

PA-EXE-21. Please provide detailed support for the statement: "Liquidated encumbrances for fiscal year 2016 are projected to be 12.0% of projected Services (class 200) and Materials and Supplies (class 300) expenses."

Response: Please refer to PWD Exhibit 6: Black & Veatch Corporation Cost of Service Work Papers, work paper Assumptions-33 (PDF Page#73 and 74). In FY 2015, Liquated encumbrances related to Services (class 200) and Materials and Supplies (class 300) expenses were 12.5%. FY 2014 and FY 2013 actual liquidated encumbrances are high relative to other historical years due to higher levels experiences as a result of changes in City financial policies. Per discussions with the Water Department, 12% was used to project liquidated encumbrances as this more closely aligns with recent experience and the targeted budgetary amounts.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

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

PA-EXE-22. Please provide a definition of the term "Liquidated Encumbrances" as it applies to the PWD.

Response: See PWD Statement 2, Direct Testimony of Melissa LaBuda, Page 16 and PWD Exhibit 4 (SI-31), Attachment SI-31, PWD Official Statement, footnote at Page 39.

Response Provided by: Melissa LaBuda, Philadelphia Water Department

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

PA-EXE-23. Please provide detailed support for each of the adjustments shown in Figure 6 "Additional Adjustments for Projected Operating Expenses".

Response: The details regarding "Additional Adjustments for Projected Operating Expenses" with reference to Figure 6 are provided in PWD Exhibit 6: Black & Veatch Cost of Service Work Papers: Direct O&M-2 (PDF Page # 196 and 197) and InterDept O&M-2 (PDF Page # 227 and 228). Additional details are provided in PWD Exhibit 6: Black & Veatch Cost of Service Work Papers: O&M Adjustments (PDF Page # 241 to 289).

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-24. Please explain in detail and provide detailed support for the 5% escalation rate utilized for Electric Costs for FY2018 - FY2021. (Figure 5)

Response: Please see PWD Statement 9-B, Ref BV-S1, Appendices 2 and 3.

Appendix 2 shows the fluctuation in historical power costs for PWD. Power costs increased by over 35% from 2010 to 2011and then show unsteady decreases over the next 3 years. The Electricity cost component of the Consumer Price Index also shows a similar volatility over the past 10 years with prices increasing at a rate of 12% in 2007 and falling by nearly 4% in 2013. Based upon PWD's historical experience, the Electricity cost component of the Consumer Price Index, as well as discussions with PWD staff, it was decided that a 5% escalation factor would be used to escalate Electric Costs for FY2018 – FY2021. This is a reasonable escalation factor based upon both experience and judgment, taking into account the market uncertainty related to electricity and power costs.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-25. Please provide a copy of the plan documents or narratives explaining the following programs presented on Figure 6:

a. Stormwater Management Incentive Program (SMIP);

b. Green Area Retrofit Program(GARP);

c. City Grant Program; and

d. Affordability Program.

Response:

a-b. Please visit our webpage http://www.phila.gov/water/wu/stormwater/Pages/Grants.aspx

c. See, PWD Statement 6, Exhibit MB-2, Testimony of Michelle Bethel and Mark Harvey

d. Please refer to PWD Statement 8, at Pages 3-6, Direct Testimony of Jon Davis for a description of program costs, as updated. Raftelis Financial Consultants provided a preliminary Customer Affordability Plan structure and costing model to City Council staff, CLS, and its consultant in a meeting on September 9, 2015 in City Hall. These were the only "plan documents" for the Customer Affordability Program. The structure of the Customer Affordability Program was subsequently modified by City Council resulting in an update to program cost projections ultimately used in the Cost of Service Study.

Response Provided by:

a-b. Joanne Dahme, Philadelphia Water Department

c. Michelle Bethel and Mark Harvey, Philadelphia Water Revenue Bureau

d. Jon Davis, Raftelis Financial Consultants

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

PA-EXE-26. With regard to the additional abatement costs in Figure 6:

a. Please explain what is being abated.

b. Provide a breakdown of the additional abatement costs.

c. Provide a breakdown of other abatement costs that are included in the FY 2016 budget.

Response:

a. Any of the following are examples of what is being abated:
   - If there is a water main break which floods a property, PWD will replace damaged hot water heaters and house heaters through Abatement plumbers on contract with PWD (other damages are handled through the claims process). Cleanup of properties damaged as a result of a water main break is also paid for through abatement.
   - If there is a sewer blockage which causes sewage to back up into a property, PWD will replace damaged hot water heaters and house heaters through Abatement plumbers on contract with PWD (other damages are handled through the claims process). Cleanup of properties damaged as a result of sewer blockage is also paid for through abatement.
   - If we have issued a Notice of Defect to a property for a defective lateral or main house drain or a leak on the supply or service and the property owner does not address it in a timely matter and it is causing an unacceptable health and/or safety condition, PWD will assign an Abatement plumber on contract to correct the defect. The property is liened to recover the cost but that cannot occur until if and when the property is sold.
   - If a private sewer is defective causing sewage to back up in properties and the property owners connected to the private sewer are not able to address the issue amongst themselves, PWD will assign an Abatement plumber to correct whatever is causing the back up. The invoice is divided amongst those connected and the properties are liened if the bill is not paid.
   - If a private water main is leaking and causing damage to public or private property or loss of water to properties and the property owners connected to the private water main are not able to address the issue amongst themselves, PWD will assign an Abatement plumber to replace the leaking pipe. The invoice is divided amongst those connected and the properties are liened if the bill is not paid.

b. Please note there are no reports available that capture this data at this time.

c. The additional adjustment amount is due to the increase in the number of properties that require abatement ("additional costs for additional abatements"). We have experienced an increase in the number of water main breaks the past 2 fiscal years with this fiscal year on track to reach the same level or higher as FY 15.

Response Provided by: Debra McCarty, Philadelphia Water Department

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

PA-EXE-27. Please provide detailed support for the projected 5.25% interest rate utilized for projected bond issues.

Response: The City used a 5.25% interest rate assumption for its FY2016 debt service budget.

Response Provided by: Melissa LaBuda, Philadelphia Water Department

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

PA-EXE-28. Please provide a schedule showing the all-in interest rate for each of the PWD's last five bond issues and the date of those bond issues.

Response: See, PWD Exhibit 4 (SI- 31). The Official Statements for the Series 2015 Bonds and other bond transactions since the last rate proceeding are available and may be downloaded from the City's Investor Website at http://www.phila.gov/investor. The all in interest issuance rates can be found on the inside front cover.

Response Provided by: Melissa LaBuda, Philadelphia Water Department

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

PA-EXE-29. Please state the required senior debt coverage as shown in the current PWD bond covenants.

Response: See, PWD Exhibit 4 (SI-31) Attachment SI-31, PWD Official Statement.

Response Provided by: Melissa LaBuda, Philadelphia Water Department

PA-EXE-30. Please provide the basis of the increase in debt coverage to 1.35.

Response: Please note that the increase in debt coverage to 1.35 is in Fiscal Year 2019 and beyond. Coverage for those Fiscal Years is not part of this rate proceeding.

Developing financial policies are "central to a strategic, long-term approach to financial management" (GFOA Best Practices, Adopting Financial Policies). Adopting a policy to steadily increase debt service coverage to 1.35 in FY 2019 is one component of the Department's Key Financial Policies. The aforesaid Policies balance the need to strengthen the Department's liquidity and financial margins against significant increases in rates and rate payer burden. As discussed, in PFM's testimony these Key Financial Policies are generally below peer medians for systems similarly sized or rated.

Debt Service Coverage, which is the financial margin after meeting debt service requirements on an annual basis, reflects a systems ability to meet legal debt service requirements while maintaining a level of liquidity to invest in capital needs, to mitigate revenue variability or to address unexpected operating expenses. Recently released medians for Moody's Investor Service (December 7, 2015; 2016 Outlook) were 1.9 to 2.0 times across all water and sewer utilities. Fitch Ratings 2016 Water and Sewer Medians reported debt service coverage on an all in basis as 2.1 times. While the goal is not to necessarily match median ratios, the indication is that even at 1.35 times coverage, the Department is still below peer medians. However the ultimate goal for increasing debt service coverage is to provide the additional cash flow needed to increase pay-go funded capital which will lead to decreased debt burden on the rate payers.

Response Provided by: Katherine Clupper, PFM

PA-EXE-31. Please provide support for the Capital Account Deposit inflation to 2.5% per year.

Response: As discussed in the Financial Plan: Revenue and Revenue Requirements Assumptions, the projected FY 2016 to FY 2021 Capital Account Deposit was inflated by 2.5% per year based on the average annual increase in net plant investment (excluding construction work in progress) during FY 2013 and FY 2014. Please refer to response attachment PA-EXE-31 Capital Account Deposit Inflation for the historical annual increase in net plant investment (excluding construction work in progress).

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-32. Please provide support for the requirement of maintaining annual cash funded capital of 20% to 25% of projected annual CIP.

Response: This is one component of the Department's Key Financial Policies. Increasing cash funded capital provides needed funds to address aging infrastructure and increased capital needs without increased long term debt burden. While the Departments' goal is in the 20% to 25%, nationally the percentage of the CIP that is financed with pay-go is approximately 50% for Fitch Rated Large Systems (2016 Water and Sewer Medians). Balancing the impact of the increased rates resulting from increase pay-go, in the short run with the long term benefit of reducing future debt burden and increasing rate payer equity, the Department has developed a more moderate approach. Long term financial planning indicates that funding the CIP mostly with bond funding becomes unsustainable and results in significant pressure on future financial flexibility.

Response Provided by: Katherine Clupper, PFM

PA-EXE-33. Please provide supporting documentation for maintaining the rate stabilization fund at $120 million to $125 million.

Response: Please refer to PWD Statement 7, Direct Testimony of Katherine L. Clupper, Page 9.

Response Provided by: Katherine Clupper, PFM

PA-EXE-34. With reference to Figure 7,

a. What does the CIP acronym stand for?

b. Please explain in detail what is depicted in Figure 7. It is understood that the top of the schedule "CIP Budget" represents a capital budget. Does the "CIP Expenses" represent expenses related to CIP projects, or is that the expected expenditures based upon actual to budget ratios?

c. Please provide detailed support for the "CIP Expenses" shown in Figure 7.

Response: The following responses provided for Question PA-EXE-34, with regard to Figure 7.

a) The CIP acronym stands for Capital Improvement Program.

b) The "CIP Budget" is based on the proposed FY 2017 to FY 2022 capital improvement program budget provided by PWD. The "CIP Expenses" are based upon the construction fund cash flow projections (representing Capital Improvement Program project expenses) provided by PWD.

c) The "CIP Expenses" details are provided in PWD Exhibit 6: Black &Veatch Corporation Cost of Service Work paper, work paper Capital Projects – Scen 4 – 3A (PDF Page # 301). This is based on "CIP Expenses" provided by PWD. See response attachment PA-EXE-34 Capital Improvement Program.

Response Provided by: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch

PA-EXE-35. Please provide the average annual increase in net plant investment during FY2010, FY2011, FY2012 and FY2015.

Response: Please see response Attachment PA-EXE-35 Property Plant and Equipment.

Response Provided by: Melissa LaBuda, Philadelphia Water Department

PA-EXE-37. Please provide detailed support for each of the Actual to Budget Factor Exceptions.

a. Please explain why 100% was used for salaries and wages under Human Resources, Finance, Planning & Engineering, Operations, Planning & Environmental Services, and Public Affairs given that the 3-year Average is lower than that percentage.

b. Please explain why 100% was used for SMIP/GARP costs given that the 3-year average is higher than that percentage.

c. Please explain why 100% was used for Pension costs given that the 3-year average is lower than that percentage.

d. Please explain why 100% was used for Pension Obligations given that the 3-year average is higher than that percentage.

e. Please explain why 100% was used for Contributions given that the 3-year average is lower than that percentage.

Response: The following responses are provided for Question PA-EXE-37, with regard to the Actual to Budget Factor Exceptions:

a) An Actual to Budget Factor of 100% was used to project operating expenses for Salaries and Wages for Human Resources, Finance, Planning & Engineering, Operations, Planning & Environmental Services, and Public Affairs in order to reflect the anticipated cost levels based on the recently negotiated labor agreements. The associated labor agreements were implemented during FY2015, resulting in increased salaries and wages for each of the noted divisions within the Water Department. Using the 3-year historical average would not accurately capture the salary and wages costs. It is anticipated that PWD will continue to utilize 100% of the budget. Please refer to PWD Statement 2: Direct Testimony of Melissa LaBuda (beginning on Page 3) for additional discussion of the labor negotiations and associated cost impacts.
b) Funding from Pennsylvania ACT 13 Marcellus Shale Impact Fees was used to increase the funding for the SMIP/GARP programs in FY 2015, resulting in spending above the originally budgeted amount. While possible to occur in the future, for cost of service purposes an Actual to Budget factor of 100% was used for projected SMIP/GARP costs.
c) An Actual to Budget Factor of 100% was used for the projection of pension costs in order to reflect the anticipated cost levels based on the labor agreements. The labor agreements were implemented during FY2015 resulting in increased pension costs. In FY 2015 the Actual to Budget factor for pension costs was 97.3%. Using the 3-year historical average for the actual to budget factor would not accurately capture the pension costs. It is anticipated that PWD will continue to utilize 100% of the budget.

Please refer to PWD Statement 2: Direct Testimony of Melissa LaBuda (beginning on Page 3) for additional discussion of the labor negotiations and associated cost impacts.

d) An Actual to Budget Factor of 100% was used for the projection of Pension Obligations costs in order to reflect anticipated cost levels based upon PWD's share of the City's overall pension obligations bonds, which are based on level principal interest payments during the study period. It is anticipated that the actual expenses will be 100% of budget.

e) Please refer to PWD Statement 2, Direct Testimony of Melissa LaBuda for additional discussion of contribution costs (beginning on Page 17). See also PWD Exhibit 4, SI-29.

Response Provided By: Ann Bui, Prabha Kumar and David Jagt, Black & Veatch