BEFORE THE

PHILADELPHIA WATER, SEWER AND STORM WATER RATE BOARD

PHILADELPHIA WATER DEPARTMENT	**)** **)**	**FY 2017-2018 RATES**

MAIN BRIEF OF THE PUBLIC ADVOCATE

MAY 2, 2016

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I. INTRODUCTION AND PROCEDURAL HISTORY.

The Philadelphia Water Department (PWD) submitted its Advance Notice, on January 8, 2016, followed by its Formal Notice, on February 8, 2016, to the Philadelphia Water, Sewer, and Storm Water Rate Board (Board), commencing the process of review of PWD's proposed $106 million water rate increase. PWD proposed to increase rates to recover additional revenues of $34.735 million in FY 2017 (reflecting a 5.42% increase in revenues from rates) and a further $36.392 million in FY 2018 (reflecting a 5.42% increase in revenues from rates).[1] In combination, the resulting rate increases to residential customers utilizing 6 CCF per month of water are projected to be approximately 12% over the two-year period for which PWD requests additional revenues from rates. See PWD Exhibit 1.

Discovery commenced immediately upon PWD's submission of its Advance Notice, on January 8. Pursuant to the schedule promulgated by the Hearing Officer, discovery was to conclude by April 18, the date upon which the record closed. To resolve a discovery dispute between PWD and Drexel Law School's Community Lawyering Clinic (CLC), however, discovery was continued until April 22, 2016, for the limited purpose of permitting PWD to respond to outstanding requests by CLC. See Hearing Officer Decision on Discovery, April 18, 2016.[2]

On January 12, active parties participated in a conference call concerning procedural aspects of the rate review process. Active participants met in person on January 21, to discuss procedural aspects of the rate proceeding and timelines for and objections to discovery requests, as well as other procedural matters. Procedural guidelines were verbally addressed by the

[1] The FY 2017 increase continues in effect in FY 2018 and accounts for approximately $34.514 million of PWD's overall $105.641 million proposed rate increase.
[2] At the time of this writing, the Hearing Officer's April 18 decision has not been added to the Board's website, but was distributed to all parties, and has been identified for inclusion on the record.

Hearing Officer, Ms. Nancy Brockway. Also, on January 21, the Public Advocate submitted an electronic memorandum concerning due process aspects of the rate proceeding. On February 9, PWD submitted a responsive memorandum to the Public Advocate's January 21 electronic memorandum regarding due process concerns in the rate proceeding. The Public Advocate responded to PWD's responsive memorandum on February 10. A prehearing conference was held on February 18, 2016 at which Hearing Officer Brockway provided additional verbal instruction concerning procedural matters in the rate proceeding. On February 22, 2016, PWD presented its explanation of the reasons for its rate request to the Board, and responded to questions from the Board and active participants.[3] The Hearing Officer issued preliminary procedural rules and a schedule for the remainder of the proceedings on March 3, which were finalized, following input from participants, on March 9, 2016. A further prehearing conference call was conducted on March 28, 2016 to address the scheduling of witnesses for technical hearings.

Testimony and position statements of active participants (other than PWD) were submitted on March 24. The Public Advocate submitted Direct Testimony of Lafayette K. Morgan, Jr. (PA St.-1), Direct Testimony of Jerome D. Mierzwa (PA St.-2), and Direct Testimony of Roger D. Colton (PA St.-3), each with accompanying schedules and/or exhibits. PECO Energy Company and Exelon Generation Co. LLC submitted Direct Testimony of Robert A. Rosenthal, with accompanying Exhibit 1. Citizens for Pennsylvania's Future (Penn Future)

[3] PWD was the only participant in this proceeding whose witnesses were provided the opportunity to support their viewpoints to the full board, pursuant to the Board's regulations. See February 22, 2016 Tr. at 186, lines 21-24 (noting that other participants "will not be in the same position to have witnesses here to answer [the Board's] questions directly"). The exclusive opportunity for PWD's witnesses to convince the Board of the necessity of a rate increase should be eliminated from the Board's regulations. For purposes of this rate proceeding, the Board should only take into consideration PWD's witnesses statements on February 22 to the extent they are clearly supported by substantial documentary evidence on the record, and then must weigh them against the evidence to the contrary.

submitted a Position Outline and the Direct Testimony of David F. Russell, P.E., with accompanying Exhibit PF-DRF-1. The Philadelphia Large Users Group submitted the Direct Testimony of Randolph Haines.

Public Input hearings were held on February 23, February 24, March 1, March 2, March 3, and April 7, 2016, at various locations in the City of Philadelphia. Members of the public were also encouraged to submit statements in writing and electronically to the Board. Technical Hearings were conducted on April 5, April 6, April 7, April 11, April 12 and April 13, 2016. . By email dated April 20, 2016, PWD provided the Hearing Officer with a preliminary outline of the issues to be addressed in PWD's brief.[4] The Public Advocate submitted its preliminary outline to the Hearing Officer on April 22, 2016.

For myriad reasons, based on the record produced and as discussed in the sections that follow, the Public Advocate submits that the Board should issue a decision denying PWD's requested rate increase (preserving existing customer rates), because: (1) approving PWD's projected net revenue requirements would continue long-standing practices which have been shown to result in unnecessarily high customer rates, and are premised on unreliable and overly conservative financial assumptions; and (2) PWD's projected revenue requirements are based on unreasonable and/or unknown and unmeasurable estimates of future revenues and expenses, which, if utilized, would result in unjust and unreasonable customer rates. If the Board approves

[4] In its outline, PWD states its intention to include, in its brief, proposed findings of fact and conclusions of law. Under the Board's regulations, the Hearing Officer has the power and authority to prepare and submit the Hearing Officer Report to the Board and all Participants. Regulations of the Philadelphia Water, Sewer and Storm Water Rate Board (hereinafter Board Reg.) Section II(3)(b)(7). The Hearing Officer's Report is defined as a summary of all written information and all testimony presented in both public hearings and technical review hearings. Board Reg. § I(j). The Public Advocate believes it unnecessary and inappropriate for PWD to submit its proposed findings of fact and conclusions of law, given that the Hearing Officer lacks the authority endorse and/or submit any such findings or conclusions to the Board. The Public Advocate is confident that this brief demonstrates the pertinent facts on the record in support of each of the Public Advocate's recommendations, as set forth with specificity herein.

a rate increase, the increase should be substantially reduced based on the Public Advocate's recommendations and changes to rates for two customer classifications (City Government and City Leased properties) should be implemented to reflect a more equitable allocation of extra capacity costs. In addition, to the extent the Board approves any increase in rates for FY 2018, as a result of this proceeding or a subsequent rate proceeding, prior to approving any such increase: (1) PWD should report to the Board on the implementation of necessary customer service improvement efforts which impact upon rates; (2) PWD must satisfy the remaining terms and conditions of its agreed-to settlement with the Public Advocate in the prior rate proceeding; and (3) PWD must present a clear implementation plan for a new low income program, satisfying the requirements of Section 19-1605 of the Philadelphia Code, and outsourcing administration to a third-party provider.

II. OVERVIEW OF PWD'S RATEMAKING METHODOLOGY.

As Mr. Morgan observes, PWD's FY 2017 and FY 2018 rate increase request has been referred to as two "fully forecasted test years". PA St.-1 at 9, lines 8-9. In reality, the baseline information, upon which PWD's FY 2017 and FY 2018 forecasts are established, is not actual financial operating results. It is based on budgeted data and forecast assumptions concerning FY 2016. As Mr. Morgan observes, PWD's budget "provides certain data on which the cost of service is based." Id. This is true in several respects.

First, with respect to FY 2016 data, from which FY 2017 and FY 2018 data is forecast, PWD utilizes a series of "actual-to-budget" or "spend" factors, in order to attempt to estimate what its actual operating and maintenance expenses will be for FY 2016 (ending June 30, 2016). These actual-to-budget factors typically represent the actual average percentage expenditure

against budgeted expenses over the most recent three concluded fiscal years, FY 2012-2015. See PA St.-1 at 18, lines 14-16. PWD deviates from this practice, however, for certain budgeted expenses in its rate forecast, as described regarding certain of the Public Advocate's recommended adjustments, below. Actual operating and maintenance expenses for FY 2016 will not be known, on a budgetary basis, until mid-October at the earliest. Actual operating and maintenance expense for FY 2016 will not be determined on a "GAAP" (Generally Accepted Accounting Principles) basis until sometime in January. See April 5, 2016 Tr. at 166, lines 3-8.

Second, with respect to FY 2017 data, PWD projects certain additional costs, so-called "additional adjustments," some of which have been included in the FY 2017 budget that was submitted to City Council for approval. To date, PWD's FY 2017 budget has not been approved. Approval is not expected to occur until late June. FY 2018's budget has not been submitted. PWD's proposed "additional adjustments" are discussed in depth in Section V.G of this Brief.

In addition, for purposes of projecting revenues, PWD's starting point relies upon data from the current and prior fiscal years. As Mr. Morgan explains:

> The operating revenue is calculated for each customer type by first determining the number of customers and the projected usage and then applying the FY 2016 schedules of usage rates (the current rates). The sales volume and number of customer accounts are projected based upon historical trends determined from the data provided by the Department. PWD applies collection factors to determine the periods in which the revenues are collected.
>
> PA St.-1 at 16, lines 14-20.

PWD's projected number of customers for FY 2016 through the two year forecast period is the actual number of customers during FY 2015. Id. at 16, lines 23-24. Usage per customer was determined based on the compound growth rate over a period of prior years, as discussed more fully in Section V.D below. PWD's collection factors were based on three year (FY 2013 through FY 2015) collection reports. PWD St.-9A at 22. These factors are reflected in PWD's

assumptions for revenues under current rates for FY 2016, and are carried forward into the FY 2017 and FY 2018 forecast period for current and proposed increased rates.

In addition to deriving a baseline expectation of revenues and expenses based on PWD's FY 2016 budget and assumptions from prior years, PWD projects changes in operating expenditures. In certain areas of expense, for example, salaries and wages, PWD's projections may be based on a labor agreement. For other areas of expense, PWD may apply an escalation factor intended to reflect inflation. As Mr. Morgan explains:

> After the FY 2016 expected expenditure level was determined, the projected levels of expenses for FY 2017 and 2018 were determined by applying inflation escalation factors to FY 2016 amounts adjusted to reflect the expected expenditure levels.
>
> PA St.-1 at 21, lines 21-24.

Mr. Morgan summarizes the various cost escalations presented in Black & Veatch's workpapers, supplied in Exhibit 6 of the filing,[5] in his testimony as follows:

Philadelphia Water Department O&M Escalation Factors		
Description	2017	2018
Labor	3.00%	3.00%
Other Benefits	4.45%	4.59%
Pension	2.42%	1.66%
Pension Obligations	0.00%	0.00%
General	3.00%	3.00%
Property Leases	-0.93%	4.76%
Other 200 (Purchases & Services)	3.50%	3.50%
Other 300 (Materials & Supplies)	2.00%	2.00%
Other 400 (Equipment)	2.25%	2.25%
Energy	0.00%	2.50%
Chemicals	3.30%	3.30%
Other	3.00%	3.00%

[5] Throughout this brief, references to PWD Exhibits are to exhibits included in the filing, as part of PWD's February 8 Formal Notice, available at http://www.phila.gov/water/rateboard/rateproceeding/Pages/OfficialFiling.aspx. References to PWD Hearing Exhibits are to PWD exhibits entered on the record during the course of technical hearings, available at http://www.phila.gov/water/rateboard/rateproceeding/Pages/TranscriptsTechnical.aspx.

PA St.-1 at 26, lines 9-10.

Three additional factors must be considered in establishing future rates and charges. First, the requirements under the Amended and Restated General Water and Wastewater Revenue Bond Ordinance of 1989 (General Bond Ordinance) must be satisfied. As summarized in Mr. Morgan's testimony, there are two specific requirements under the General Bond Ordinance:

- 120% Test: net revenues (including transfers from the Rate Stabilization Fund to the Revenue Fund) must be equal to at least 1.20 times the debt service requirements for the fiscal year (excluding the principal and interest payments in respect of Subordinated Bonds).
- 100% Test: rents, rates, fees and charges must yield net revenues (including transfers from the Rate Stabilization Fund to the Revenue Fund) equal to at least 1.00 times the sum of
    - the debt service requirements (including debt service requirements in respect of Subordinated Bonds);
    - Amounts required to be deposited into the Debt Reserve Account during such fiscal year;
    - The principal or redemption price of and interest on General Obligation Bonds payable during such fiscal year;
    - Debt service requirements on interim debt payable during such fiscal year; and
    - The Capital Account Deposit to the Construction Fund for such fiscal year (less any amounts transferred from the Residual Fund to the Capital Account during such fiscal year).

See PA St.-1 at 39, lines 10-26.

In addition, as Mr. Morgan explains, the City has covenanted with Assured Guaranty Municipal Corporation (AGM) to satisfy the following requirement:

- 90% Test: rates and charges shall be sufficient on an annual basis to yield net revenues (excluding amounts transferred from the Rate Stabilization Fund to the Revenue Fund) at least equal to 90 percent of the debt service requirements (excluding debt service due on any Subordinated Bonds)

PA St.-1 at 40, lines 1-10.

Finally, as Mr. Morgan explains, the Water Rate Board Ordinance establishes a "floor" and "ceiling" for rates and charges. As set forth in Philadelphia Code Section 13-101(4), the rates and charges must:

- Yield to the City at least an amount equal to the sum of:
  - Operating expenses of the City in respect of the water, sewer, storm water systems;
  - Debt service on all obligations of the City in respect of the water, sewer, stormwater systems;
  - In respect of water, sewer and storm water revenue obligations of the City, such additional amounts as will be required to comply with any rate covenant and sinking fund reserve requirements approved by ordinance of Council in connection with the authorization or issuance of water, sewer and storm water revenue bonds; and
  - Proportionate charges for all services performed for the Water Department by all officers, departments, boards or commissions of the City.
- But, rates and charges shall not exceed the total appropriations from the Water Fund to PWD.

See PA St.-1 at 40, line 18, through 41, line 9.

Finally, as part of its rate forecast, PWD has submitted proposals to target increased debt service coverage, increase the portion of capital construction funded through current customer payments (i.e., "pay-as-you-go" capital spending), and to maintain specified levels of reserves in

its Rate Stabilization and Reserve Funds throughout the rate increase period. These proposals are discussed at more length in Sections IV.C and IV.A of this Brief.

III. APPLICABLE STANDARDS.

In evaluating PWD's requested rate increase, the Board must ensure that applicable legal standards for utility rate making are followed. As discussed more fully below, central to this analysis is the requirement that rates and charges satisfy the constitutionally-based standard of "just and reasonable" rates, which is expressly incorporated into PWD ratemaking. In addition, the Philadelphia Code specifies that the Board's decision must be "in accordance with sound utility rate making practices" as well as "consistent with industry standards."

A. Legal Standards.

The paramount standard for all utility ratemaking is the constitutionally-based "just and reasonable" standard. Although not an arithmetic formula, the just and reasonable standard requires a rate making body to conduct a careful weighing of the interest of customers in affordable rates against the financial needs of the utility. This strict legal standard reflects ultimately that utility rates that are not appropriately balanced can become confiscatory, depriving customers of interests in property if they cannot maintain service at rates that are too high, and depriving utilities of revenues necessary to maintain property dedicated to public service if rates are too low. Accordingly, the rate maker must balance the interests of customers in receiving efficient utility service at the lowest possible rates, and the interest of the utility in obtaining sufficient revenues to conduct its operations, maintain its financial integrity and achieve access to financial markets for revenue bonds at reasonable rates. Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591, 607 (1944). This constitutionally-based standard is applicable to a municipally owned utility like PWD with the same force and effect as

it is to an investor owned utility. American Aniline Products, Inc., v. Lock Haven, 135 A. 726 (Pa. 1927). Moreover, in Pennsylvania, it has been conclusively established that no applicable constitutional requirement is more exacting than the requirement of just and reasonable rates, and this requirement applies in the context of municipal rate making (it is not limited to ratemaking at the Pennsylvania Public Utility Commission (PUC)). See Public Advocate v. Philadelphia Gas Commission, 674 A.2d 1056, 1061 (Pa. 1996).[6] Moreover, City Council, in establishing the Board, specifically mandated that "rates and charges shall be just, reasonable and nondiscriminatory," thereby expressly incorporating the constitutionally-based just and reasonable standard. See Phila. Code § 13-101(4)(d).

In weighing the interests of customers and the utility, the Board must necessarily consider all concerns raised regarding the quality of PWD's customer service. Pennsylvania and federal courts have recognized, in the context of setting just and reasonable rates, that the impacts upon customer service, and the quality of service provided, are within the scope of regulatory consideration. Moreover, neither statutory law nor the Constitution imposes a unilateral obligation on customers to pay for the cost of service without a reciprocal obligation of the utility to satisfy standards of reasonable service. See Nat'l Utilities, Inc. v. Pa. PUC, 709 A.2d 972, 979 (Pa. Cmwlth. 1998), following D.C. Transit Sys., Inc. v. Washington Metro. Area Transit Com'n, 466 F.2d 394, 411 (D.C. Cir. 1972), *cert denied.*

In addition to the legal authority and obligation of the Board to consider concerns regarding service clearly established by the courts, City Council has expressly articulated that part of the Board's inquiry is related to service. The Ordinance establishing the Board (codified in Philadelphia Code Chapter 13-100 governing Water, Sewer and Storm Water Rates) provides

[6] PGW became subject to PUC rate oversight as a result of the Natural Gas Choice and Competition Act in 1999, three years after the Pennsylvania Supreme Court decisively held that the "just and reasonable" standard applied to the municipally-owned PGW.

that the Board shall fully consider the Water Department's Financial Stability Plan, (Phila. Code § 13-101(4)(b)(i)), which Plan shall identify "utility *service* benchmarks," (Phila. Code § 13-101(2)). PWD reports that part of its mission is to pursue strategies to "improve customer service, outreach and assistance," in its Financial Stability Plan.[7] Several clear customer service issues have been identified in the course of this proceeding and are thoroughly examined on the record as set forth more fully in Sections X and XI; these are relevant to PWD and the Board, as they pertain to PWD's Financial Stability Plan. Certain of these issues consist of customer service commitments upon which rates and charges have been based, but which commitments PWD has not satisfied. Other service issues identified demonstrate inefficiencies and inconsistencies in operations that impact the determination of the reasonableness of PWD's forecast operating expenses. Clearly, these service-related issues are within the scope of the determination of just and reasonable rates and charges, under the applicable legal standards applying to PWD ratemaking.

Satisfying the constitutionally-based just and reasonable standard requires a rate maker to base its decision on substantial evidence. The "substantial evidence" standard is a strict standard, resting squarely on the utility, which benefits from no presumption in its favor. Courts evaluating the application of the substantial evidence standard in administrative proceedings have clarified that the sufficiency of the evidence required is directly related to the nature and extent of the authority (i.e., rate increase) requested. Lansberry v. Pa. PUC, 578 A.2d 600, 603 (1990). In the context of PWD's request to increase rates to recover an additional $106 million over two fiscal years, this standard is high.

[7] See PWD Exhibit 2, at 2.

The substantial evidence standard is explicitly made applicable to the Board's rate determination pursuant to Pennsylvania's Administrative Agency Law. See 2 Pa. C.S. §754.[8] Accordingly, PWD must prove each element underlying its rate increase request with substantial and legally credible evidence. Substantial evidence means "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." Phila. Gas Works v. Pa. PUC, 898 A.2d 671, 675 n.9 (Pa. Cwmlth. 2006); Motor Freight Exp. v. Pa. PUC, 121 A.2d 671 (Pa. Super. 1956) (internal citations omitted). This standard requires more than a mere trace of evidence or the suspicion of the existence of such a fact sought to be established. See Norfolk & Western Ry. Co. v. Pa. PUC, 413 A.2d 1037 (Pa. 1980). Although there is no precise formula which the Board must apply, the Board is required to utilize some reasonably scientific method in its rate determination. City of Johnstown v. Pa. PUC, 133 A.2d 246, 250 (Pa. Super. 1957). Moreover, pursuant to its own regulations, the Board "shall fully consider and give substantial weight" to the record and the report to be prepared by Hearing Officer Brockway. The Board must also reference the portions of the record supporting its conclusions. Board Reg., Section II.9(a)-(b).

B. Promulgation of PWD Tariff.

Pursuant to the Board's regulations, Section 9(b), all rates and charges of PWD should be set forth in a compliance tariff submitted to the Board and published on the Board's website, reflecting the Board's final decision in this Rate Proceeding. The Board should be aware, as

[8] This conclusion is necessitated by Pennsylvania law as a result of the framework for ratemaking by the Board established pursuant to the Philadelphia Home Rule Charter and Philadelphia Code. See Public Advocate's Memorandum Responding to the Hearing Officer's Request Concerning Due Process of Rate Hearings, dated as of January 21, 2016, available at: http://www.phila.gov/water/rateboard/PDF/PublicAdvocateDueProcessMemorandum.pdf

discussed in Mr. Morgan's testimony, and during the technical hearings, that PWD's rate forecast model, developed by Black & Veatch, contains various "inter-connections." PA St.-1 at 6, lines 24-25; April 5, 2016 Tr. at 19, lines 12-20. Accordingly, although the Public Advocate has utilized the Black & Veatch model to calculate an "order of magnitude" associated with each proposed revenue requirement adjustment, the sum of the Public Advocate's adjustments, separately calculated, would not correspond to the actual impact upon the net revenue requirements, taken together. As a result, the Public Advocate recommends that the Board articulate, in its Rate Determination, the specific assumptions it directs PWD to modify in its model. Based on those changed assumptions, the Board should require PWD (working with Black & Veatch) to finalize projected net revenue requirements taking into account the various inter-connections in the model, and report back to the Board the impact of those adjustments with an accompanying compliance tariff.

It should be noted that PWD's compliance tariff must include all rates and charges, not just those rates and charges which PWD has proposed for adjustment in this proceeding. PWD's filing reflects changes to certain rates and charges, which have been discussed on the record of this proceeding. However, there are currently in effect numerous other rates and charges (see, e.g., the "Miscellaneous Charges" currently set forth in Section 306 of PWD's regulations, PWD Exhibit 3A). The Board's jurisdiction is not limited to just those rates and charges PWD proposes to alter in a rate proceeding; the Board is responsible for fixing and regulating all PWD rates and charges. Phila. Code §13-101(3). Given that no participant has raised an issue or concern regarding rates and charges other than those revised rates and charges submitted by PWD in this proceeding, it is appropriate for the Board to instruct PWD, in its next rate proceeding, to submit detailed justification for each rate or charge set forth in the tariff in

order that the Board may determine whether adjustment may be appropriate. Finally, as suggested by CLC, the Board should require PWD to adopt standards for the payment of miscellaneous charges (e.g., meter installation fees) over time and/or pursuant to a reduced fee structure based on customer financial means, in order to ensure these charges do not continue to be barriers to the receipt of life-essential water service. March 11, 2016 Pub. Tr. at 31, lines 10-15.

C. Sound Utility Rate Making Practices and Current Industry Standards.

Pursuant to the Philadelphia Code, rates and charges shall be developed "in accordance with sound utility rate making practices." In addition, pursuant to the Philadelphia Code, rates and charges shall be developed "consistent with current industry standards." The Philadelphia Code is clear that current versions of the American Water Works Association (AWWA) Principles of Rates, Fees and Charges Manual (M-1) and Water Environment Federation's Wastewater Financing & Charges for Wastewater Systems may be utilized to determine whether rates and charges are consistent with *industry standards*. The Philadelphia Code provides no further guidance regarding sources to utilize to determine sound utility ratemaking practices.

In this proceeding, there are competing viewpoints concerning sound rate making practices and industry standards. A threshold issue is PWD's mistaken contention that the widely-recognized "known and measurable" principle does not apply to this rate proceeding. A second issue arises from PWD's unjustifiably broad reliance upon future budgets and a five year forecast to support its requested increases in rates. A final issue regards the extent to which PWD or any participant can rely upon the M-1 as a definitive guide to justify its position.

1. The Known and Measurable Standard Is a Fundamental Principle Applicable to PWD Ratemaking; It Applies to All Ratemaking in Pennsylvania.

The "known and measurable" standard is a fundamental utility ratemaking principle, essential to sound rate making, which requires all ratemaking claims to be based upon known, measurable and reasonable expenses. Office of Consumer Advocate v. City of Lancaster – Sewer Fund, 100 Pa. PUC 174 (2005). It is universally recognized among utility ratemaking authorities. The failure of supporting cost estimates to satisfy the known and measurable standard constitutes an evidentiary failure by the utility to demonstrate the necessity of increased rates. The known and measurable standard is recognized by the American Water Works Association as a fundamental standard in ratemaking. According to the AWWA:

> The fact that expenses are not the same as those observed in past periods is not, by itself, evidence of unreasonable rates. Past cost trends may be modified to compensate for known and measurable cost changes in the future. Such projected costs are often used to establish a target revenue requirement for a test or base year for developing rates. These expected or projected costs will be analyzed to determine the proper user charge revenue requirements.

W. Corssmit (Ed.), Water Rates, Fees, and the Legal Environment, AWWA, 2nd Ed., 18 (emphasis added).

Moreover, the M-1 recognizes that, for adjustments to reflect future costs beyond a historical test year, the known and measurable standard applies. See M-1 at 12.

One of PWD's experts, Mr. Bart Kreps, acknowledges that the known and measurable standard applies under certain approaches to ratemaking. PWD St.-8, Direct Testimony of Bart Kreps (hereinafter, Kreps) at 4. However, Kreps appears to assert that this standard only applies under the "utility basis" of ratemaking and not under the "cash needs" approach upon which he asserts PWD's rates are established. Kreps at 4. Without clearly denying that the "known and measurable" standard applies to PWD ratemaking, Kreps appears to suggest this standard may be

sidestepped for municipal utilities, and that PWD should have flexibility to depart from this standard based on the recognition by the AWWA of a cash-needs approach. Kreps at 5-6.

Kreps is wholly inconsistent with the AWWA in this regard.[9] While the M-1 clearly indicates that the "known and measurable" principle applies to pro forma expenses utilizing a traditional test year, it nowhere states that this standard ceases to apply for purposes of projected test years. Rather, the AWWA utilizes different terminology, functionally embodying the same concept. The M-1 requires that projected future expenses be either "known and measurable" or "well-considered estimates." M-1 at 13. Moreover, as set forth above, the AWWA's Water Rates, Fees, and the Legal Environment clearly articulates that the known and measurable standard is used to *establish revenue requirements for a test year*, not simply to depart from a test year on a pro forma basis. Accordingly, the AWWA implicitly recognizes that the known and measurable standard applies to projecting revenue requirements, regardless of whether the utility sets rates on utility basis or cash needs basis. At a minimum, even substituting the M-1's language that such estimates be "well-considered," it is fundamental to the determination of customer rates that such estimated expenditures satisfy a threshold level of reasonableness, demonstrating certainty that they will, in fact, occur.

Ultimately, Pennsylvania courts have determined that the known and measurable standard applies to a utility that sets rates on a cash basis. Primarily, the Pennsylvania Supreme Court has decisively held that there is no basis, under Pennsylvania law, to distinguish between a generally accepted ratemaking principle on the basis that the utility is, or is not, municipally-

[9] Kreps' testimony is fundamentally inconsistent with Philadelphia and Pennsylvania law, particularly inasmuch as he fails to recognize the entire rate review structure over which the Board presides. He is also fundamentally incorrect from both a legal and a factual perspective to the extent he suggests that PWD's unapproved FY 2017 budget forms the basis for its rate request.

owned.[10] See Shirk v. City of Lancaster, 313 Pa. 158, 169, 169 A. 557, 562 (1933) ("In general, however, the business of supplying water by a municipality must be regarded and dealt with in the same manner as that of a private corporation. Should the supplying of water be determined to be a governmental function, inevitably there would follow endless confusion in the administration of the basic principles underlying the same business in the identical matter of rates, and also in other public and private relations which come before the courts.") Accordingly, examining a rate request by PGW, a municipal utility which establishes rates according to a cash flow methodology substantially similar to PWD's methodology,[11] the PUC determined, and the Commonwealth Court (the intermediate appellate court) upheld, that the known and measurable standard applies for purposes of forecasting future revenue requirements. Philadelphia Gas Works v. Pa. PUC, 2009 WL 9098313, at *5 (Pa. Commw. 2009) (rejecting five year forecast for purposes of setting rates because such forecast was not known and measurable; determining that lower level of revenue increase than requested was sufficient to satisfy all of the required elements of PGW's cash flow rate method on a projected test year basis).

In Pennsylvania, regardless of what may be inferred from the AWWA on this issue or Mr. Kreps' broad and unsubstantiated contention that a municipal utility may diverge from fundamental principles of ratemaking, the known and measurable standard applies by law to

[10] It should come as no surprise that the M-1 advises readers to consult with legal counsel before a major decision or change concerning rates; the M-1 is not a state-specific guide, nor a legal treatise on utility ratemaking. M-1 at 295.

[11] See, e.g., 52 Pa. Code §69.2702 ("The Commission is obligated under law to use the cash flow methodology to determine PGW's just and reasonable rates. Included in that requirement is the subsidiary obligation to provide revenue allowances from rates adequate to cover its reasonable and prudent operating expenses, depreciation allowances and debt service, as well as sufficient margins to meet bond coverage requirements and other internally generated funds over and above its bond coverage requirements, as the Commission deems appropriate and in the public interest for purposes such as capital improvements, retirement of debt and working capital.").

PWD ratemaking. Mr. Morgan and Mr. Rosenthal correctly contend that "known and measurable" is the proper standard to apply in assessing PWD's projected revenue requirements. As Mr. Morgan states:

> It is also important that both adjusted and unadjusted test year data meet the widely-accepted regulatory principle of being "known and measurable". To be considered as "known and measurable", the probability that the revenue or cost will change must be certain and the amount of the change must be known with certainty.
>
> PA St.-1 at 8, lines 3-7.

Similarly, Mr. Rosenthal explains:

> It is a generally accepted ratemaking principle in Pennsylvania that claimed test year expenses must be known and measureable at the time of filing. This means that adjustments cannot be based upon conjecture or even informed judgment. Fundamental ratemaking principles require that all ratemaking claims be based upon known, measureable and reasonable expenses.
>
> Direct Testimony of Robert A. Rosenthal, at 5, lines 8-12.

During the technical hearings, Mr. Rosenthal confirmed that, based on his extensive experience in ratemaking in Pennsylvania, his expert opinion is that the "known and measurable" standard applies to municipal utility ratemaking. See April 13, 2016 Tr. at 63, lines 2-17.

2. Recognition of the Distinction Between PWD's Budget and Best Practices for Establishing Rates and Charges.

PWD does not spend its full budget in any fiscal year. Contrary to certain statements by PWD representatives, PWD's rates are <u>not</u> set simply on the basis of its budget. See February 22, 2016 Tr. at 30, lines 9-11 ("the Water Department's rates and charges are set on a budgetary or legal basis.") To the contrary, "PWD <u>keeps its books</u> on what is termed a 'legally enacted' or 'modified accrual' basis." PA St-1 at 8 (emphasis added). This is a conservative accounting methodology, which the Public Advocate's expert, Mr. Morgan, contends cannot be relied upon in ratemaking because of two primary factors: (1) it tends to understate revenues and overstate

expenses, which would result in unnecessarily high rates, and (2) one-time, non-recurring expenses in a budget should not drive ratemaking; rather, rates should be based on normal levels of ongoing expenditures. See PA St.-1 at 9-10. PWD did not rebut Mr. Morgan's testimony in this regard, but its witnesses appear unclear on the distinction between PWD's budget and the standards and practices the Board must utilize in setting rates.

The methodology utilized by PWD in forecasting revenue requirements, in many respects, confirms that a future PWD operating budget does not, alone, support a request to increase rates. As set forth in PWD witness testimony, the first step in PWD's ratemaking model for operating and maintenance expenses for ratemaking purposes is the application of historical "actual-to-budget" or "spend factors" to PWD's FY 2016 budget. PWD St-9A, at 25. The spend factors, based on a three year average of actual spending relative to budgeted amounts, demonstrate what the "expected expenditure level" for FY 2016 will be, which is different from PWD's FY 2016 budget. Id. From that expected expenditure level in FY 2016, PWD and its consultants attempt to estimate how much costs may increase during FY 2017 and FY 2018 using "escalation factors," and those estimates of increased expense provide part of PWD's projected revenue requirements for the coming years. As discussed in Section V, the Public Advocate is proposing multiple adjustments to PWD's budget factors and escalation factors utilized in determining projected revenue requirements.

Contrary to the implicit acknowledgement in the rate model that PWD's budget is not the appropriate foundation upon which to build future rates, on multiple occasions, PWD appears to confuse the Board's rate determination with PWD's budget. For example, regarding contributions and indemnities expense, Ms. LaBuda suggests that the Board's reflection of actual historical expenditure levels in rates would somehow impede PWD's ability to meet customer

needs. April 5, 2016 Tr. at 102, line 24, through 103, line 2 ("Unfortunately, any type of adjustment to this line has a direct impact to customers and our ability to meet customers' needs and demands."). The Board should recognize that this self-serving contention is simply incorrect.

In another instance, PWD erroneously asserts that the Mayor of Philadelphia's proposed budget for PWD is determinative of rates and charges ("You really need to look at the mayor's budget in brief and the page on the water fund to see all of the components of what rates and charges are covered which [Black & Veatch] does detail in their work papers," April 5, 2016 Tr. at 117, lines19-23), only to be corrected by Black & Veatch explaining that actual historical experience is utilized to determine expected expense levels (April 5, 2016 Tr. at 119, lines 9-13). While certainly PWD's ability to spend may be restricted in some way by its legally-enacted budget,[12] PWD's spending is not restricted, as to any particular expense, by the Board's rate determination.

As Mr. Morgan testified, "Normal ratemaking practice seeks to determine costs on a normal ongoing level, rather than to recover costs in a specific year. Since rates are not collected subject to refund, costs should be established at a level that is more representative of normal operations." PA St.-1 at 10, lines 10-13. Notably, the AWWA recognizes that normalization of historical data is a best practice in ratemaking, intended to "reflect conditions that may not continue into the future." M-1 at 10. Accordingly, in determining appropriate rates and charges for PWD, the Board should make those adjustments recommended by the Public Advocate, and discussed more fully below, which are intended to recover from customers what is necessary to fund PWD's normal operations, and recognizing that PWD has accumulated massive reserves

[12] PWD may obtain further/modified spending approval through a City Council-approved budget transfer ordinance, which is a relatively routine undertaking.

from customers utilizing projections which have historically understated revenues and overstated expenses.

3. The AWWA M-1 Manual Provides Only General Guidance to the Board in PWD Ratemaking.

The M-1 "is intended to help policymakers, managers, and rate analysts consider all relevant factors when evaluating and selecting rates, charges, and pricing policies." M-1 at xix. It is not, and does not purport to be, a prescriptive manual, establishing bright-line rules for the establishment of rates and charges. As relevant to the Board's consideration in this case, there appear to be three main areas of controversy surrounding the participants' reliance upon the M-1: (1) the extent to which the M-1 requires the Board to defer to PWD's five-year forecast or the City of Philadelphia's five year plan in the projection of future O&M expenses; (2) the use of the M-1 manual to supply industry benchmarks when actual data from PWD is not available; and (3) the degree to which the M-1 provides that customer service inquiries are relevant in ratemaking.

a. AWWA Guidance on Revenue Requirements.

PWD asserts that the M-1, as an industry standard, supports the use of estimates based on long-range financial planning. April 6, 2016 Tr. at 6, line 19, through 7, line 10. Accordingly, PWD appears, at times, to submit that aspects of its five-year forecast and the City of Philadelphia's five year plan should, because they constitute long-range planning that the M-1 endorses, be entitled to some deference by the Board in determining rates. See, e.g., April 6, 2016 Tr. at 53, lines 5-7. At other times, PWD's witnesses acknowledge that the M-1 endorses the use of a period of financial planning, with five years specifically mentioned as being appropriate, as a best ***management*** practice. April 6, 2016 Tr. at 91, line 14, through 92, line 2.

Moreover, PWD acknowledges that, in forecasting its future expenses, the "key" to its financial stability is the ability to drawdown the Rate Stabilization Fund. April 6, 2016 Tr. at 94, line 16, through 95, line 2.

In fact, the M-1 dedicates a mere two paragraphs to substantive guidance concerning the use of projections. M-1 at 10. Furthermore, the M-1 is clear in cautioning against reliance upon projections beyond a single year for ratemaking:

> In making projections for more than one year, measures of revenue adequacy (i.e., indicated annual deficiencies) *do not necessarily imply* that an immediate rate change sufficient to cover deficiencies for the entire projection period (e.g., five-year period) is required or recommended.
>
> M-1 at 10.

Rather, the manual utilizes a five year projection to demonstrate how, in projecting revenues and expenses, a utility can anticipate potential needs for adjustment. Importantly, the M-1 explicitly recognizes that one advantage of this forecasting is "that it may allow the utility to better anticipate any major changes in rates, and take action immediately to help mitigate or lessen those projected major changes in rate levels." M-1 at 10. Accordingly, the use of a five year forecast is clearly a management tool that can assist a utility in determining when a rate increase or operational change *may* be necessary to ensure that revenue requirements are met, and it can inform stakeholders of management's views of the relative financial strengths or challenges facing a utility in the near-term.

The AWWA acknowledges that a financial projection model should be considered a "living document" subject to change as conditions change. M-1 at 10. Accordingly, the AWWA does not endorse the use of a five-year projection as presumptively valid for any purpose in establishing rates and charges. Rather, the M-1 manual is clear that for both revenues and

expenses, actual historical data is the most appropriate basis for projections. See M-1 at 22 ("The amount of revenue that may be derived from water rates under any particular rate schedule can be appropriately projected based on historical data regarding customer billing"); M-1 at 30 ("In projecting future O&M expenses, factors that will affect future expenses must be adequately analyzed. Recent experience regarding O&M expenses, as recorded by the utility, serve as an important base for projections. Trends in such expenses should be recognized, but normalization of past experience is important in the analysis.")

Ultimately, City Council has determined that PWD's Financial Stability Plan is worthy of *full consideration* by the Board, but has not indicated that PWD's projections are entitled to any deference. Phila. Code § 13-101(4)(b)(i). In the fullness of that consideration, the Board must satisfy the legal standards and ratemaking principles applicable to PWD ratemaking. Accordingly, in its "full consideration" of PWD's requested rate increase, the Board must also consider the reasonableness of PWD projections over the rate period, bearing in mind that as the AWWA clearly recognizes, a five-year forecast may not be reliable over even a short-term period. M-1 at 10 (projections should be reviewed "*at least* annually"). Moreover, City Council did not endorse the use of PWD's five-year forecast as an accurate predictor of revenue requirements. City Council, in articulating ratemaking standards for the Board to follow, set forth no specific period of years for PWD's Financial Stability Plan, and instead required PWD's Financial Stability Plan to be updated periodically and in advance of any request for increased rates and charges. Phila. Code § 13-101(2). Accordingly, in Philadelphia, as in the AWWA M-1 manual, it is clearly recognized that a forecast of utility financial performance cannot stand alone to justify any aspect of PWD's proposed rate increase. To rely exclusively upon PWD's forecast would violate specifically promulgated standards, including the constitutionally-based just and

reasonable standard incorporated into the Philadelphia Code, sound utility ratemaking principles and industry standards. Rather, in forecasting the need (or absence of need) for additional rates from customers, the Board must assess the reasonableness of those foundational elements utilized to forecast revenue requirements. In other words, PWD's projections must be supported on the basis of actual historical data or projected on the basis of known and measurable changes in revenues and expenses.

b. AWWA Guidance on Cost Allocation.

As discussed more fully in Section VI below, another issue concerning reliance upon the M-1 arose in the context of cost allocation among different customer classes. Specifically, Mr. Mierzwa determined, using actual usage data supplied by PWD, that PWD's proposed cost allocation analysis understated the costs of serving two customer classes, the City Government and City Leased Properties classifications. This under allocation of costs is attributed to the understatement of the usage of these classes during periods of elevated maximum day and hour demands. As part of his assessment of the *extent* of the under allocation of costs, Mr. Mierzwa applied common industry maximum day and hour demand standards identified in Appendix A of the M-1. Unlike the M-1's guidance concerning the development of revenue requirements utilizing historical data that the utility *should* maintain, the M-1 manual recognizes that cost allocation should be reasonably determined based on similar water-use characteristics. M-1 at 75. PWD and the Public Advocate's expert, Mr. Mierzwa, agree that conducting an actual demand study, to measure the specific maximum day and hour usage demands of each customer class above ordinary levels of usage (so-called "extra capacity" demands), has not been performed and would likely be a very time-consuming and expensive undertaking. PA St.-2 at 11, lines 5-6; April 11, 2016 Tr. at 5, lines 18-22. Accordingly, in order to determine how costs

associated with meeting higher than normal levels of water demand during peak periods for various classes should be allocated, certain assumptions need to be made about the characteristics of usage by different classes of customers. April 11, 2016, Tr. 8, lines 11-16.

In this proceeding, the issue concerning these assumptions is whether it is reasonable to rely upon the M-1 manual's examples of extra capacity factors in the absence of any reliable actual data from PWD. The Public Advocate contends that, utilizing the framework of the M-1 manual to identify where extra capacity costs may not be appropriately allocated to customer classes is reasonable, because the M-1 manual relies upon typical industry-accepted estimates of customer demands. Moreover, PWD's inability or unwillingness to provide specific data concerning extra capacity costs is no basis for disregarding the obvious and dramatic variance in monthly billed usage associated with City Government and City Leased Property customer classifications, particularly compared with other customer classes. Ultimately, the Public Advocate has used the industry-accepted estimates of customer demands supplied by the M-1 as demonstrative of the imbalance, and has recommended below a far more modest means to begin reallocation of costs.

c. The M-1 Confirms That Customer Service Inquiries Are Relevant to Ratemaking.

The M-1 confirms that customer service is a component to the determination of just and reasonable rates. In discussing general legal standards, the M-1 observes that "efficiency in delivering services" is one of the factors included in determining the reasonableness of costs to be recovered through rates. M-1 at 296. Although this statement appears merely to confirm the AWWA's recognition of federal caselaw concerning just and reasonable rates, the AWWA goes one step further, stating that customer-related data is an essential component of a utility's

development of supportable rates. In crafting rate proposals, the AWWA recommends that utilities be proactive in assessing customer's needs:

> As a final element of the data requirements and information that may be of assistance to the utility in establishing a rate form that meets the objectives and goals of the utility, it is important to find out what your customers want, or perceive to be important…[T]he utility should investigate its customers' needs, attitudes and preferences.
>
> M-1 at 308.

Accordingly, while the M-1 confirms the relevance of customer service data to the ratemaking authority based upon legal principles, it expands upon that relevance, advising utilities to ensure that information regarding customers' needs informs the utility's rate proposal. Not only should the Board consider customer service issues arising in the context of PWD's rate proceeding, but, according to the M-1, PWD should assemble, and make available customer service data when crafting its own rate proposals. As discussed more fully below, not only has PWD failed to make available certain necessary customer service data, it has stopped collecting data it previously collected resulting in an inability to assess the full extent of its customer service inefficiencies. See Section X.A., below.

IV. PWD IS CAPABLE OF MAINTAINING ADEQUATE RESERVES AND FUNDING INCREASED CAPITAL WORK UNDER EXISTING RATES.

The Philadelphia Code charges the Board with determining what minimum level of reserves PWD should maintain during the rate period. Similarly, the Philadelphia Code requires the Board to determine the extent to which current revenues should fund capital expenditures. As discussed below, the Public Advocate recommends no increase in PWD's targeted level of reserves and recommends that PWD be required to utilize existing, excess reserves prior to increasing customer rates to fund increased "pay-as-you-go" capital expenditures.

A. PWD Should Continue to Target $90 Million in Combined Rate Stabilization and Residual Fund Balances.

Pursuant to Philadelphia Code Section 13-101(4)(b)(i), in fixing rates and charges, the Board shall determine the minimum level of reserves to be maintained by PWD during the rate period. PWD asserts that it must maintain $110 million in its Rate Stabilization Fund and $15 million in its Residual Fund, for a total of $125 million in reserves in these two funds. PWD St.-2 at 6. PWD is under no legal obligation to maintain reserves at or above that level; its basis for this amount is derived from its financial plan.[13] As mentioned above, the Board should fully consider PWD's financial plan, but the Board is not bound by its terms, nor should the Board defer to PWD's financial plan. The Board should determine the minimum level of reserves PWD should maintain based on "all relevant information presented, including, but not limited to, peer utility practices, best management practices and projected impacts on customer rates." Phila. Code § 13-101(4)(b)(i). The Public Advocate submits that PWD has not established a need to increase the minimum level of reserves above what it targeted in establishing rates and charges for FY 2013-2015. As reflected in the Joint Petition for Settlement of Phase I of the 2012 Rate Proceeding (hereinafter, Settlement Agreement),[14] Attachment B (which is also designated Exhibit ML-6 to PWD St.-2), PWD targeted a minimum balance of approximately $75 million in its Rate Stabilization Fund and a minimum balance of approximately $15 million in its Residual Fund.[15] PWD has not supported its request to increase its minimum level of

[13] Contrary to its suggestion that it is required to maintain $45 million in its Rate Stabilization Fund (April 6, 2016 Tr. at 107, lines 6-10), PWD has not identified, nor does there appear to be, any provision of law requiring any specified minimum balance in the Rate Stabilization Fund.
[14] The Settlement Agreement was added to the record in PA Hearing Exhibit II.
[15] See Exhibit ML-6, line 41 (reporting targeted FY 2015 year-end balance of $11,794,000 for Residual Fund) and line 44 (reporting targeted FY 2015 year-end balance of $74,513,000 for Rate Stabilization Fund). These amounts are to be contrasted with Mr. Jagt's assertion that PWD targeted combined reserves of $115,000,000 at the end of FY 2015 in these funds. February 22, 2016, Tr. at 192, line 13.

reserves by $35 million, the equivalent of its FY 2017 rate increase, and reflecting an almost 40% increase in its minimum fund balances.

The Board should be mindful that in settlement of the last rate proceeding, in late 2012, PWD projected significant drawdowns from its Rate Stabilization Fund in each year between 2012 and 2015. See PA Hearing Exhibit II at 11. As Mr. Morgan testified,

> The combination of under-projected revenues and over-projected expenses during the previous rate case has directly contributed to the accumulation of funds in PWD's Rate Stabilization Fund over the period FY 2012 – FY15. In fact, documentation produced in this proceeding demonstrates that PWD's expected Rate Stabilization Fund balances have been consistently projected at unrealistically low levels, suggesting the accuracy of PWD's rate model is a longstanding problem.

PA St.-1 at 14, line 23, through 15, line 3.

It is abundantly clear from the record that, in its rate increase forecasts, PWD has historically overstated expenses and understated revenues. PA-St. 1 at 12, line 10, through 11, line 9; PA-EXE-103 (included at PA Hearing Exhibit I at 13-17); April 6, 2016 Tr. at 77, line 4, through 78, line 6. The cumulative effect of this methodology over the prior rate period was to produce an additional $132 million in PWD's Rate Stabilization Fund as of fiscal year-end 2015,[16] and an additional $3.2 million in the Residual Fund.[17] In other words, on a combined basis, PWD's inaccurate forecast of revenues and expenses resulted in reserves which were $135 million **more** than it intended to produce the last time it increased rates. On a mathematical

[16] Compare FY 2015 amount reported on Exhibit ML-6, line 44, $74,513,000, with PWD FY 2015 Financial Statements (PWD Exhibit 4, Supplement to SI-7f, available at http://www.phila.gov/water/rateboard/PDF/PWDFinancialStatements.pdf), reporting year-end balance of $206,446,966.

[17] Compare FY 2015 amount reported on Exhibit ML-6, line 41, $11,794, with PWD FY 2015 Financial Statements (PWD Exhibit 4, Supplement to SI-7f), reporting year-end balance of $14,993,329 .

basis, the accumulation of excess funds in the Rate Stabilization Fund alone accounts for 77 cents of every dollar by which PWD increased rates for FY 2013, 2014 and 2015.[18]

PWD asserts that it has become more "accurate" in forecasting future revenues and expenses, but admits that it has no actual information supporting that claim. PWD provides no information concerning specific measures taken to improve the accuracy of its forecasts. Moreover, PWD's experts attest that the methodology utilized in this case is unchanged from that utilized in the last rate proceeding. February 22, 2016 Tr. at 191, lines 16-23. Ultimately, PWD's claims of improved accuracy in this rate proceeding are meant to distinguish its current forecast from past practices. Yet, by all indications, PWD has not made any meaningful change. As discussed below, it has failed to conduct a collaborative workshop with the goal of agreeing upon reasonable budget and growth factors to be used in forecasting revenue requirements. And, as shown by Mr. Morgan's testimony (and discussed below), a number of specific assumptions utilized by PWD are unreasonable, and would result in the continuation of PWD's long-standing practice of inaccurately forecasting revenues and expenses. PWD asserts that somehow its "alignment" with the City's five year plan provides more certainty regarding its forecast, but there is no evidence to support this claim. PWD's use of the City's five-year plan is new in this rate proceeding, and there is no evidence demonstrating its reliability for ratemaking purposes. April 5, 2016 Tr. at 15, lines 16-17.

PWD acknowledges that its projections cannot be demonstrated to be more accurate until after actual results are obtained, and that use of Rate Stabilization Fund reserves, like all aspects of its projections, may be more or less than shown in its forecast. See, generally, April 6, 2016

[18] See PA Hearing Exhibit I, at 17, demonstrating *additional* funds in Rate Stabilization Fund of $38,949,000 in FY 2013, $43,250,000 in FY 2014, and $25,131,000 in FY 2015. In sum, an additional $107,330,000 accumulated in the Rate Stabilization Fund over the period FY 2013-2015. This represents approximately 77% of PWD's revenue increase (107,330,000/140,019,000=76.65%), of $140,019,000, agreed to in the Settlement Agreement. See PA Hearing Exhibit II, at 4.

Tr. at 80, line 21, through 82, line 12. Although PWD attributes its past experience, and the related uncertainty as to whether its projections are accurate, to the delay in producing year-end figures for its legal basis of accounting reporting (after October 15), there is no question that this delay will continue into the future.[19] April 5, 2016 Tr. at 166, lines 1-11.

Under the circumstances presented, a presumption exists that PWD's forecast will continue to understate revenues and overstate expenses. The so-called "presumption of continuance of fact or condition" is a well-established evidentiary principle, which stands for the proposition that, "[o]nce a status or relationship is shown to exist, it is ordinarily presumed to continue until the contrary appears." 24 P.L.E. Evidence § 28. This common law presumption applies to administrative fact-finding. Hostetter et al., v. Pa. PUC, 49 A.2d 862, 864 (Pa. Super. 1946) (finding that this common-law presumption applied to administrative fact-finding and describing it as "only an application of a familiar and elementary common-law principle, the so-called presumption of continuance doctrine, by which a condition of a continuous nature once established may be assumed to continue until the contrary is shown."). Until PWD can definitively show that its projections have, in fact, become more accurate, the Board should presume that PWD's forecasts continue to understate revenues and overstate expenses. Notably, PWD on multiple occasions undermined its own position regarding improved accuracy of its forecast, acknowledging that, to the contrary, its forecast is an overly conservative one.[20]

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[19] It goes without saying that PWD's FY 2016 actual revenues and expenses will dictate the amount of a withdrawal or deposit to the Rate Stabilization Fund. Ms. LaBuda acknowledges that this amount cannot be known at this time. At the time of the last rate proceeding, when settlement of the revenue requirement aspect of the case was reached shortly after the close of Fiscal Year 2012, PWD estimated a withdrawal of nearly $14.5 million would be necessary for FY 2012. Instead, a deposit of more than $8.5 million was made to the Rate Stabilization Fund, reflecting a $23 million variance. PA-EXE-103.

[20] See, e.g., April 5, 2016 Tr. at 95, lines 13-14 ("we are being conservative in the projection of expenses in this case"); April 5, 2016 Tr. at 108, lines 9-10 ("in general, when you are predicting future bond rates, you want to be conservative"); April 5, 2016 Tr. at 109, lines 4-6 ("you are looking forward, so you want to be conservative"); April 5, 2017 Tr. at 167, lines 18-24 (describing use of rate case projections in the

On the basis of these factors, the inescapable conclusion is that increasing customer rates to drive up PWD reserves is unnecessary. PWD's reserves have reached all-time high levels despite the targeting of lower reserve fund balances in PWD past projections. PWD has projected spending down its Rate Stabilization Fund year after year, and yet its reserves have continued to accumulate. The Board should not recognize a deliberate attempt to drive up Rate Stabilization and Residual Fund reserves by implementing a policy minimum of $125 million in the aggregate. On the basis of actual fund balances, PWD has significantly exceeded even that higher amount each year while its policy has been to maintain a minimum of $90 million combined in the Rate Stabilization and Residual Funds.

B. No Peer Analysis Has Been Provided Which Supports PWD's Minimum Reserve Policy.

In this proceeding, it is apparent that PWD utilizes other utility company data inconsistently, varying its presentation of its "peers" to suit different purposes. For example, in an effort to show that its bills are affordable, PWD offers presentations including over a dozen other utilities. See, e.g., Exhibit JP-2 to PWD St.-5; PWD February 22 Board Presentation, at 41 (included in PA Hearing Exhibit I, at 20-21). Its consultant, Mr. Palladino, ranks PWD's bills somewhat less affordable than Boston and Baltimore on the basis that approval of even a modest increase would cause PWD average bills to exceed those cities' average bills (current PWD average monthly bill is $67.43, compared to $67.50 and $67.49 for Boston and Baltimore, respectively). Exhibit JP-2. In PWD's own presentation, however, PWD reverses this treatment, ranking its bills as more affordable than Boston and Baltimore. PWD depicts the

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bond market: "we need to be relatively conservative in the projections"); April 13, 2016 Tr. at 135, 17-21 (acknowledging PWD taking "an admittedly conservative view of the potential cost" of a new low income program).

amount of its marginal rate increase above its current average monthly bill, but does not adjust where PWD's increased rates would place it relative to its "peers." PWD February 22 Board Presentation, at 41; PA Hearing Exhibit I at 21. Moreover, PWD clearly adds and removes utilities from these presentations from time to time, with the effect that PWD's bills look more affordable because PWD has decided to include as peers utility companies that charge much higher bills than would be reasonable in Philadelphia. Compare Exhibit JP-2 with PWD February 22 Board Presentation, at 41; see generally April 6, 2016 Tr. at 148, line 2, through 153, line 24.

PWD attempts to bolster its request to target higher reserves by showing the cash reserve policies of three "selected peer utilities," including D.C. Water, Cleveland Water, and the City of Baltimore. See PWD St.-7, at 8. PWD acknowledged that there are dissimilarities between these utilities and PWD. Cleveland Water, for example, is only a water utility. April 5, 2016 Tr. at 141, lines 1-3. Moreover, unbeknownst to PWD, Cleveland has also passed an ordinance freezing rates for three years. PA Hearing Exhibit I at 22-24. Strikingly, Cleveland Water is not included in any of PWD's presentations intended to compare bill affordability. April 6, 2016 Tr. at 153, line 24. Washington, D.C., identified as a "best practice" by PWD, has a significantly higher median household income than Philadelphia. PA-EXE-122; April 5, 2016 Tr. at 141, lines 8-13. It also charges significantly higher rates to water customers, as shown in PWD's other presentations. Exhibit JP-2; PWD February 22 Board Presentation, at 41.

For purposes of assessing the adequacy of PWD reserves, PWD asserted that its reserve policies were not, in fact, based on a particular peer, but rather on "a range of peer utilities, looking at the medians of the rating agencies." April 5, 2016 Tr. at 142, lines 1-2. PWD provided no information whatsoever to identify the specific utilities included in this range. PWD

offered only conclusory statements regarding the appropriateness of its desired reserve policy and the extent to which it is supportable by peers, concluding that PWD should target 120 days of cash on hand as "appropriate and in line with other peer system [sic]." PWD St.-7, at 9.

As Mr. Morgan observed, and PWD confirmed, PWD's data is not based on an actual peer analysis, but is based purely on a presentation of sector summaries from credit reporting agencies. April 6, 2016 Tr. at 99, lines 1-6. Mr. Morgan testified that this data is not appropriate for use in establishing policy. PA St.-1 at 42, lines 19-22. As mentioned above, Section 13-101(4)(b)(i) of the Philadelphia Code permits the Board to consider "peer utility practices" in determining minimum levels of reserves to be maintained by PWD. There is no suggestion in the Philadelphia Code, however, that the Board should consider sector medians reported by the credit agencies. Moreover, as reflected on the record, use of the rating agency data presents some clear risks, since it has been demonstrated to be unreliable. For example, as reported by Fitch, PWD's Capital Improvement Program is financed 70% by debt, and 30% by customer payments. April 5, 2016 Tr. at 144, line 10, through 145, line 21. PWD submits that this data is erroneous.

Moreover, it is not clear that a minimum reserve *policy* is relevant to Moody's or the other credit rating agencies. Ms. Clupper's testimony demonstrates that the actual reserves, expressed as days cash on hand, are among the "key factors" utilized by those agencies, rather than the minimum reserve policy. See PWD St.-7 at 3, 4. In Moody's utility rating methodology, set forth on Page 5 of Ms. Clupper's testimony, Moody's clearly examines days cash on hand, identifying an amount greater than 250 days under its "Aaa" rating. Moody's utility rating methodology does not provide any information about the importance of a utility's minimum reserve *policy*. PWD has supplied no information whatsoever to compare PWD's

actual reserves to the actual reserves maintained by any utilities that could be considered peers. Nor has PWD shown whether, within any group of peer utilities, PWD's charging of rates to consistently accumulate reserves far in excess of minimum, targeted levels, is just and reasonable. Although Ms. Clupper suggests PWD's policy should be to maintain 120 days in reserves, PWD had more than twice that amount in each year since 2011. See TR-4[21] (showing days cash on hand of: 295 for FY 2011; 353 for FY 2012; 260 for FY 2013; 289 for FY 2014; and 292 for FY 2015). According to its audited financial statements, PWD possessed 292 days of cash on hand at FYE 2015. Again, given the extent to which PWD inaccurately forecasts revenues and expenses, increasing PWD's targeted level of reserves will insure that customers pay higher rates than necessary to exceed PWD's reserve targets by a large margin.

C. PWD's Request to Increase Senior Debt Service Coverage to Implement a Larger Pay-As-You-Go Policy Does Not Justify Increased Customer Rates.

PWD submits that, in order to fund additional capital work on a pay-as-you-go basis, it must raise rates to increase its senior debt service coverage ratio. April 5, 2016 Tr. at 126, line 19, through 127, line 2. Accordingly, PWD has presented in its financial plan that it will trend coverage higher in order to generate more internally generated funds for capital work. PWD's witness also draws a link between higher coverage rates and lower costs to customers, but admits that there is no study that would quantify whether any actual savings to customers are obtained by increasing rates in order to increase debt service coverage. April 5, 2016 Tr. at 133, line 22, through 134, line 2.[22] PWD has only conceptually tied the increased debt service coverage ratio

[21] Available at http://www.phila.gov/water/rateboard/Transcripts/TR-1-2-3-4-6-7.pdf

[22] Indeed, even assuming that Ms. Clupper's anecdotal testimony that higher debt service coverage ratios may lower interest expense were persuasive (see April 5, 2016 Tr. at 133, line 22, through 132, line 2), a

to future cost savings. Instead, the Board's focus should be on whether significantly increased rates for the purposes of raising debt service coverage ratios to fund current construction costs renders the rates unjust and unreasonable. The Public Advocate submits that PWD has presented insufficient justification for this aspect of its proposed rate increase, particularly in light of its ability to utilize existing reserves to fund current construction costs.

As background, the Board should understand that there is no specific mechanism for "pay-as-you-go" capital work in the General Bond Ordinance governing the expenditure of project revenues. In order for Project Revenues (defined to include all "rents, rates, fees and charges imposed" on customers) to be utilized for current capital work (as opposed to paying the principal, redemption price and interest on Revenue Bonds), those amounts must be deposited in a fund or account from which capital expenditures may be made.

According to the General Bond Ordinance, "the City shall cause all Project Revenues received by it on any date to be deposited into the Revenue Fund upon receipt thereof." General Bond Ordinance, Section 4.05. Once deposited into the Revenue Fund, Project Revenues are first utilized to pay Operating Expenses in a timely manner, and then follow a schedule of required and discretionary payments, disbursements and transfers to other funds and accounts. As long as PWD's 90% Test is met (PWD must produce net revenues at or in excess of 90% of its senior debt service costs), PWD determines how much revenue flows to or from the Rate Stabilization Fund to ensure that it meets its 120% Test (PWD must produce net revenues, *including* transfers from the Rate Stabilization Fund, at or in excess of 120% of its senior debt service costs).[23] Amounts transferred to the Rate Stabilization Fund in any year are not counted

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lowered expense obtained by raising customer rates cannot be justified without detailed cost/benefit analysis. PWD has provided no such analysis in support of its request.

[23] In recent years, PWD has targeted higher senior debt service coverage than 120%; ramping up in annual increments of 1% since FY 2013. See, e.g., PWD St-9A, Table C-1, line 26.

for coverage purposes. PWD also makes an annual "Capital Account Deposit" which must be at least 1% of the depreciated value of PWD's plant, property and equipment. This amount is estimated at $21.745 million in FY 2017 and $22.289 million in FY 2018. See PWD St.-9A, Table C-1, line 29. Finally, net revenues counted for coverage purposes but not required for another purpose flow to the Residual Fund. Amounts in the Residual Fund may be transferred to any fund or account, including the Capital Account, and so may be used for capital work. General Bond Ordinance, Section 4.12.

PWD acknowledges that payment for capital work using internally generated funds, as opposed to the proceeds from bond issuances, is accomplished via the Capital Account. See February 22, 2016 Tr. at 37-38 (describing transfers from Residual Fund to "Capital Trust"[24]). PWD asserts that the only way it can utilize additional internally generated funds to pay for capital work is by increasing coverage. April 5, 2016 Tr. at 126, line 19, through 127, line 2. From PWD's perspective, in order to transfer more funds from the Residual Fund to the Capital Account, it must increase rates to generate a higher coverage ratio, allowing it to count additional revenues in excess of expenses toward coverage, and allowing those excess amounts to flow to the Residual Fund instead of the Rate Stabilization Fund. This fails to consider that PWD determines the amount of Project Revenues in each year that flow to and from the Rate Stabilization Fund, and the amounts that end up in the Residual Fund. PWD also fails to recognize that the Capital Account Deposit can, by definition, be increased, generating more pay-as-you-go capital. As defined, the Capital Account Deposit may be 1% of the depreciated value of PWD's plant, property and equipment "or such greater amount as shall be annually certified to the City in writing by a Consulting Engineer as sufficient to make renewals,

[24] There is no "Capital Trust" identified in the General Bond Ordinance. PWD was referring to the Capital Account within the Construction Fund established pursuant to Section 4.04 of the General Bond Ordinance.

replacements and improvements in order to maintain adequate water and wastewater service." General Bond Ordinance, Section 2.01 (Definitions).

PWD's perspective follows from an erroneous legal interpretation. As PWD explained on April 6, 2015, it was "advised legally that [it] had to meet the exact coverage metrics that were portrayed in the [2012 Rate Case] settlement." April 6, 2015 Tr. at 105, lines 5-10. Accordingly, under PWD's view, it could not direct additional revenues to the Residual Fund or via the Capital Account Deposit because those revenues would have been counted toward its senior debt coverage ratio, and would have somehow violated the terms of the Settlement Agreement. This is patently incorrect. Primarily, as set forth in Paragraph 13(a) of the Settlement Agreement, the parties' agreement was that settlement rates were designed to produce approximately $140 million dollars in additional revenues, as shown in the Attachment B to the Settlement Agreement. PA Hearing Exhibit II at 4, 11. While Attachment B shows PWD's expected senior debt coverage ratios for 2013, 2014 and 2015, the parties made no specific agreement that PWD was required to target specific senior debt coverage ratios in excess of 120%. To the contrary, as set forth under the heading "Black Box Settlement," the parties simply agreed that the settlement was consistent with the rate model, financial parameters, etc., included in the filing itself, without any prejudice to any position the parties might adopt in subsequent litigation. PA Hearing Exhibit II at 4. Attachment B was a demonstrative exhibit, which was only binding to the extent it reflected a commitment that rates would increase under assumptions designed to produce approximately $140 million in additional revenues. If it were true that the specific amounts depicted in Attachment B were legally required, PWD would have egregiously violated the settlement by actually producing more than $206 million in the Rate

Stabilization Fund by the end of FY 2015 because Attachment B shows a balance of $74.5 million.

Rather than increasing rates to produce higher levels of coverage, PWD already possesses the means to direct more funds to the Capital Account. Although doing so may affect (increase) PWD's calculated senior debt service coverage ratio, it would not require increasing rates. PWD can, and should, utilize funds within the Rate Stabilization Fund, which exists *for the purposes of stabilizing rates*, reducing it to a more reasonable balance of approximately $75 million, before coming back to customers and requesting higher rates.[25] PWD can transfer revenues from the Rate Stabilization Fund to the Revenue Fund, allowing those revenues either to flow into the Residual Fund, and then be transferred to the Capital Account, or to be transferred directly to the Capital Account via an increased Capital Account Deposit. As set forth in the General Bond Ordinance, Section 4.13: "As of the effective date of this Ordinance and as of June 30 of each Fiscal Year, the City may transfer (i) from the Rate Stabilization Fund to the Revenue Fund or (ii) from the Revenue Fund to the Rate Stabilization Fund, the amount determined by the Water Commissioner to be transferred for such Fiscal Year." In either circumstance, it is not difficult to explain to the investment community that PWD's debt service coverage ratio may fluctuate based on capital spending associated with planned drawdowns of the Rate Stabilization Fund. PWD can "manage to" the use of those funds for capital purposes in a manner which ensures it meets or exceeds its 120% coverage test, just as easily as it can "manage to" precisely 120%.

Ultimately, it is premature for the Board to determine a specific percentage of capital work to be funded on a "pay-as-you-go" basis through higher rates. As Mr. Morgan concludes, PWD seeks to support this proposal "by a comparison to sector summaries produced by ratings

[25] PWD recognizes that the Rate Stabilization Fund "was established to create, you know, an operating reserve in order to mitigate the need for [the] city to raise rates, you know, in a precipitous way and to – in order to do rate smoothing for the benefit of ratepayers." April 6, 2016 Tr. at 43, lines 5-10.

agencies." PA St.-1 at 47. As discussed above, regarding establishing appropriate levels of reserves, PWD has not presented meaningful information in the form of a peer group analysis which would support increasing debt service coverage to fund capital work.

Moreover, even if PWD showed that its proposal is supported by a peer group analysis, that would not be the end of the inquiry. In the context of establishing rates, the Board must consider the impact upon customers, who paid higher rates during FY 2013, 2014 and 2015 only to see $0.77 of every $1.00 in higher charges end up in PWD's Rate Stabilization Fund. April 5, 2016 Tr. at 170, lines 19-21. These substantial reserves are available to assist in funding capital improvement. PWD should responsibly utilize those funds, rather than increasing rates to fund capital investment at this time. Furthermore, to the extent PWD can demonstrate that utilizing additional internally generated funds for capital work is cost-beneficial to customers, in comparison with traditional debt-financed capital improvement, it should conduct that experiment using the resources it already has, rather than through incrementally higher charges to customers.

V. PUBLIC ADVOCATE RECOMMENDATIONS REGARDING REVENUE REQUIREMENTS.

As set forth below, the Public Advocate has identified a series of adjustments to PWD's revenue requirements. On the basis of these adjustments, and PWD's historical inaccuracies in forecasting revenue requirements, Mr. Morgan concludes,

> I submit that PWD has failed to demonstrate the necessity of a rate increase in FY17. This holds true under the assumptions PWD employs in its rate model, for two reasons: (1) historically, PWD's financial forecast has consistently overstated PWD's actual revenue requirements, and (2) under its own projections, PWD demonstrates no necessity of a rate increase in FY17. Because, as filed, PWD's requested rate increase for FY18 is almost entirely dependent upon the assumptions employed in projecting revenue requirements for FY17, for which I propose no increase, I submit that PWD should not receive any rate increase for FY18 at this time. FY18's operating conditions are so far out

> into the future that an estimate of what potential rate increase could be appropriate in FY18 is purely speculative, and violates well settled principles of rate making, including that rates and charges must be based on known and measurable revenue and expenses.
>
> PA St.-1 at 5, lines 17-24.

The subsections of this Section V discuss Mr. Morgan's specific recommended adjustments. It should be noted that, consistent with Mr. Morgan's recommendation concerning the uncertainty associated with a potential rate increase in FY 2018, the Public Advocate is making a number of recommendations concerning the implementation of a new low income program and certain customer service improvements which the Board should require be sufficiently addressed prior to the effectiveness of any rate increase for FY 2018, as discussed below.

A. Mr. Morgan's Recommendations Are Reasonable, Consistent with Accepted Pennsylvania Principles of Ratemaking and Permit PWD to Satisfy All of its Obligations.

As discussed above, the Pennsylvania Supreme Court has held that the principles of public utility ratemaking that apply to utilities are universal. No different set of principles applies to municipal utilities based on whether or not they are regulated by the Pennsylvania Public Utility Commission. Accordingly, while PWD may assert that adjustments proposed by Mr. Morgan are inappropriate because PWD is not regulated by the Public Utility Commission, those assertions miss the mark. Accordingly, the Board should recognize and implement the ratemaking principles pursuant to Mr. Morgan's expert guidance:

> It should be noted that the rates that are derived from the test year remain in effect, not just for the test year, but for all subsequent years until new rates from a future rate case become effective. This is an important distinction between ratemaking and budget setting. Since rates could be in effect for an indefinite period of time, it is extremely important that the test year financial data is representative of the utility's normal operating conditions. It is also important that both adjusted and unadjusted test year data meet the widely-accepted regulatory principle of being "known and measurable". To be

> considered as "known and measurable", the probability that the revenue or cost will change must be certain and the amount of the change must be known with certainty.

PA St.-1 at 7, line 23, through 8, line 7.

Mr. Morgan's expertise cannot reasonably be questioned. He has testified in dozens of proceedings concerning rate base, revenue requirements and cost of service for water and wastewater utilities, and dozens more proceedings concerning similar rate considerations affecting other types of utilities. See Response to City-3 (C.V. of Morgan).[26] In this proceeding, Mr. Morgan analyzed the voluminous information in PWD's filing, its responses to data requests, and its various presentations and explanations to the Board and participants. On the basis of all of this information, he proposed several specific adjustments to PWD's revenue requirements, set forth in the subsections that follow. For presentation purposes, Mr. Morgan attempted to utilize the extraordinarily complicated Black & Veatch spreadsheet model to demonstrate the value of these adjustments. The product of Mr. Morgan's use of the Black & Veatch model was provided as a response to a request made during the hearing, and consists of 529 pages of spreadsheet data.[27] See TR-5.[28]

Mr. Morgan utilized the Black & Veatch model to produce an exhibit, summarizing the revenue requirement adjustments he proposed. The final version of Mr. Morgan's combined water and wastewater exhibit, Exhibit LKM-1, was entered on the record as part of PA Hearing

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[26] Available at http://www.phila.gov/water/rateboard/PDF/PAResponsetoCity1-8.pdf.

[27] During the hearings, PWD dedicated an inordinate amount of time and attention to rebuttal testimony concerning one data entry error made in Mr. Morgan's presentation, attached to his testimony as Schedule LKM-1. See April 6, 2016 Tr. at 18, line 4, through 31, line 21. This error did not in any way affect the projected value of Mr. Morgan's adjustments, as presented on Page 1 of PA Hearing Exhibit I, and discussed more fully in this brief. Moreover, as PWD's witnesses specifically acknowledge, this data entry error was corrected by Mr. Morgan in the errata sheet submitted on April 5, 2016, the day before PWD's rebuttal. See April 6, 2016 Tr. at 61, line 21; PA Hearing Exhibit III (Errata Sheet). PWD confirmed that, mathematically, Mr. Morgan's final Schedule LKM-1 contains no inaccuracies. April 6, 2016 Tr. at 62, lines 23-24.

[28] Available at http://www.phila.gov/water/rateboard/Transcripts/TR-1-2-3-4-6-7.pdf

Exhibit III. PWD incorrectly focuses on the fact that this exhibit does not fully reflect all of Mr. Morgan's policy recommendations. See, e.g., April 6, 2016 Tr. at 14, line 22, through 16, line 21. This focus is misplaced. The purpose of Mr. Morgan's exhibit is simply to demonstrate how the revenue requirement adjustments he proposes impact forecast revenues and expenses from FY 2016 through FY 2018 and associated net revenue requirements for FY 2017 and FY 2018.[29] Mr. Morgan explained this in detail in his written testimony. See PA St.-1 at 6, line 23, through 7, line 12 (describing that based on time constraints in this proceeding, Mr. Morgan attempted to reflect his adjustments to the revenue requirements in the Black & Veatch model; reserving the right to revise recommendations in the event a discrepancy was discovered). Mr. Morgan is under no obligation to utilize Black & Veatch's spreadsheet model in support of his sound policy recommendations which do not impact test year operating and maintenance expenses or calculations of anticipated customer revenues.

Moreover, as stated in Mr. Morgan's testimony and clearly established during the hearings, Mr. Morgan accurately projects that PWD will be able to satisfy its debt service coverage requirements utilizing his assumptions, and without increasing rates. As Mr. Morgan states on page 6 of his testimony, "PWD is able to meet its legally required debt service coverages in both FY 2017 and 2018 without increasing rates." PA St.-1 at 6, lines 3-5. A description of PWD's required debt service coverages (i.e., the 90% Test, 100% Test, and 120% Test) is provided in Section II, above.

[29] PWD's witness, Ms. Clupper, suggests that Mr. Morgan's calculations are incorrect because in proposing his adjustments, PWD's Residual Fund balances as of the beginning of FY 2017 are modified. April 6, 2016 Tr. at 28; 115-116. As Ms. Kumar attempted to explain, Ms. Clupper's understanding is incorrect. April 6, 2016 Tr. at 28, lines 16-19. Mr. Morgan's adjustments affect revenues and expenses in FY 2016 as well as FY 2017 and FY 2018. Mr. Morgan did not make any modifications to the Black & Veatch model other than those proposed adjustments discussed in his testimony, and so the increased fund balances in PWD's Residual Fund are a product of other factors embedded in the Black & Veatch model itself.

According to Schedule LKM-1, under Mr. Morgan's assumptions, PWD's net revenues before any transfer from the Rate Stabilization Fund in FY 2017 and FY 2018 exceed total senior debt service coverage, satisfying the 90% Test.[30] Schedule LKM-1, line 29, shows that the total coverage requirement, the 100% Test, is also satisfied.[31] Regarding the 120% Test, as Board Member Popowsky recognized, satisfying this requirement a process of "solving for" 120%, utilizing transfers to or from the Rate Stabilization Fund. April 6, 2016 Tr. at 105, lines 2-4. Although Mr. Morgan's Schedule LKM-1 depicts a potential coverage issue in FY 2018, this is because Schedule LKM-1 was presented to show the specific adjustments Mr. Morgan made to the revenue requirements, not the adjustments that would be necessary to "solve for" PWD's required 120% Test. PWD's witness Mr. Jagt confirmed that upon examination of Mr. Morgan's modified version of Black & Veatch's model, supplied to PWD informally, and entered on the record in response to Transcript Request 5, the Black & Veatch model automatically calculates debt service coverage for purposes of the 120% Test. April 6, 2016 Tr. at 64, lines 1-2. Through cross examination of PWD's experts, it was demonstrated that Mr. Morgan's adjustments to revenues and expenses would, in fact, permit PWD to meet its debt service coverage requirements utilizing transfers from the Rate Stabilization Fund. See, generally, April 6, 2016 Tr. at 64-75 (no transfer from the Rate Stabilization Fund would be necessary to meet PWD's coverage requirements in FY 2017, resulting in an additional $19.3 million in the Rate

[30] The calculations to demonstrate this are provided below, using figures from Schedule LKM-1:

		FY 2017	FY 2018
(a)	Net Revenues After Operations (line 20)	272,764	265,960
(b)	Rate Stabilization Transfers to Revenue Fund (line 19)	19,300	39,000
(c)	Net Revenues Before RSF Transfers ((a)-(b))	253,464	226,960
(d)	Total Senior Debt Service (line 25)	207,715	222,986
(e)	Coverage ((c)/(d)) (must exceed 90%)	122%	102%

[31] PWD has made no claim that Mr. Morgan's projections could result in a default under the 90% Test or the 100% Test. See, e.g., April 6, 2016 Tr. at 89, lines 6-15.

Stabilization Fund in FY 2018, for a total of $169.3 million available for potential transfer to satisfy the 120% Test).[32] Based on Mr. Morgan's projections, an amount equal to approximately 18% of Total Senior Debt Service would need to be transferred from the Rate Stabilization Fund to the Revenue Fund in order to satisfy the 120% Test. See footnote 30, supra, table line (e) (showing senior debt service coverage of 102% without any transfers from the Rate Stabilization Fund). This amount is approximately $40.6 million (($222,986 * 1.20) - $226,986 = $40,597), and Mr. Morgan projects the Rate Stabilization Fund will have adequate reserves to fund this transfer.

B. In Considering Mr. Morgan's Recommendations, the Board Should Recognize That PWD's Rate Forecast Methodology Requires Modification to Avoid Continuing to Charge Customers Based on Inaccurate Forecasts.

PWD acknowledges that the methodology utilized to project its cost of service is no different than it was in the past rate proceeding. February 22, 2016 Tr. at 191, lines 16-18. As discussed above, PWD has provided no evidence to substantiate its claim that it has improved its ability to forecast its needs into the future. In fact, as demonstrated by Mr. Morgan, a number of assumptions included in PWD's rate request are demonstrably unreasonable, and, if approved, would unnecessarily inflate customer rates. As Mr. Morgan explains, "part of [his] analysis in this proceeding was to examine the extent to which [PWD's] model may have inaccurately

[32] When asked whether, using Mr. Morgan's assumed revenues and expenses, PWD would be able to meet its debt service coverage requirement in FY 2018 by transferring an additional $2.23 million from the Rate Stabilization Fund (having a projected year-end balance of over $111 million) to the Revenue Fund, Ms. Kumar responded that PWD would not be able to do so. April 6, 2016 Tr. at 73, line 22. Ms. Kumar clarified that her response was based on strict application of PWD's desired policy of maintaining a minimum of $110 million in the Rate Stabilization Fund, which would dip below $110 if an additional $2.23 million were required ($111-$2.23=$108.77). April 6, 2016 Tr. at 74, 7-13. Of course, as discussed during the hearings, the $111 million projected FY 2018 balance would likely be at least $19.3 million higher under Mr. Morgan's assumptions. April 6, 2016 Tr. at 75, lines 6-10.

projected PWD's needs." PA St.-1 at 11, lines 23-25. Mr. Morgan conducted this assessment by reviewing the forecast revenue requirements from the 2012 rate proceeding, reflected in the Settlement Agreement, against PWD's actual financial results.

Mr. Morgan's analysis demonstrated that in the years 2012 through 2015, PWD's rate case estimate of revenues was understated, and its estimate of operating and maintenance expense was overstated. See PA St.-1 at 12, line 6, through 13, line 9. In pertinent part, Mr. Morgan demonstrated the following consistent pattern of variance between PWD's forecast and actual revenues and expenses:

	2012	2013	2014	2015[33]
Actual Revenues Over/(Under) Budget	$ 7,361	$ 8,198	$ 5,245	$ 14,707
Operating Expense Over/(Under) Budget	$ (14,948)	$(18,303)	$ (16,933)	$ (3,170)[34]

As Mr. Morgan concluded, on an average basis, PWD's forecast of operating expenses for FY 2012, 2013, 2014 and 2015 was $13.338 million overstated. PA St.-1 at 13, lines 7-9.

PWD's witnesses nonetheless contend that the forecast methodology utilized by PWD, and reflected in the projections in this rate proceeding, is not in need of adjustment. As Ms. Kumar testified:

> The financial plan model has a high degree of modelling integrity with respect to four key aspects. It meets all of the general bond ordinance and insurance covenants. It's mathematically accurate. It uses all available reliable data. And it uses reasonable and

[33] This information was provided by PWD in response to PA-EXE-103 and was posted to the Board's website on February 12, 2016. PWD's audited financial statements were provided by electronic mail two weeks later. It should be noted that PWD's audited financial statements vary significantly from the information supplied by PWD in response to PA-EXE-103, reflecting significantly higher revenues, and significantly lower operating expenses (excluding depreciation and amortization) for FY 2015 and FY 2014. PWD may assert that this difference is attributable to different accounting methodologies used for budgeting purposes versus GAAP (Generally Accepted Accounting Principles) reporting.

[34] It is noteworthy that in FY 2015, PWD paid more than $7 million to the City of Philadelphia's General Fund, to compensate the General Fund for real estate tax credits provided to Sugarhouse Casino for both FY 2014 and FY 2015. See PWD Exhibit 4, Supplement to SI-7f. According to Ms. LaBuda, this payment is treated as an operating expense. April 5, 2016 Tr. at 185, lines 10-17. Accordingly, PWD's operating expense for FY 2015 reflects at least one significant deferred expense from FY 2014, skewing the FY 2015 operating expense upward to that extent.

> defensible projections, and it provides transparent analysis of all the mathematical analysis in the model.

April 6, 2016 Tr. at 10, lines 5-12.

Ms. Kumar makes no effort to explain how PWD's projections are reasonable and defensible in light of the documented variances shown in Mr. Morgan's testimony. Instead, PWD contends that it "outperformed" its projections, generating additional balances in the Rate Stabilization Fund. April 5, 2016 Tr. at 160, lines 3-12. While Ms. LaBuda claims that PWD has improved how it is projecting costs going forward, she makes no claim, and provides no evidence, that PWD will not "outperform" in the future. Rather, it appears clear that PWD has every intention of continuing to "outperform." See, e.g., April 6, 2016 Tr. at 11, lines 17-24 (opposing Public Advocate adjustments on the basis that they could pose the mere risk of underperformance); April 6, 2016 Tr. at 113, lines 16-20 ("I mean, it's sort of a Philadelphia thing that they say the sky is falling and they outperform, and that's a good thing as far as investors are concerned and as far as the credit agenc[ies]").

In fact, the only clear description of any difference in how PWD is projecting expenses is its claim that the source of its pension and health care expense information is the City of Philadelphia's state-approved, five-year plan. April 5, 2016 Tr. at 171, lines 6-9. PWD submits that it has not utilized the City of Philadelphia's five-year plan in past rate proceedings. April 5, 2016 Tr. at 15, lines 18-20. However, as Mr. Morgan observes, PWD has always relied upon the City's pension plan projections. PA St.-1 at 24, lines 7-8. Moreover, Ms. LaBuda confirmed that costs of PWD's pensions and health care are, and always have been, driven by the fact that PWD is a department of the City of Philadelphia, sharing the same tax identification number. See April 6, 2016 Tr. at 93, lines 15-18. Although PWD may be relying upon a different source document from the City of Philadelphia in order to forecast future pension and health care

expenses, this does not appear to reflect any meaningful change in PWD's methodology. Nor does PWD provide any information upon which to assess whether the City of Philadelphia's five year projections for pension and health costs are reasonable, or more reliable, for purposes of establishing rates and charges to be paid by customers.

Ultimately, PWD's 2012 rate proceeding, which forecast a need for additional revenues of $140 million from customers over FY 2013 through FY 2015, resulted in more than $107 million in excess transfers to the Rate Stabilization Fund. April 5, 2016 Tr. at 170, lines 8-18. In other words, approximately 77% (107,330,00035/140,019,00036 = 76.65%) of PWD's increased revenue from the last rate proceeding was deposited directly into the Rate Stabilization Fund. April 5, 2016 Tr. at 17, lines 19-21. As shown in the paragraphs that follow, specific assumptions included in PWD's filing, if approved by the Board, would continue to result in underestimation of revenues and overestimation of expenses, continuing PWD's longstanding pattern of charging higher than necessary rates to customers and accumulating reserve funds wildly in excess of its projections.

C. The Board Should Adjust PWD's Assumption of Liquidated Encumbrance Ratio to Reflect a Reasonable Projection for the Rate Period.

As Ms. LaBuda explained:

> An encumbrance is an expense that is anticipated to be charged to the Water Fund. Liquidated encumbrances represent cancelled commitments. The Department's budgetary…statements treat liquidated encumbrances as contra-expense.

PWD St.-2 at 16.

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[35] See PA Hearing Exhibit I, page 17, reporting "Total Impact" to Rate Stabilization Fund as deposits of $38,949,000 in FY 2013, $43,250,000 in FY 2014, and $25,131,000 in FY to 2015. The sum of these amounts equals $107,330,000.

[36] See PA Hearing Exhibit II, page 4, reporting additional service revenues of $140,019,000 agreed upon in the Settlement Agreement.

In projecting future operating expenses, PWD applies a ratio of liquidated encumbrances to expenses for materials (class 300) and equipment (class 400), reflecting that it expects that certain expected expenses will not, in fact, be incurred. A higher ratio results in less expense, and a lower revenue requirement. April 5, 2016 Tr. at 40, lines 14-16. In this rate proceeding, PWD utilized a 12% liquidated encumbrance ratio, and explained the basis for this 12% ratio as follows: "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." See PA-EXE-21.

Examining actual liquidated encumbrance ratios, however, does not support PWD's use of 12% for its forecast. As set forth in the workpapers included in PWD Exhibit 6, PWD's actual liquidated encumbrance ratio has exceeded PWD's budget in each of the last five years. Furthermore, actual liquidated encumbrance ratios have exceeded 12% in each of the last five years. Workpaper Assumptions-33 provides the following budget and actual liquidated encumbrance ratios for FY 2011-2015:

	2015	2014	2013	2012	2011
Actual	12.50%	24.93%	20.45%	14.24%	16.11%
Budget	12.29%	12.56%	11.37%	12.80%	11.08%

Mr. Morgan asserts that PWD should utilize an average of the most recent three years liquidated encumbrance ratios for purposes of forecasting. PA St.-1 at 31, line 23, through 32, line 2. As Mr. Morgan observes, for many purposes, including the majority of the spend factors utilized by PWD, PWD's filing utilizes a three-year historical average. PA St.-1 at 18, lines 14-17. Accordingly, in general, PWD's use of a 12% liquidated encumbrance ratio deviates from the majority of assumptions utilized in forecasting its revenue requirements. Utilizing the three most recent years' actual liquidated encumbrance ratios produces an average of 19.29%

((20.45%+24.93%+12.50%)/3). Applying a 19.29% liquidated encumbrance ratio to class 300 and class 400 estimated expenses in PWD's forecast, Mr. Morgan estimates that the revenue requirement for FY 2017 would be reduced by $12,608,000 in FY 2017 and $12,893,000 in FY 2018. PA Hearing Exhibit I, page 1. The Public Advocate submits that the Board should require PWD to utilize the three-year average liquidated encumbrance ratio, in order to consistently forecast PWD's revenue requirements based on recent actual experience.

In response to Mr. Morgan's recommendation, PWD claims that the higher liquidated encumbrance ratio experienced in FY 2013 and 2014 was attributable to an unspecified policy change in the City of Philadelphia. As explained by Ms. LaBuda, "there were two years in the three-year average that break the norm because of a process in the city whereby there was an unfortunately [sic] buildup in encumbrances that occurred over a two-year period…. when you only look at the three-year period, you are grabbing two distorted years, versus when you use a longer range, you pick up the historical trends." April 5, 2016 Tr. at 42, lines 7-16. However, contrary to this statement, PWD did not propose a 12% liquidated encumbrance ratio on the basis of a longer range of experience. PWD already asserted that its forecast was based upon *more recent* experience and a desire to align with its budget. PA-EXE-21. As discussed above, there is a fundamental distinction between determining an appropriate annual budget for PWD and setting the rates that customers should be required to pay for future years. PWD's budget is not the basis for informed ratemaking determinations. See Section III.C.2, above.

Ultimately, even if the Board credits PWD's testimony that FY 2013 and 2014 liquidated encumbrance ratios should be disregarded, it should not approve a 12% liquidated encumbrance ratio. The Board should instead calculate PWD's expected liquidated encumbrance ratio on the basis of actual experience, not PWD's budget. As discussed during the hearings, in each of the

past five years, PWD has experienced an actual liquidated encumbrance ratio in excess of its budget. April 5, 2016 Tr. at 43, lines 9-15.[37] The Public Advocate submits that the Board should not rely upon PWD's unsubstantiated statements concerning a vague policy change in the City which resulted in its liquidated encumbrance ratios being unusually high in FY 2013 and 2014. But, in the event the Board disagrees, and elects to exclude FY 2013 and 2014 as outliers, the appropriate methodology to calculate PWD's anticipated liquidated encumbrance ratio would be to average the remaining three years of actual data provided by PWD, FY 2011, 2012, and 2015. Doing so, PWD's expected liquidated encumbrance ratio would be 14.28% ((16.11%+14.24%+12.50%)/3).

D. The Board Should Approve Mr. Morgan's Recommendation Concerning Revenue Growth Rate (Estimated Decline in Usage By Customers with 5/8" Meters).

As Mr. Morgan explained, PWD's rate filing projects an annual decrease in customer usage. "According to PWD the decrease in usage is primarily driven by its projection of an annual reduction of 1.5 percent annually in the usage per account associated with 5/8" meter General Service Customers (the largest customer class)." PA St.-1 at 17, lines 18-21. Mr. Morgan determined that PWD "calculated the 1.5 percent decrease in usage per account associated with 5/8" meter General Service Customers based on a 5-year average compound growth." Id. at 17, lines 21-23. Mr. Morgan observed that PWD relied upon the use of the most recent 3-year average for determining actual-to-budget ratios used for expenses, and that it was inconsistent to use a five year average for revenues. Id. at 18, lines 14-19. Moreover, Mr. Morgan testified that "[i]n forecasting revenues and costs, typically the further out in time from

[37] PWD's witness, Mr. Jagt, incorrectly asserted that this historical variance between budget and actual liquidated encumbrance ratio had remained within two to four percent. April 5, 2016 Tr. at 47, line 9. In FY 2011, the variance between actual and budget liquidated encumbrance ratio exceeded 5% (16.11% actual compared to 11.08% budget) as shown in the table presented above.

the target year, the less reliable the amounts become." Id. at 18, lines 20-22. Declining usage is typically driven by replacing household fixtures with more efficient ones; PWD confirmed this was the basis for its assumptions. Id. at 17, line 24, through 18, line 5. But, as Mr. Morgan points out: "at some point, the rate at which these efficient appliances are added slows down as the majority of the old designed appliances and fixtures have been replaced. Hence, as can be seen with limiting the growth analysis to the most recent 3-year period, there appears to be a slowdown in the rate of decrease which must be recognized for ratemaking purposes." Id. at PA St.-1 at 19, lines 5-9.

In contrast, PWD asserted that it was more reasonable to utilize a five-year average. PWD's witness, Mr. Jagt, testified:

> We used the longer range period to ensure that we were avoiding annual fluctuations as a result of climate changes like year to year, whether it was a wet year or dry year, whether to reflect customer usage pattern changes over the period of time. And it's also based on experience [with] the system.
>
> April 6, 2016 Tr. at 182, lines 8-14.[38]

However, as demonstrated during the hearings and confirmed by Mr. Jagt, since FY 2012, there has been virtually no decline in consumption among 5/8" meter General Service Customers. April 5, 2016 Tr. at 28, lines 9-13. In fact, from 2012 through 2015, usage among 5/8" General Service Customers declined from an average of 7.32 MCF per customer to 7.31 MCF per customer. See PWD Exhibit 6, Workpaper Assumptions-4. Based on these numbers, Mr. Morgan correctly calculated the compound growth rate as a decline of 0.05%.[39] A lower rate of

[38] Notably, while Mr. Jagt submitted on April 6 that seasonal fluctuations could impact usage, he was clear, in testifying before the Board, that customer conservation was the driver of decreased consumption: "The declining usage is projected as customer basis uses more efficient appliances and fixtures, and also conservation awareness and ongoing efforts to decrease the water demand in the system." February 22, 2016 Tr. at 78, lines 19-24.

[39] Perplexingly, Ms. Kumar submits that Mr. Morgan somehow rounded his numbers to derive this 0.05% decline. April 5, 2016 Tr. at 29, lines 10-14. In fact, Mr. Morgan's calculation of a negative 0.05%

decline means PWD would continue to collect more revenue under existing rates than it projects, and would obviate the need for approximately $15 million of the proposed two-year rate increase. Utilizing a five year average, as PWD submits, effectively disregards the most recent three years, for which there has been virtually no change in consumption by 5/8" meter General Service Customers, ensuring that if the recent trend in usage reduction continues, PWD will over-collect revenues from customers.

Ultimately, PWD's rationale for utilizing a five year average for 5/8" meter General Service Customers is directly contradicted by its usage of a three year average for larger than 5/8" meter customers. During the technical hearings, PWD was asked how it calculated the estimated usage per account for each customer type having a larger than 5/8" meter. April 5, 2016 Tr. at 83, line 24, through 84, line 7. As PWD explained during the hearings, and confirmed in response to Transcript Request 2, "The FY 2016 to FY 2021 projected average volume per account for commercial, industrial, and public utilities accounts with meters larger than 5/8" are estimated based on the three year historical average (FY 2013 to FY 2015) for each customer type." TR-2.[40] Accordingly, PWD has inexplicably chosen to use a *five year average* to forecast usage for certain classes of customers and a *three year average* to forecast usage for other classes of customers. The inescapable conclusion is that PWD has engaged in a process of picking and choosing its assumptions, in order to attempt to justify its request for increased rates.

As recommended by Mr. Morgan, the Board should approve an adjustment to PWD's forecast, requiring it to utilize the three year compound growth rate for usage among 5/8" meter General Service Customers. According to Mr. Morgan's calculations, this adjustment would

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compound growth rate was based on the information supplied in PWD Exhibit 6, Workpaper Assumptions-4, and can be confirmed as follows: (7.32) (1-0.0005)^3 = 7.309025.

[40] Available at http://www.phila.gov/water/rateboard/Transcripts/TR-1-2-3-4-6-7.pdf

produce a reduction to PWD's rate increase request of $5,960,000 in FY 2017 and $9,493,000 in FY 2018.

E. The Board Should Base PWD's Payroll Spend Factor on Actual, Historical Experience, and Reject PWD's Proposal to Adjust Payroll Expenditures to Reflect 100% of PWD's Budget.

As Mr. Morgan describes, PWD has included salaries and wages in its cost of service study utilizing certain assumptions. First, PWD escalated its FY 2016 budgeted salaries and wages to reflect labor rate increases and increases in the numbers of employees. PA St.-1 at 22, lines 17-19. As Mr. Morgan explained, PWD's forecasted employee headcount for FY 2017 and FY 2018 reflects 219 more employees than PWD actually had in FY 2015, 216 employees more than PWD had in FY 2014, and 265 employees more than PWD had in FY 2013. PA St.-1 at 22, lines 21-24. PWD's forecast for FY 2017 and FY 2018 is for a total of 1,977 employees, which is an increase of 18 over its FY 2016 *budgeted* headcount of 1,959 employees. Id. at 22, lines 20-21. PWD acknowledged that, as of October 2015, it had 147 vacancies, reflecting an *actual* headcount in FY 2016 at that time of 1,812. PA-EXE-66(a). Furthermore, as Mr. Morgan observed:

> Data from PWD shows that from FY 2013 through FY 2016, the Department has never been able to fill 100 percent of its budgeted positions in any one of those years. In fact, in the response to PA-EXE-66, PWD stated: "PWD would like to have very few vacancies on any given month. Due to the extremely long time period required to fill a vacancy in the Civil Service system (up to 6 months), reaching a vacancy number below 100 is unlikely now or in the immediate future." Clearly, the Department admits that the assumption that all positions will be filled is unrealistic.
>
> PA St.-1 at 23, lines 6-12.

Notwithstanding the Department's clear recognition of the staffing challenges it continues to face, and acknowledgement that a vacancy level below 100 is unrealistic, PWD

provided documentation demonstrating that it projects full staffing for FY 2017 and 2018. See Attachment Response PA-EXE-100 (showing forecasted employees of 1,977 in FY 2017 and 2018, and reporting "Assumes full staffing level is reached based upon FY16 budgeted levels and the addition of 18 staff within the Water Department"); PA-EXE-100(b) ("[p]rojected staffing levels are also presented for FY 17 and 18, which take into account 100% FY 2016 staffing levels and the additional staffing positions discussed in the Financial Plan: Revenue & Revenue Requirements Assumptions."). Clearly, as acknowledged by Ms. LaBuda, PWD's efforts to reduce vacancies are part of PWD's basis for submitting that Class 100 expenses for personal services will increase during the forecast period. See PWD St.-2 at 17 ("[E]mployee health care and pension benefits are the largest and fastest growing expenditures of the City's budget. In addition the Department's improved focus on Human Resources is reducing vacancies in the Department in a meaningful manner. Both of these trends are leading to higher Class 100 costs for personal services."). PWD asserts, however, that notwithstanding its projection of full staffing, it assumes some vacancy level in its budget. April 5, 2016 Tr. at 53, lines 6-9.

Given that PWD and the Advocate agree that PWD will not obtain a full staffing level during FY 2017 and FY 2018, and that the data demonstrates turnover and fluctuation in headcount,[41] the question is what level of expense should be assumed in rates for Class 100 costs for personal services. PWD has proposed that its actual-to-budget factor be assumed to be 100%, meaning that it will spend 100% of its budget on payroll each year in FY 2017 and FY 2018. Technically, PWD submitted that "it is anticipated that PWD will <u>continue to utilize</u> 100 percent of budget" for salaries and wages. See PA-EXE-37(a) (emphasis added). However, as demonstrated in PWD Exhibit 5, Assumptions 22A and 22B, PWD has not utilized 100 percent

[41] As shown in the attachment to PA-EXE-100, PWD's actual headcount was 1,712 in FY 2013, increased by 49 to 1,761 in FY 2014, and then decreased by three to 1,758 in FY 2015.

of budget for salaries and wages. April 5, 2016 Tr. at 51, line 1-2 ("historically the actual results are below 100 percent but significantly increasing over the three-year period.").

It is unreasonable to assume 100% expenditure for salaries and wages given the demonstrated staffing challenges and historical spend factors for Class 100 expenses. See PA St.-1 at 23, lines 11-14. Accordingly, as Mr. Morgan recommends, the Board should approve an adjustment to PWD's projections, to reflect the use of the three-year average actual spend factor for salaries and wages. As shown in the revised Black & Veatch model provided by the Public Advocate in response to Transcript Request 5, the average spend factor varies by department, further supporting that a use of a 100% spend factor is unreasonable. The Board should direct PWD to utilize the following spend factors for salaries and wages:

- 95.07% for Human Resources and Administration
- 82.47% for Finance
- 88.82% for Planning and Engineering
- 95.21% for Operations
- 99.12% for Planning & Environmental Services
- 93.76% for Public Affairs

See TR-5, Workpaper Assumptions-22A.[42]

The Board's adoption of Mr. Morgan's recommended adjustment to utilize the three-year average actual-to-budget spend factors would result in a downward adjustment of $5,026,000 to PWD's revenue requirement for FY 2017 and a downward adjustment of $5,177,000 to PWD's revenue requirement for FY 2018.

[42] Available at http://www.phila.gov/water/rateboard/Transcripts/TR-5-PA_Response.pdf.

F. The Board Should Reject PWD's Billing Adjustment Factor, Which Would Unnecessarily Inflate Customer Rates.

PWD proposes a "billing adjustment factor" which is simply a percentage by which it wants to increase billings on the off-chance that its collections may not be as high as it projects. According to the Department's response to PA-EXE-137, this billing adjustment factor was included to "provide an allowance for risks associated with the assumptions used in the development of billing as projections." In the response to a follow up data request, PA-EXE-194, the Department admitted there were no workpapers supporting the billing adjustment factors. As a result, Mr. Morgan testified that there is no way to determine whether or not the adjustment is reasonable. PA St.-1 at 19, lines 21-22. As Mr. Morgan testified, PWD's billing adjustment factor adjustment is troubling for a couple of reasons.

> First, it appears that the Department's assumption is that if there is a risk that there is an error in its projections, then the appropriate step is to make adjustments unfavorable to customers. This assumption is unfair to customers because it is without support. Moreover, consistent with my conclusions earlier, this type of assumption would contribute to a pattern of forecasting revenues that are lower than should be expected. Second, this adjustment is an example of an adjustment that is not known and measurable. Therefore, I am recommending the removal of the billing adjustment factor from the development of the revenue requirements.
>
> PA St.-1 at 19, line 23, through 20, line 6.

PWD acknowledged that the only information it supplied in an effort to justify the billings adjustment factor was an example described in PA-EXE-194. April 5, 2016 Tr. at 37, lines 3-5. In that example, PWD states that utilizing a three-year average of usage per account results in a calculated level of usage of 12.16 MCF per account. It submits that because one year during the three-year average the actual usage was 12.08 MCF per account, below the three year average, a billings adjustment factor would be justified to account for this risk. This position

wholly fails to account for the mechanism created by the General Bond Ordinance to mitigate that risk: the Rate Stabilization Fund.

More importantly, as discussed during the hearings, PWD's proposal fails to account for the fact that in two of the three years included in PWD's calculation, actual usage was higher than average. April 5, 2016 Tr. at 37, lines 21-24. PWD acknowledges that it proposes no adjustment for those years, during which it acknowledges it collects more revenues than projected. April 5, 2016 Tr. at 38, lines 13-18. PWD admits that when usage exceeds forecast, additional revenues are available for transfer into the Rate Stabilization Fund. April 5, 2016 Tr. at 38, lines 15-18. However, PWD fails to recognize, as Mr. Morgan clearly does, that the billings adjustment factor results in inflated rates to customers, minimizing, if not eliminating, the possibility of utilizing funds from the Rate Stabilization Fund when usage is lower than average, and contributing additional amounts, beyond what PWD would collect simply as a result of usage exceeding average, to the Rate Stabilization Fund.

The impact of PWD's billings adjustment factor on customer rates in the past is unknown, because PWD has acknowledged that it has provided no historical information confirming the impact, need for, or prior existence of this unwarranted contingency. April 5, 2016 Tr. at 36, line 24, through 37, line 5. PWD has provided no data supporting the use of this escalator, and, by all indications, the risk it purports to identify is nonexistent for ratemaking purposes.[43] The Board should require PWD to eliminate from its rate model the use of a billings adjustment factor, which unjustly and unreasonably inflates customer rates. Removal of this aspect of PWD's rate request reduces the PWD's rate request by $2,934,000 in FY 2017 and $3,155,000 in FY 2018. See PA Hearing Exhibit I, at 1.

[43] Certainly, an average level of customer usage over a historical period is an industry supported means of normalizing past experience for purposes of forecasting future revenue requirements. See M-1 at 10.

G. The Board Should Exclude PWD's Additional Adjustments.

In addition to forecasting increased costs based on escalation factors, and forecasting reduced revenues under existing rates due to customer usage decline, PWD projects new O&M expenses in the forecast period, FY 2017 and FY 2018. PWD submits that these future expenses, which are not supportable based on actual expenditures in the past or on reasonable inflation factors, should be considered in calculating its revenue requirements for future years and passed on to customers in the form of higher rates. These new expenses are described as "Additional Adjustments" and set forth in Figure 6 of PWD Exhibit 5.

As clearly demonstrated in the discovery, when the Public Advocate requested "detailed support" for each of the adjustments listed in Figure 6 of PWD Exhibit 5, PWD referred the Advocate to Black & Veatch's Direct O&M workpapers, in PWD Exhibit 6. See PA-EXE-23. These workpapers set forth the amount of the adjustments listed in Figure 6, but <u>do not provide any detailed support</u>. The workpapers fail to explain how the additional adjustments were calculated. When the Public Advocate again requested "detailed workpapers supporting" each of the additional adjustments (referencing Black & Veatch's Direct O&M workpapers, in PWD Exhibit 6), PWD provided a circular response, referring the Advocate back to Figure 6 of PWD Exhibit 5. See PA-EXE-143, 145 and 146. PWD later supplemented PA-EXE-143, 145 and 146, providing the schedules included in PA Hearing Exhibit I, pages 28-43. These schedules demonstrate that, regarding each additional adjustment (excluding costs associated with WRAP and a new low-income affordability program, discussed below), PWD's "detailed support" consisted solely of the following repetitive notation: "Additional costs based on discussion with PWD staff." PA Hearing Exhibit I, at 28, 29, 31, 32, 34, 35, 36, 37, 39. During the course of

the technical hearings, and discussing a sampling of these additional adjustments, it was made clear that PWD possessed no documentary evidence supporting the amount of each additional adjustment, nor any evidence that could reasonably be relied upon to determine when, if at all, the additional expense would be incurred. See generally April 5, 2016 Tr. at 54-62.

As Mr. Morgan testified, none of these additional adjustments should be approved by the Board:

> There are several reasons why these adjustments should not be included. During the discovery phase of this proceeding, repeated attempts were made to obtain the supporting documentation for these adjustments. Specifically, the Public Advocate sought data that would show how the adjustments were calculated and the assumptions used for the cost components. Essentially, these are *pro forma* adjustments which means that the costs have not been incurred to date. As a result, these adjustments are the best estimates made by PWD's staff. In every rate proceeding in which I have been involved, *pro forma* adjustments are subject to discovery and review. However, in this proceeding the Public Advocate was not allowed to review the documentation supporting these adjustments despite several attempts. Eventually, during a telephone call between PWD and the Public Advocate, PWD informed the Public Advocate that examining the supporting documentation would not be permitted because these adjustments were proposed in the City's FY17 budget which has not yet been approved.

PA St.-1 at 36, lines 3-16.

Mr. Morgan provides three further reasons for why PWD's additional adjustments should be rejected. Generally, Mr. Morgan asserts that PWD has not made available documentation for the participants and the Board to determine the basis upon which PWD calculates its additional adjustments, leaving them unsupported. PA St.-1 at 36, lines 19-22. It follows that the likelihood that the associated expense will be incurred in the amount of and at the time it is projected to be incurred, cannot reasonably be judged by the Board and the participants. Moreover, Mr. Morgan observes that PWD's FY 2017 budget has not yet been approved, leaving uncertain the extent of any actual funding level associated with these adjustments in FY 2017. Id. at 38, lines 3-7. Accordingly, Mr. Morgan concludes that these adjustments fail to satisfy the

requisite standard of being "known and measurable," making them unreasonable for ratemaking purposes. Id. at 37, lines 7-8. Finally, Mr. Morgan observes that PWD has utilized various escalation factors for future costs, and that PWD's additional adjustments would be applied on top of already escalated cost categories. Accordingly, Mr. Morgan states that "[t]he potential to overstate [costs] is realized when one uses both the inflation rate to increase costs while, at the same time, making specific adjustments to increase those same cost categories." Id. at 37, lines 17-18.

Accordingly, Mr. Morgan recommends eliminating PWD's additional adjustments from its rate increase request, generating a downward adjustment of $16,892,000 to the proposed FY 2017 rate increase, and a downward adjustment of $16,178,000 to the proposed FY 2018 rate increase. See PA Hearing Exhibit I, at 1.[44] In addition, in the course of review of PWD's additional adjustments, it became clear that, in addition to their being unsupported, creating a risk of overstating costs, there are further bases for the Board to exclude the additional adjustments. The subsections below detail the further reasons why PWD additional adjustments, if approved, would result in unjust and unreasonable customer rates.

1. WRAP.

PWD requests $4 million in higher rates as an "additional adjustment" to fund its long-standing, preexisting low-income program (the Water Revenue Assistance Program, or WRAP) in FY 2017. As PWD's witness, Ms. Bethel, testified, WRAP has been in existence at least since she started working for Philadelphia's Water Revenue Bureau, eight years ago. April 12, 2016 Tr. at 87, lines 8-10. This program has been funded under current rates for many years. PWD

[44] For FY 2018, the amount of this adjustment includes the AMI related costs of approximately $431,000 which PWD has agreed are inappropriate for inclusion in this rate proceeding. See TR-15.

proposes no increase in funding for the WRAP program. PWD Exhibit 5, at 7 (Figure 6). Rather, PWD submits that funding for WRAP was not included in its prior cost of service study, and so customers should be required to pay an additional $4 million to continue to fund this program. April 5, 2016 Tr. at 63, lines 16-18. This position is demonstrably incorrect.

Contrary to PWD's representations, expenditures for WRAP were clearly included in PWD's cost of service study for the 2012 rate proceeding. As set forth in PA Hearing Exhibit I, page 3, PWD's Deputy Commissioner, Joseph S. Clare, III, specifically identified that approximately 6.6% of PWD's revenue need was projected for: "increase [in] spending for WRAP and other assistance programs given greater need in current economy and improved outreach." (emphasis added). Furthermore, PWD's witness, Mr. Harvey, acknowledged that, in February 2012, the amount of grant assistance provided pursuant to WRAP was increased from $200 per year per customer to $500 per year per customer. April 12, 2016 Tr. at 87, lines 17-18. That increase was instituted contemporaneously with PWD's commencement of its 2012 rate proceeding. See PA Hearing Exhibit II, at 1 ("On February 3, 2012, the Philadelphia Water Department ('Department') notified Philadelphia City Council of its intent to file proposed changes in rates and charges…."). Clearly, at the time PWD last increased rates, in 2012, PWD's witnesses knew and understood that funding for WRAP program was to be increased, and that increased funding was one basis for the rate request. That PWD's witnesses in this proceeding have no knowledge of, or have elected to disregard, that fact, is immaterial.[45]

That WRAP was considered an element of PWD's 2012 rate increase proceeding is of fundamental importance to the Board's determination. As PWD acknowledged, the WRAP program has been funded at approximately $4 million over each of the last two fiscal years

[45] PWD's witness, Ms. LaBuda testified, following an objection from counsel, that since she was not with PWD at the time of the last rate proceeding, she could not speak to what occurred in the 2012 rate proceeding. April 5, 2016 Tr. at 65, lines 1-2.

(April 5, 2016 Tr. at 69, line 20, through 70, line 3) and PWD's additional adjustment would add a further $4 million to customer rates to fund the program in FY 2017 (PWD Exhibit 5, at 7 (Figure 6)). Astonishingly, when asked directly whether WRAP was paid for through current customer rates, PWD's witness, Ms. Kumar, submitted that the costs of the program were "probably provided through the Rate Stabilization Fund." April 5, 2016 Tr. at 70, lines 18-19. As has been discussed, in each year from FY 2012 through FY 2015, PWD has accumulated additional tens of millions of dollars more than it projected in the Rate Stabilization Fund. In fact, in only one year, FY 2013, did PWD make any withdrawal from the Rate Stabilization Fund whatsoever, in the amount of $4,666,000. That withdrawal represented $38,949,000 *less than* PWD projected it would withdraw. In each other year, PWD made massive deposits into the Rate Stabilization Fund, including $43,250,000 in FY 2014, and $25,131,000 in FY 2015. To the extent PWD submits that, but for WRAP, it would have deposited a further $4,000,000 in the Rate Stabilization Fund in each of the immediately preceding years, that is hardly demonstrative of a need for customers to pay $4,000,000 more per year to continue to fund the program. Nor does that position in any way undermine the clear record that PWD recognized that increased rates would fund more WRAP assistance beginning in 2012.

The record clearly establishes that PWD included WRAP costs in its revenue requirements in the 2012 rate proceeding.[46] PWD's disregard for these facts is astounding. PWD's customers pay currently, through existing rates, to fund the WRAP program, and should face no higher charges in FY 2017 for it to be continued at the current funding level. Eliminating the FY 2017 additional adjustment for WRAP reduces PWD's rate increase request

[46] The Settlement Agreement confirms that the reduced revenue requirement agreed to did not result in PWD eliminating any of its budget assumptions, which included WRAP. It provides: "[T]he terms of the Settlement are consistent with the rate model, financial parameters, budget assumptions, budget/growth factors, cost allocations and rate design in the PWD proposed rate filing." See PA Hearing Exhibit II, at 4 (regarding "Black Box Settlement").

by $4 million. The revenue requirements associated with a new low income program, to commence in FY 2018, are addressed separately below.

2. SMIP/GARP.

PWD includes $3.55 million as an annual additional adjustment to increase incentives and grants under its Stormwater Management Incentive Program (SMIP) and Green Area Retrofit Program (GARP). Based on the further information supplied by PWD during the hearings, the Board should deny PWD's request for additional pro forma expense recovery for SMIP/GARP.

As PWD's witness, Ms. Williams, testified, PWD increased its budget for SMIP/GARP from $5 million to $10 million in FY 2015 and is currently budgeted at $11.5 million. April 7, 2016 Tr. at 32, lines 17-20. Accordingly, during the period over which PWD implemented three successive annual rate increases, FY 2013-2015, PWD was able to double the SMIP/GARP budget. In FY 2016, PWD has had sufficient resources not only to maintain its SMIP/GARP program under existing funding levels, but elected to increase funding, without seeking a rate increase.[47] At this time, it is unknown how much of PWD's budget for SMIP/GARP will actually be expended in FY 2016, since the fiscal year is not over, and PWD does not calculate its final year-end compliance with its budget until mid-October.[48]

PWD is requesting an additional $3.55 million in annual funding for SMIP/GARP, but, in addition to the uncertainty surrounding PWD's expenditure of its FY 2016 budget, it is unclear how much of this amount PWD can spend in FY 2017 and FY 2018. As PWD's witness, Ms. Williams, testified, PWD has had sufficient funds in its budget to meet the demand for SMIP and

[47] Pursuant to the Settlement Agreement, PWD agreed not to make any further rate increase effective before July 1, 2015, absent financial emergency. PA Hearing Exhibit II, at 4.
[48] See, e.g., April 5, 2016 Tr. at 166, lines 2-5.

GARP in FY 2013-2015. April 7, 2016 Tr. at 29, 9-13 (reporting no applications were denied for lack of funding). Moreover, PWD acknowledged that, of rejected applications for SMIP and GARP, it had no reason to believe that those applications would have been funded if additional resources were available. April 7, 2016 Tr. at 29, lines 14-20. Ultimately, PWD acknowledges the current need to market and advertise SMIP and GARP programs in order to ensure participation under current spending assumptions. April 7, 2016 Tr. at 29, line 24, through 30, line 23.

On the basis of PWD's testimony, regardless of whether the SMIP and GARP programs may assist PWD in meeting its environmental obligations, the record reflects some significant doubt about whether PWD can feasibly utilize the additional funds for these programs over the projected rate period. PWD acknowledges some limitations on the feasibility of additional expenditures in this area. April 7, 2016 Tr. at 33, lines 2-5. Accordingly, in addition to being unsupported (PWD acknowledges that it has not committed to expenditures for SMIP/GARP in FY 2017) as Mr. Morgan submits, the Board should deny PWD's requested increase in customer rates to fund $3.55 million in additional SMIP/GARP grants in FY 2017 and FY 2018. PWD should show that there is sufficient demand for program participation before the Board provides any increase funding from customers for these programs. Eliminating this additional adjustment reduces PWD's rate increase request by over $7 million for FY 2017 and FY 2018.

3. General Fund CSO Reimbursement.

PWD requests a rate increase of $1.8 million in FY 2017 and $3.5 million in FY 2018 to reimburse the City of Philadelphia's General Fund for upfront payments to construct a combined sewer outfall. Based upon the information provided by PWD, the Public Advocate submits that the timing of payments for this obligation is uncertain, rendering them unsupported as Mr.

Morgan has indicated. In addition, to the extent these obligations actually materialize during the rate period, they should continue to be met under existing customer rates as they have been.

As set forth in PWD's FY 2015 Financial Statements:

> On June 7, 2011 the City of Philadelphia entered into an Amended and Restated Development and Tax and Claim Settlement Agreement (the "agreement") with Sugarhouse HSP Gaming, L.P. (HSP). In accordance with the agreement, HSP is required to fund development and expansion of the Laurel Street combined sewer overflow. In compensation for this construction, HSP is allotted a five year credit against its real estate taxes and settlement payments otherwise due to the City of Philadelphia. This credit is equal to 28 percent of the amount expended on the Laurel Street Combined Sewer Overflow project. If the credit exceeds the amount of real estate taxes and settlement payments due to the City, the credit carries over to the following year.
>
> As the Laurel Street Combined Sewer Overflow is a capital asset of the Water Department,[49] the Water Department is required to make payments to the General Fund of the City the amount of this credit. This credit is approximately $3.5 million per year during fiscal year 2014 through 2018. During fiscal year 2015, the Water Department made payments to the General Fund of the City totaling $7,028,842, of which $3,514,421 represents a payment for fiscal year 2014.

PWD Exhibit 4 Supplement to SI-7f.

As detailed in the passage above, for unexplained reasons, PWD deferred (or was required to defer) reimbursement to the General Fund of the approximate $3.5 million credit for FY 2014. One can only speculate whether this deferral was due to the described "carry-over" mechanism. Given this deferral, it is not clear whether, in FY 2017 and FY 2018, the amounts of the additional adjustment PWD has identified will, in fact, be required to be transferred to the General Fund. Moreover, PWD's description of the amount of the additional adjustment, $1.8 million in FY 2017 and $3.5 million in FY 2018, is inconsistent with its Financial Statements.

[49] According to Ms. LaBuda, "the terms of the agreement [to reimburse the General Fund for this expense] don't allow us to use our capital fund to pay for all of the cost…Fiscal Year 17 and 18 payments have to come out of water operating because they do not meet the eligibility to be paid out of capital." April 5, 2016 Tr. at 185, lines 10-17. It is unclear why this would be the case, since the CSO is clearly a capital asset of PWD. Nonetheless, PWD's intention is for this expenditure to be paid through current customer rates, which is an additional mechanism through which PWD seeks to increase pay-as-you-go capital work.

PWD provides no explanation for why the credit, estimated at $3.5 million per year from FY 2014 through FY 2018, is reduced to $1.8 million in FY 2017. Finally, even at the $3.5 million level of adjustment proposed for FY 2018, PWD is proposing no additional incremental expense over the obligation it has described in its Financial Statements, namely, approximately $3.5 million per year in FY 2014 through 2018.

Ultimately, PWD's Financial Statements make clear that the agreement under which PWD claims to have incurred the obligation to reimburse the General Fund was entered into in 2011, prior to PWD's filing of its last rate proceeding in February 2012. It is also clear that, to the extent PWD has actually had an obligation to reimburse the General Fund under the Sugarhouse agreement, PWD has not had any difficulty satisfying that obligation in preceding fiscal years. While doing so, PWD has documented the consistent pattern of accumulating, in each year from FY 2012 through FY 2015, additional sums, beyond the forecast included in the Settlement Agreement, into the Rate Stabilization Fund. Accordingly, PWD has been able, under existing customer rates in effect in FY 2015, to satisfy its purported obligation to reimburse the General Fund by approximately $3.5 million per year. There is no basis for the Board to conclude that PWD requires additional service revenues to continue to meet an obligation that was, or should have been, specifically identified in PWD's last rate proceeding, and which PWD has been able to satisfy under existing rates. Eliminating this additional adjustment reduces PWD's rate increase request by $5.3 million for FY 2017 and FY 2018.

4. Other Additional Adjustments.

PWD includes a host of other miscellaneous adjustments. PWD has included additional adjustments concerning administration and implementation of a new affordability program. As set forth below, the Public Advocate has proposed an overall budget for this new program which,

when available for rate recovery, will be adequate over the rate period and provide a mechanism for adjustment for over/under recovery, ensuring that rates associated with the program costs are just and reasonable. Accordingly, PWD's additional adjustments for the new affordability program should be rejected. In addition, PWD's wish-list of additional adjustments includes staffing new positions in multiple departments (and pension and benefits obligations associated with new staffing), maintenance and equipment costs, facilities administration costs, chemical expenses, additional abatements, and additional engineering expenses to "mark-out" water and sewer infrastructure. These additional adjustments are discussed briefly below. As Mr. Morgan has concluded, none of these adjustments is adequately supported. In all, the elimination of PWD's additional adjustments reduces the rate increase request by approximately $7.5 million for each of FY 2017 and 2018.

Regarding new staffing in multiple departments, PWD has not provided adequate substantiation for these pro forma expenses.[50] The amount of expense associated with any new hires, logically, depends upon a number of factors, including the terms and conditions of employment, salary and hire date, as well as job classification. PWD acknowledges that it cannot know the potential hire date for any new employee. April 5, 2016 Tr. at 60, lines 18-21. For ratemaking purposes, this uncertainty renders the adjustments unknown and unmeasurable. Under closely analogous circumstances, the PUC has considered and rejected the inclusion of pro forma expense for new hires. See Office of Consumer Advocate v. City of Lancaster – Sewer Fund, 100 Pa. PUC 174 (2005) (concluding that without verifiable information concerning the starting date and salary of a new employee, the associated pro forma labor expense was not known and measurable, and could not be included in customer rates). The Board should reject

[50] Notably, in PWD Hearing Exhibit 4, regarding staffing costs, PWD acknowledges that it has made the *request* for additional staffing in various departments. To the extent it has done so, this request would have been made in its FY 2017 budget, for which approval has not yet been obtained from City Council.

additional adjustments for unidentified, and unverifiable, new hires and their associated pension and benefits expense.

PWD asserts that an additional adjustment of $1.3 million in FY 2017 and $1.2 million in FY 2018 should be approved to reflect one-time maintenance expense. PWD Exhibit 5, Figure 6. In response to the Public Advocate's further, informal discovery requests, asking for explanation on the derivation of these costs, PWD provided the following response:

> Some of our plants and facility equipment require a high rate of maintenance. One time maintenance cost included in the cost of service study for 2017, 2018 and 2019 for the operations division include BRC increase in insurance payments; NEWPCP increase in drydocking recycler for 6 year inspection; digester cleaning; chiller rental; increase cost of CoGen Maintenance; SWWPCP increase in digester and flocculation cleaning, paving and emergency HVAC repair. These costs are based off of historical experience and will reoccur each fiscal year as equipment is old and other equipment requires a higher rate of maintenance.
>
> See PWD Hearing Exhibit 4.

As with PWD's other additional adjustments, PWD fails to provide information necessary to substantiate these claimed expenses. Perhaps more significantly, PWD's claim for an additional expense is, in fact, based on *historical experience*, which would be reflected in historical levels of expenditures already included in PWD's cost of service study, and escalated by an inflation factor in Black & Veatch's rate model.

Similarly, concerning additional equipment expense, PWD submits that it will utilize an additional $0.1 million per year for the purchase of LED light fixtures and replacement of air conditioning. PWD Hearing Exhibit 4. Again, PWD fails to provide information necessary to verify these pro forma expenses. Moreover, the replacement of these fixtures reflects ongoing expense, rather than an additional expense which has not previously been encountered. A separate adjustment should not be made for this type of expense. Again, consistent with best ratemaking practices, expenses like these, which have historically occurred, have been

normalized in the historical information upon which PWD's forecast methodology is based. M-1 at 10.

Regarding facilities administration, PWD asserts that an additional $998,000 in facilities maintenance expense should be included in increased rates to customers because the expense was "inadvertently dropped" from FY 2016's budget. See PWD Hearing Exhibit 4. Whether or not the expense was included in FY 2016's budget is irrelevant. As discussed more fully above, PWD's budget is not determinative of the just and reasonable rates that customers may be expected to pay. PWD's current rates were set in FY 2012, and have been sufficient to cover facilities maintenance expense during the four fiscal years 2013, 2014, 2015 and 2016. PWD's failure to include this expense in its budget for FY 2016 has no bearing on the adequacy of its rates to cover this expense, which has been included in base rates since FY 2012. PWD makes no claim that this is in any way an additional expense beyond what was contemplated when its rates were previously determined.

Concerning additional chemical expenses, again, PWD submits that its request is based on *historical experience*. As set forth in PWD Hearing Exhibit 4, the additional chemical expense is intended to address cold weather needs of the treatment system at PWD's Northwest Pollution Control Plant, which have "occurred at varying levels over the last 4 to 5 years." As with additional maintenance, equipment and facilities administration expense, PWD has provided insufficient information to verify these pro forma expenses. Moreover, the occurrence of events requiring these expenditures in past years indicates that these expenses would have been included in its forecast for future chemical expenses based on actual payments. As Mr. Morgan notes, chemical costs, calculated in FY 2016 at the expected expenditure level by Black & Veatch, have also been escalated into the forecast years FY 2017 and FY 2018. The inclusion

of an additional adjustment for chemical expenses would realize the potential to overstate costs for this category. See PA St.-1 at 37, lines 17-23 ("[t]he potential to overstate [costs] is realized when one uses both the inflation rate to increase costs while, at the same time, making specific adjustments to increase those same cost categories. A specific example of this is present in PWD's filing. PWD has adjusted chemical expense by 3.3 percent. Included in the chemical expenses which were inflated by 3.3 percent is phosphhric acid. However, in the additional adjustments, PWD has included between $500,000 to $600,000 for phosphoric acid. Clearly, phosphoric acid has been increased twice by PWD.").

PWD also proposes $0.5 million in FY 2017 and $0.6 million in FY 2018 for additional abatement expenses. In PWD Hearing Exhibit 4, PWD lists a number of possible examples of events that could trigger abatement expenses, for example a main break, sewer blockage, notice of defect, private sewer blockage, or private water main leakage. However, PWD makes no claim that any of these *potential* occurrences are new risks, justifying increased customer rates. Furthermore, it is self-evident that the occurrence of these events in future years at a level which exceeds the historical expenditures for abatements already reflected in PWD's rate model is purely hypothetical. Even if these events do occur, PWD provides no basis for determining whether the amount of additional abatement expense it identifies is even remotely reasonable. The Board should reject PWD's additional abatement expense.

Finally, PWD submits that an additional $0.6 million in FY 2017 and $0.7 million in FY 2018 should be approved in order to "mark-out … water & sewer infrastructure prior to excavation." PWD Hearing Exhibit 4. PWD submits that roughly one-sixth (10,800 of the 63,275) of the notices it received of excavation work requiring its inspection in 2014 required PWD to "mark-out" its infrastructure. Id. PWD submits that an additional expenditure is

appropriate in order to permit it to "explore the service levels that could be achieved through a one call contract … to close out project[s] in a more timely manner." Id. While the Public Advocate generally supports PWD's efforts to improve efficiency, it is inappropriate to include in customer rates the charges associated with an initiative having this much uncertainty. PWD provides no timeline, request for proposals, bids, prior contracts, or other information on which the Board could determine that this cost estimate is reasonable or likely to be incurred during the forecast period.

H. The Board Should Reduce the Escalation Factor Associated with Class 800 Transfers from 3% to 2%, Saving Customers $1.5 Million in FY 2017 and $3.6 Million in FY 2018.

PWD proposes to apply a 3% escalation to one category of expense in the Finance Department, Class 800 transfers, to compensate other City departments for services provided to PWD. Mr. Morgan recommends the use of a 2% escalation factor, which is based upon the Blue Chip Economic Indicators consensus forecast of the Gross Domestic Product Price Index (GDP-PI) for 2017. PA St.-1 at 30, lines 8-11. As submitted by Mr. Morgan, a 2% escalation rate, reflecting general anticipated cost increases, is a more appropriate measure, which should be utilized for the rate period. This adjustment reduces the rate increase by approximately $1.5 million in FY 2017 and $3.6 million in FY 2018. As Mr. Morgan notes, it is generally permissible to use a reasonable inflation factor to project certain increases in costs. See, e.g., Pa. PUC v. Pennsylvania-American Water Co., 71 Pa. PUC 210 (1989) (expressing reservations, but permitting the continuing use of general escalation or inflation factors under limited circumstances).

PWD contends that a 3% escalation rate should be utilized, submitting that the costs being submitted for reimbursement by the City are "predominantly" labor services provided to PWD by other City Departments. April 5, 2016 Tr. at 94, lines 11-15. Accordingly, because PWD projects its labor costs increasing by 3%, it has elected to use a 3% escalation factor for the projected transfers reflected in the Finance Department's Class 800 line item. Notably, PWD's explanation, that this 3% increase was intended to mirror PWD's projected increase in labor expense is directly contradicted by PWD's documented assumptions utilized in its cost of service study. See PWD Exhibit 5, at 6 (Figure 5) (listing the annual escalation associated with Class 800 transfers as 3.0% "[b]ased on long-term historical average increase in PPI…Materials for Construction and Construction Machinery & Equipment (see Appendix 3)"). Regardless, in response to a transcript request, PWD provided an excerpt from its most recent Official Statement describing the services covered by PWD's Class 800 transfers. PWD's Official Statement provided:

> These services include purchasing of services, supplies and equipment by the Procurement Department; certain communication services by the Office of Innovation and Technology; street repairs by the Streets Department; disbursements and cash management by the Director of Finance; auditing services by the Office of City Controller; debt management services by the Office of the City Treasurer; testing and hiring services from the Office of Human Resources and Labor Relations unit and other support services provided by the Managing Director's Office, Civil Service Commission, Department of License & Inspections, and the Police Department.
>
> TR-3 at 2.

According to this description, and as described by Ms. LaBuda, the services provided by the City to the Department are indeed "quite varied." April 5, 2016 Tr. at 99, line 3.

Although it is conceivable that the majority of the services provided, and described in the Official Statement, are labor-related expenses, it is also true that not all of the services are labor related (e.g., components of procurement, street repairs, IT services, etc., would be other than

labor services). Furthermore, while it could be appropriate for PWD to assume a particular cost escalation factor for its own labor, based on its knowledge of its workforce, including expected turnover, demographics, and other characteristics, the assumption that PWD's cost escalation factor should apply to labor costs for other City Departments is unproven. Moreover, it is unclear whether, given the specific reference to the Producer Price Index inflation rate utilized for Class 800 transfers in PWD's assumptions documentation, PWD's witness was simply confused or provided erroneous information. Ultimately, given that PWD's transfers to the General Fund reflect repayment for a wide variety of services, which are not necessarily labor-related, Mr. Morgan's recommendation to utilize an inflation factor more closely tied to general cost inflation in the economy is sound and should be approved by the Board. Approval of Mr. Morgan's recommendation results in a downward adjustment to the revenue requirement of approximately $1.5 million in FY 2017 and $3.6 million in FY 2018. See PA Hearing Exhibit I, at 1.

I. The Board Should Adjust PWD's Contributions/Indemnity Spend Factor to Reflect Historical Spending Levels.

PWD proposes to apply a 100% spend factor to its $6,500,000 annual budget for contributions and indemnities. This spend factor is not warranted by PWD's historical actual-to-budget analysis, and should not be approved by the Board. As Mr. Morgan explains:

> I disagree with the basis for using the 100 percent spend factor as I will explain below. The increased exposure to claims has not been demonstrated. While the Department pace of expenditure during FY 16 may be higher than expected, the higher expenditures is not due to an increase in water main breaks as implied by PWD's claim of increased exposure. Instead, the increase in expenditure was the result of one major incident, as demonstrated in the response to PA-EXE-177. Moreover, because there was a major incident during FY 2016, it does not mean that there will be another major incident in FY17 or FY18. Given the budgeted amount for contributions/indemnities was increased

> by approximately 17.2 percent from $52.276 million to $61.266 million, additional funds have been made available to accommodate expected higher activity. The historical data indicates that the spend factor of this account is approximately 77 percent. Therefore, I believe an historical factor is more reasonable than to choose a factor based upon only one year's activity.

PA St.-1 at 25, lines 19-31.

During the technical hearings, PWD acknowledged that, historically, its actual expense for contributions and indemnities has not been 100%. PWD's Exhibit 5, Appendix 1 (Actual to Budget Factors), page 17, provides the following historical spending information:

	3-Year Average	2015 Actual to Budget	2014 Actual to Budget	2013 Actual to Budget
Contributions 500	76.75%	59.09%	92.86%	78.31%

Based on this information, it is clear that, over each of the proceeding three fiscal years, PWD has not utilized its full $6,500,000 budget for contributions and indemnities. Furthermore, as discussed during the technical hearings, and demonstrated in the Public Advocate's testimony in the 2012 rate proceeding, during the period FY 1996 through FY 2011, PWD not once utilized the full $6,500,000 budget for contributions and indemnities. See PA Hearing Exhibit I, at 11.[51]

Notwithstanding the clearly demonstrated historical difference between PWD's budget and its actual expenditure for contributions and indemnities, PWD illogically maintains that its rate forecast for this category of expense cannot be reduced. According to PWD, any adjustment would have "a direct impact to customers and [PWD's] ability to meet customers' needs and demands." April 5, 2016 Tr. at 103, lines 1-2. PWD appears to submit that, by reducing PWD's rate increase to reflect actual historical spending, it would be unable to utilize the full $6,500,000 it has in its budget for contributions and indemnities, in the unlikely event such spending were

[51] As set forth in the Settlement Agreement from the 2012 rate proceeding, PWD withdrew all rebuttal testimony. PA Hearing Exhibit II, at 5. Testimony of the Public Advocate's witness in 2012 remains unrebutted.

required. This position reflects a fundamental misunderstanding of the Board's role, and its oversight over rates. As discussed above, PWD's budget does not dictate its rates, nor does the Board's determination of just and reasonable rates necessitate any modification to PWD's budget. Historical spending demonstrates that while there is significant fluctuation in PWD's actual expenditure for contributions and indemnities, PWD has never spent 100% of its budget for this category of expense. PWD's assumption of 100% spending, for purposes of setting higher customer rates in the future, is unreasonable and should be rejected by the Board. Instead, the Board should, as Mr. Morgan advises, utilize the three year average of 76.75%. This adjustment would result in a savings of approximately $1.5 million per year to customers. See PA Hearing Exhibit I, at 1.

J. The Board Should Utilize a Lower Debt Interest Rate For 2018.

PWD proposes utilizing a projected interest rate of 5.25% for debt issuances, impacting FY 2018 of the rate proposal. As Mr. Morgan testified, PWD provided no documentation in support of this interest rate assumption, and so the assumption is not known and measurable. PA St.-1 at 32, line 21, through 33, line 1. In fact, PWD acknowledges that this assumption is overly conservative given current market conditions. As discussed by PWD's witness, Ms. Clupper:

> Do we think rates are going to shoot up 180 to 200 [points]? Do I think that? No. The point is that when you are projecting debt service, you need to be conservative. Because if you are wrong, I'm not going to -- maybe they do go up. If you are wrong, now you don't have enough money to pay for your debt service. That's a wors[e] position to be in than having too much. You need to be, you need to be conservative.
>
> April 5, 2016 Tr. at 111, lines 10-18.

As the Hearing Officer recognized, and the Wall Street Journal recently confirmed, the media is reporting that the Federal Reserve is unlikely to raise interest rates anytime soon. April 5, 2016

Tr. at 111, lines 6-8; "Fed Signals No Rush to Raise Rates," *The Wall Street Journal*, A1 (April 28, 2016). The professed basis for conservative estimation of PWD's future interest expense appears significantly overblown. The proposed adjustment applies to one year of the rate period, FY 2018, based on PWD's interest rate assumption of 5.25%. The timing of that issuance is unclear; timing would substantially impact the amount of actual expense in FY 2018. Moreover, if interest rates do dramatically increase, PWD management would have the ability to revise its financial plan and "take action immediately to help mitigate or lessen" the impact of that unexpected cost. See M-1 at 10.

PWD's interest rate assumption relies upon a certain "thought process" employed by the City Treasurer's office. April 5, 2016 Tr. at 108, lines 7-8. According to PWD's witness, Ms. Clupper, determining what interest rate should be assumed for PWD's future bond issues reflected the following considerations:

> We all understand we are at the lower end of where the interest rate market [has been] over the last several years. So the practice was to add 100 basis points to what was the interest cost or the true interest cost of the last issue which was about four and-a-quarter. That's where the five and-a-quarter came from.
>
> April 5, 2016 Tr. at 108, lines 10-17.

For ratemaking purposes, this manner of projection falls far short of any known standard. Certainly, it was not determined pursuant to a reasonably scientific basis of forecasting interest rate expense. It would appear to fall short even of a "best guess" standard, were one to exist and apply in the context of setting rates. The Board should approve Mr. Morgan's recommendation to utilize a 5% interest rate assumption for FY 2018's expected bond issue, reflecting the most recent interest rate on the City of Philadelphia's General Obligation Bonds. See PA St.-1 at 33, lines 3-6. This modest adjustment, utilizing an interest rate of 5.0% results in a reduction of $675,000 to the rate request for FY 2018.

K. Inter-Departmental Expenses Will Be Affected By The Board's Adjustments.

As PWD confirmed during the technical hearings, the Public Advocate's recommended adjustments to PWD operating and maintenance expense have impacts upon interdepartmental charges. April 5, 2016 Tr. at 112, lines 12-20. This is because assumptions applied to departmental operations and maintenance expenses are utilized in the rate forecast model for certain interdepartmental expenses. Based on Mr. Morgan's analysis, approving the adjustments to PWD's forecast operating and maintenance expenses, as discussed in the proceeding sections, results in a further adjustment to PWD's revenue requirement of approximately $3.3 million in FY 2017 and $4.1 million in FY 2018. See PA Hearing Exhibit I, at 1. The Board should ensure that all adjustments to PWD's rate forecast approved by the Board are properly applied in the Black & Veatch forecast model to reflect the impact upon inter-departmental operating and maintenance expense.

VI. PWD'S RATE DESIGN SHOULD BE ADJUSTED FOR CITY GOVERNMENT AND CITY LEASED PROPERTY CUSTOMER CLASSIFICATIONS.

PWD utilizes the base-extra capacity method of distributing the costs of service to customer classes in its class cost of service study in this rate proceeding. PA St.-2 at 6, line 1-2. Under cost of service ratemaking principles, costs associated with providing water service at a "base," or average level, and costs associated with providing water service at higher than average levels must be equitably allocated to customer classes. See, e.g., M-1 at 6, 83. The Public Advocate's witness, Mr. Mierzwa, conducted an analysis of PWD's allocation of extra capacity costs and determined that City Leased Properties and City Government customer classifications

would not be paying their fair share under the uniform rate structure PWD proposed. Accordingly, the Board should approve an adjustment to the rates of City Government and City Leased Property customer classifications, as recommended by the Advocate.

A. City Properties Are Not Allocated Extra Capacity Factors That Satisfy The Minimum Threshold.

As Mr. Mierzwa explained in his testimony, utilizing the actual usage data provided by PWD, the first step in determining the proper allocation of extra capacity factors is to calculate the ratio of the average day consumption for the month of maximum usage to the annual average day consumption for each customer class. PA St.-2 at 12, line 19, through 13, line 1. For each class, this ratio reflects the bare minimum maximum day extra capacity factor. Id. at 13, lines 1-4. That is because it assumes the same level of usage, per day, during the month of maximum usage, which would certainly be understated due to fluctuation in usage during the month. As Mr. Mierzwa demonstrates, the maximum day extra capacity factors PWD proposes for City Government and City Leased Properties customer classifications *does not even satisfy this minimum threshold*. PA St.-2 at 13, lines 9-12; Schedule JDM-1 (showing PWD's maximum day factor to be 1.8 for each of the City Leased and City Government classes, when the calculated absolute minimum maximum day factors are 2.1268 and 2.0575, respectively). As Mr. Mierzwa concludes, this fact alone demonstrates that PWD's extra capacity factors used for these customer classes is understated and unreasonable.

Mr. Mierzwa then utilizes industry-standard assumptions from the M-1's Appendix A, to calculate the expected actual maximum day and maximum hour factors taking into account daily fluctuations in usage. PA St.-2 at 13, lines 4-7. Although PWD questioned the use of these

assumptions, speculating that actual usage at these properties could vary from the industry-standard assumptions, PWD provided no actual data upon which to base any other assumptions. See April 11, 2016 Tr. at 54, lines 14-17 (Mr. Mierzwa stating that he asked what weekly adjustments should be used for the various classes, confirming PWD provided no answer); Id. at 55, lines 16-19 (Mr. Mierzwa stating that he asked for available information about usage characteristics, confirming PWD didn't have any); April 11, 2016 Tr. at 62, lines 16-17 (Mr. Mierzwa "used what was in the AWWA manual since [PWD] didn't provide any alternatives").

It is important to note, however, that Mr. Mierzwa's calculations of actual extra capacity costs, which are supported by the M-1, were purely demonstrative. As Mr. Mierzwa testified:

> I calculate extra capacity demand factors for each of these classes. But in the end, the testimony is not to specifically use these factors. It's just to point out how low the factors were…. So I don't actually use these factors. If I did, the cost of service studies would have indicated an increase of about 60 percent for these two city classes. And I have not proposed that.
>
> April 11, 2016 Tr. at 56, line 21, through 57, line 7.

Rather, as Mr. Mierzwa states in his testimony, he recommends making an incremental adjustment, to begin to transition the City Government and City Leased Properties toward a fair allocation of extra capacity costs. Mr. Mierzwa states:

> I recommend that if an increase is authorized by the Board in this proceeding, the two City customer classes should be assigned a revenue increase of 8.5 percent regardless of the increase authorized by the Board in this proceeding. For all other customer classes, I recommend that the increase in rates initially proposed by PWD be proportionately scaled back to achieve the revenue increase authorized in this proceeding after accounting for the increases to the City customer classes.
>
> PA St.-2 at 16, lines 14-20.

Accordingly, because the increase allocated to City Leased and City Government customer classes was 8.5% as proposed in PWD's filing, Mr. Mierzwa's recommendation is simply that those customers remain at that level of increase, and that all other customer classes receive a

reduced rate increase, under the assumption that the Board will deny, or implement downward adjustments to, PWD's overall rate request.

To implement Mr. Mierzwa's recommendation, he acknowledges that separate usage rates would need to be established for these two customer classes. PWD submits that this is inappropriate, *for this rate proceeding*. April 11, 2016 Tr. at 12, lines 4-12. PWD states that it would prefer, in the event separate rates should be established for different customer classes, to approach that process in a "holistic fashion" in a future proceeding. April 11, 2016 Tr. at 12, lines 16-21. Of course, this position disregards the fact that only the City Leased and City Government classes have been assigned extra capacity factors by PWD that were below the minimum threshold. PA St.-2, Schedule JDM-1.

PWD's witness also submits that, contrary to the actual usage information Mr. Mierzwa relies upon: "based on the volume distribution analysis…we adjusted the peaking factor to reflect a flatter demand factor for the city and city-leased [customers]." April 11, 2016 Tr. at 10, lines 8-11. During the technical hearings, the Public Advocate explored with PWD the actual monthly billed consumption data provided by PWD in response to PA-EXE-88, which conclusively demonstrates significant fluctuation in usage for City Government and City Leased Properties classifications, particularly compared with the residential customer classifications. See, generally, April 11, 2016 Tr. at 15-27.[52] The demonstrated level of usage variation does not support PWD's assertions that demand is "flatter" for these customers; to the contrary, it supports Mr. Mierzwa's recommendation that an adjustment is appropriate.

[52] Summarizing this discussion, the monthly usage multiple (calculated as the ratio of the usage in the highest month to the usage in the lowest month) demonstrated: (1) a range of 1.2-1.3 for residential customers over the last four fiscal years; (2) a range from a low of 2.9 (FY 2014) to 10.6 (FY 2015) for City Leased properties; and, (3) a range from a low of 2.5 (FY 2015) to 105.1 (FY 2013, which likely reflects some form of billing adjustment) for City Government properties.

B. PWD Changed its Methodology in Response to a Transcript Request, Inexplicably and Erroneously Criticizing Mr. Mierzwa's Testimony.

During the technical hearings, PWD asserted that utilizing the demand factors calculated by Mr. Mierzwa would result in the diversity factor analysis exceeding an acceptable range, from 1.10 to 1.40.[53] Mr. Jagt submitted that, utilizing Mr. Mierzwa's recommendations, the diversity factor would exceed 1.40 for maximum hour demand. April 11, 2016 Tr. at 11, lines 21-23. In response to the Public Advocate's questioning, Mr. Jagt confirmed that in conducting its analysis of the impact of Mr. Mierzwa's recommendations, PWD had continued to take into consideration lost and unaccounted for water. April 11, 2016 Tr. at l3, line 23, through 14, line 2. PWD failed to specify, however, that it altered how it took into account non-revenue water (i.e. lost and unaccounted for water), which alteration is solely attributable to depiction that Mr. Mierzwa's recommendations would cause the diversity factor for maximum hour demand to exceed 1.40.

In discovery, PWD provided a calculation of the system diversity factors under its proposed maximum day and maximum hour demand factors. In response to PA-EXE-167(b), PWD provided the following table (lost and unaccounted for water has been highlighted):

[53] The Public Advocate agrees that this range is set forth in the M-1, and may be considered reasonable, even though deviation from this range may also be reasonable.

Description	Avg Day Demand	Max Day Demand	Max Hour Demand
System Demands (Mcf/Day)			
Retail Demand Excluding Fire Protection	16,770	31,980	52,890
Wholesale (Aqua PA)	300	555	660
PWD Facilities	822	1,315	2,630
Subtotal Metered Demand	17,892	33,850	56,180
Estimated System Non-Revenue Water	11,201	11,201	11,201
Estimated Total System Non-Coincidental Demand	29,093	43,911	64,461
Estimated System Non Coincidental Demand Peaking Factor		1.51	2.22
System Coincidental Demand Peaking Factor		1.30	1.74
Estimated **System** Diversity Factor		1.16	1.27

As the table shows, PWD's estimated system diversity factor for maximum hour demand of 1.27 falls between 1.10 and 1.40. In contrast, in response to a transcript request made during the April 11 technical hearing that sought support for PWD's claim that the use of Mr. Mierzwa's proposed maximum hour extra capacity factors for the two City classes would result in diversity factors that fell outside of the 1.10 to 1.40 range, PWD provided the following table, designated TR-9A[54] attachment (again, lost and unaccounted for water has been highlighted):

[54] Available at http://www.phila.gov/water/rateboard/Transcripts/TR-9A-Attachments.pdf

DIVERSITY FACTOR ANALYSIS
BASED ON JDM PROPOSED CITY AND CITY LEASED CAPACITY FACTORS

Description	Avg Day Demand	Max Day Demand	Max Hour Demand
System Demands (Mcf/Day)			
Retail Demand Excluding Fire Protection (a)	16,770	33,030	55,060
Wholesale (Aqua PA)	300	555	660
PWD Facilities	822	1,315	2,630
Subtotal Metered Demand	17,892	34,900	58,350
Estimated Losses Based on 38.5% System Non-Revenue Water	11,201	14,561	19,489
Estimated Total System Non-Coincidental Demand	29,093	48,321	74,919
System Non Coincidental Demand Peaking Factor		1.66	2.58
System Coincidental Demand Peaking Factor		1.30	1.74
Diversity Factor (1.10 - 1.40)		1.28	1.48

As can clearly be seen, PWD has altered one significant assumption, which is the estimated lost and unaccounted for water, in making its calculations. In the first calculation, lost water is calculated at a factor of 38.5% of average day demand (17,892/(1-.385)=29,093). The actual lost water reflects the difference between the estimated total system non-coincidental demand and the metered demand (29,093-17,892=11,201). This 11,201 MCF of lost water is utilized by PWD in its system diversity calculations (max day and max hour).

In the second calculation, PWD inexplicably performs another calculation, driving the calculated quantity of lost water up to 14,561 MCF and 19,489 MCF for maximum day and maximum hour demand, respectively. In this example, PWD recalculates lost and unaccounted for water at a factor of 27.8% of maximum day demand (34,900/(1-.278)=48,321) and at a factor of 22.1% of maximum hour demand (58,350/(1-.221)=74,919). PWD provides no explanation for this recalculation, nor is there any reasonable basis for assuming that lost and unaccounted for water would be constant under PWD's system diversity assumptions, but would change under Mr. Mierzwa's assumptions. It is clear that PWD has changed its methodology, unjustifiably

undermining Mr. Mierzwa's recommendations. As demonstrated in the table below, utilizing a consistent measure of estimated losses, at 38.5% pursuant to the methodology PWD employed in response to PA-EXE-167, Mr. Mierzwa's adjustments do not result in a maximum hour diversity factor in excess of 1.40.

Description System Demands (Mcf/day)	Avg Day Demand	Max Day Demand	Max Hour Demand
Retail Demand Excl. Fire Protection	16,770	33,030	55,060
Wholesale (Aqua PA)	300	555	660
PWD Facilities	822	1,315	2,630
Subtotal Metered Demand	17,892	34,900	58.350
Estimated Losses @ 38.5%	11,201	11,201	11,201
Est. Total System Non-Coincidental Demand	29,093	46,101	69,551
System Non-Coincidental Demand Peaking Factor		1.58	2.39
System Coincidental Demand Peaking Factor		1.30	1.74
Diversity Factor (1.10-1.40)		1.22	1.37

As discussed above, the Public Advocate recommends that City Government and City Leased Properties be charged proportionately higher usage based rates for water, and all other customers receive scaled back rates, in order to better reflect their actual cost of service. PWD has presented no reason why this adjustment, which would ensure greater equity between customer classes, should not be made at this time. The Public Advocate's proposed adjustment recognizes that PWD's allocation would otherwise understate the extra capacity costs associated with serving the City Government and City Leased Property customer classifications, to the detriment of all other customers.

VII. INCOME-BASED WATER RATE ASSISTANCE PROGRAM

In 2015, Philadelphia's city council and mayor approved legislation authorizing the establishment of an Income-Based Water Rate Assistance Program (hereinafter "IWRAP"), which will go into effect in 2017. In this proceeding, the PWD has proposed both a partial design of, and estimate of costs for, IWRAP. In this section of the brief, the Public Advocate offers recommendations on the features of the IWRAP design that have been delegated to the Board and argues that the PWD's proposed design is both impermissible and contrary to the ordinance. This section of the brief also addresses revenue requirements associated with the implementation and operation of IWRAP and when those costs can be collected.

VIII. INCOME-BASED WATER RATE ASSISTANCE PROGRAM DESIGN.

A. The Board has Limited Authority Over IWRAP Design.

The Board's authority over the IWRAP design is set forth in the IWRAP ordinance and is limited to the determination of the percentage of income limitations to be imposed and the number of low-income tiers to be established. The Board's authority to fix and regulate water, sewer, and storm water rates and charges is set forth in Title 13 of the Philadelphia Code. The Board's authority over IWRAP is not included in Title 13. The Board's authority over IWRAP is delineated in the IWRAP ordinance as set forth in Title 19 of the Philadelphia Code. The ordinance states as follows:

> (3) The IWRAP program is authorized under the following terms and conditions:
>
> > (a) Monthly IWRAP bills shall be affordable for low-income households, based on a percentage of the household's income and a schedule of different percentage rates for (i) households with income up to fifty percent (50%) of FPL, (ii) households with income from fifty percent (50%) to (100%) of FPL, and (iii) households with income from one hundred percent (100%) to one hundred fifty percent (150%) of FPL, and shall be charged in lieu of the Department's service, usage, and stormwater charges. That goal shall be

> achieved through a discount on generally-applicable residential rates or other bill calculation mechanism based upon each Customer's actual income and, if practicable, historical usage, in a manner consistent with applicable federal law. ***The percentage of income limitations to be imposed at each level by the first sentence shall be determined by the Water, Sewer and Storm Water Rate Board, which also shall have discretion to establish more, but not fewer, Low-Income tiers.*** Bills issued pursuant to this IWRAP program shall be deemed to comply with Philadelphia Code Section 13-101(4)(d). The Department shall have discretion to offer more favorable terms than the standard rates upon an individualized finding of Special Hardship. Historical usage shall not include significant usage attributable to leaks or activities not customary to a residential setting.

Phila. Code §19-1605(3)(a) (emphasis added). Section 19-1605(3)(a) limits the Board's authority over IWRAP design to a determination of the percentage of income limitations, or affordability targets, to be imposed on each low-income tier of IWRAP customers. The provision also allows the Board, in its discretion, to establish three or more low-income tiers for the program. Notably, the provision does not direct the Board to determine additional features of the IWRAP design, such as the type of bill calculation mechanism to be utilized.

The PWD's IWRAP proposal should be rejected because in order to approve it the Board would have to exceed the scope of the authority that it has been granted under the IWRAP ordinance. In the direct testimony of Jon Davis, the PWD proposes IWRAP design features such as: a tiered discount bill calculation mechanism, a stratification of customers by hypothetical usage levels, a minimum bill requirement, and an arrears contribution. PWD St.-8, Direct Testimony of Jon Davis (hereinafter Davis) at 4 and 6. Section 19-1605(3)(a) of the Philadelphia Code does not authorize the Board to determine these features of the IWRAP design.

The Board should (and may) authorize only those IWRAP design features that are delegated to the Board under the ordinance. If the Board disagrees with the Public Advocate and chooses to approve additional features of the IWRAP design, then the Board should consider the plain language of the ordinance and adopt a program design and costs for the program that are

consistent with the ordinance. The Public Advocate's expert, Roger D. Colton, has thoroughly examined the program design features and costs associated with a complete and accurate implementation of the IWRAP ordinance. PA St.-3 at 3-62. The PWD has not conducted a thorough analysis. Davis 1-6. As argued more fully in the following sections of this brief, the PWD's proposed design is inconsistent with the ordinance and should be rejected. Should the Board conclude that it has the authority to determine additional aspects of IWRAP design, the Public Advocate submits that all of its proposals regarding program design should be accepted.

B. The Public Advocate's Proposed Affordability Targets Should Be Accepted.

Mr. Colton's recommendation concerning affordability targets for IWRAP customers should be accepted because it is based on recognized affordability standards and Mr. Colton's considerable expertise in the design and evaluation of customer assistance programs. The PWD's IWRAP proposal does not explicitly identify the affordability targets to be determined by the Board. The PWD's proposed targets can be ascertained by reviewing the work papers underlying Mr. Davis' testimony. PA-RDC-60. The PWD proposes the following affordability targets:

- 4% for 0-50% of poverty
- 3% for 50-100% of poverty
- 4% for 100-150% of poverty
- 4% for 150-250% of poverty

PA-RDC-60. Mr. Davis' proposal effectively renders the language of the ordinance non-existent. The ordinance explicitly allows the Board to establish "more, but not fewer" low-income tiers. By establishing, effectively, the same percentage of income limitation for each tier, Mr. Davis

establishes "fewer" tiers.[55] Tiers having the same percentage of income limitation cannot be found to be different tiers.

Moreover, Mr. Davis offered no demonstration that the percentage of income limitations that he proposes are "affordable" to low-income customers. Given the mandatory language of the ordinance, that IWRAP rates "shall be affordable for low-income households," the percentage of income limitations advanced by Mr. Davis cannot be found to comply with the ordinance.

The PWD proposes affordability targets that are approximately the same at every income tier. Under the PWD's proposal, IWRAP customers with the least income and IWRAP customers with the most income would be required to pay the same percentage of income toward the IWRAP bill. The PWD's affordability targets are more burdensome than those proposed by the Public Advocate.[56] The Public Advocate's expert, Mr. Colton, proposes that the Board adopt percentage of income targets that are consistent with a generally recognized water/wastewater affordability standard of 2%. PA St.-3 at 27, line 19, through 29, line 12. Mr. Colton proposes that IWRAP affordability targets be set as follows:

- 2% for 0-50% of poverty
- 2.5% for 50-100% of poverty
- 3% for 100-150% of poverty
- 4% for 150-250% of poverty

[55] In his direct testimony, Mr. Colton addresses the number of tiers needed to satisfy the IWRAP legislation's affordability requirements. He states, "should the Department's non-income based tiered discount program design continue to be the basis of the IWRAP design, I recommend that the Department move to the same number of tiers that PECO eventually adopted (before it gave up on its tiered discount in its entirety). PECO has adopted an affordability program based on six tiers." PA St.-3 at 27, line 1-5). For the reasons set forth in this section of the Public Advocate's brief, Mr. Colton concludes that PWD's proposed tiered discount cannot satisfy the IWRAP legislation's requirements.

[56] These numbers reflect the affordability thresholds that are created, in part, by the Department's proposed arrears contribution. Even if the Board accepts, as the Public Advocate argues in this brief, that the IWRAP ordinance prohibits the Department from requiring IWRAP participants to pay an arrears contribution, the Department's proposed affordability targets, without the arrears contribution, continue to impose a greater burden on participants than those proposed by the Public Advocate.

Id. at 27, line 19, through 29, line 12, and 25, lines 4-7.

Mr. Colton has conducted extensive research on low-income usage, payment patterns, and affordability programs. Id. at 1, line 15 through 2, line 9. His work includes not only the design, implementation, and improvement of low-income affordable rate programs but also the evaluation of low-income affordable rate programs. Id. at Appendix A; PA Responses to City – Set 1.[57] In contrast, the PWD's witnesses testified that although RFC staff have worked on customer affordability programs in other jurisdictions, RFC does not engage in ongoing work in these jurisdictions to determine how well the programs are performing. PA-RDC-113 through PA-RDC -124; April 12, 2016 Tr. at 31, lines 15-24.[58] It follows that RFC has no knowledge of whether any of its work in other jurisdictions has succeeded at achieving affordability or even resulted in affordability within the range targeted by RFC.

The Board should accept the recommendation of Mr. Colton. The IWRAP ordinance does not permit the PWD to establish a program that *may* result in affordable bills for IWRAP customers. To the contrary, the ordinance states, "monthly IWRAP bills **shall** be affordable for low-income households, based on a percentage of the household's income and a schedule of different percentage rates (…)." Phila. Code § 19-1605(3)(a) (emphasis added). Mr. Colton's expertise designing and evaluating utility customer assistance programs clearly surpasses that of the PWD's witnesses and should be given substantial weight in light of the IWRAP ordinance's affordability mandate.

[57] Available at http://www.phila.gov/water/rateboard/PDF/PAResponsetoCity1-8.pdf.
[58] At the April 12, 2016 Technical Hearing Mr. Davis testified that, "We typically don't do ongoing work. We might do an analysis at the beginning of the program. We, typically, don't have ongoing record keeping with respect to how that program is doing."

C. A Percent of Income Payment Plan Program and Not a Tiered Discount Program Should Be Accepted.

The Board lacks the authority to approve IWRAP design features beyond the affordability targets and number of low-income tiers to be included in the program because the IWRAP ordinance does not grant the Board broad authority over program design. Should the Board conclude that it does have authority to approve the bill calculation mechanism that the PWD will use to determine IWRAP bills, then the Board should approve a percent of income payment plan design and not a tiered discount program design.

The record evidence in this proceeding overwhelmingly supports a conclusion that a percent of income payment plan is the only mechanism to ensure the delivery of an affordable IWRAP bill that is based on the IWRAP customer's actual income. The record supports a finding that the PWD's proposed tiered discount program is based on hypothetical data and other assumptions about IWRAP customers that undermine the ability of the proposal to fulfill the IWRAP ordinance's affordability mandate. PA St.-3 at 6, line 21 through 15, line 9. The Public Advocate has established that PWD's tiered discount program will result in both over and under subsidization of IWRAP bills. Under the proposal advanced by Mr. Davis, some IWRAP participants will be paid more than is required to make their bills affordable, while others will be paid less than is required to make their bills affordable. In contrast, the ordinance does not allow a program that advances affordability "on average." The ordinance does not allow a program that allows a calculation of affordability based on averages or hypotheticals. The language of the ordinance is plain and unambiguous: (1) "monthly IWRAP bills *shall be* affordable": (2) that determination of affordability shall be "based on a percentage of *the household's* income"; and (3) that determination of affordability shall be "based upon *each customer's actual income*."

Phila. Code § 19-1605(3)(a) (emphasis added). The use of hypotheticals and city-wide averages does not comply with this clear language.

PWD proposes a tiered discount IWRAP design, which provides a fixed percentage discount to IWRAP customers. Davis at 3. PWD's proposal does not rely on an assessment of the IWRAP customer's actual income and usage level. Instead, the PWD's proposed discounts are based on median or average income, consumption, and household size. February 22, 2016 Tr. at 104, lines 2-23. As Mr. Colton explained in his direct testimony:

> [PWD] bases its affordability determination on an assortment of averages (…). [R]ather than basing affordability on the household's income or on each customer's actual income, the Department's determinations are based on the middle –the median income within the tier and the median consumption within the usage (…). Moreover, even those averages are based on further averages, since the income is not based on each customer's actual income but rather, according to Mr. Davis, on the average household size for the City of Philadelphia.

PA St.-3 at 7, lines 7-14 (internal citations omitted). The PWD's use of averages is unacceptable because the IWRAP ordinance requires that the IWRAP bill calculation mechanism be based upon "each Customer's *actual* income." Phila. Code § 19-1605(3)(a). (emphasis added). As Mr. Colton opined in his direct testimony:

> [T]he Department's tiered discount proposal will generate a bill that is "affordable" (defined by the ordinance as a percentage of income) only in the rare instance when a household: (1) has an income precisely equal to the fictional average for the discount tier; and (2) has a household size precisely equal to the fictional average size.

PA St.-3 at 10, lines 4-7. Again, the IWRAP ordinance does not permit the PWD to establish a program that *may* result in affordable bills for IWRAP customers. The ordinance mandates not only that IWRAP bills *shall* be affordable for IWRAP customers, but mandates further how that affordability is to be determined. Section 19-1605(3)(a).

The result of the PWD's use of averages and hypothetical data is that IWRAP customers are likely to receive underpayments and overpayments under the PWD's proposed design. PA St.-3 at 10-15. For customers who receive underpayments, the PWD's design clearly undermines the intent of the IWRAP ordinance. These customers will not receive an appropriate discount to bring the IWRAP bill within range of the affordability targets set for their low-income tier. Customers with income less than the averages assumed by the PWD will be substantively underserved. PA St.-3 at 13, lines 15-17. Those most in need are likely to be underserved. As Mr. Colton demonstrates in his analysis of the diversity of incomes within the city of Philadelphia, "the PWD's proposal would divert funding that would otherwise be available to those Census tracts with the lowest incomes to the tracts with higher incomes." PA St.-3 at 14, 19-21. Customers who receive overpayments will receive discounts beyond what they need to afford the water bill. PWD's proposal is unreasonable and inefficient because it fails to deliver an affordable bill in some instances and over delivers in others.

A percent of income payment plan design does not suffer from the defects that plague a tiered discount design. A percent of income payment plan is a superior design for a variety of reasons. First, a percent of income payment plan allows for the precise calculation of an affordable bill based on the customer's actual income and not an average or hypothetical income. April 13, 2016 Tr. at 32, line16 through 33, line 19. Second, a percent of income payment plan is less costly because, as a result of providing affordable bills based on actual income, a percent of income payment plan eliminates the over and under payment issue that is created by a tiered discount design. As Mr. Colton explained on cross examination:

> [O]ne of the differences between the tiered rate discount and the percent of income (payment plan) is that under the tiered rate discount, even if your bill is affordable based on a percentage of income, you are still going to receive (a

> discount) whether it's the 90 percent discount or whatever the discount is in the tier.

April 13, 2016 Tr. at 46, lines 19-24. He continues:

> You may have an affordable bill, but you are going to receive benefits nonetheless under the tiered rate discount, which is one reason you were asking yesterday, why does the tiered rate discount cost more than the percentage of income program? And the reason is because under, one reason is that under the tiered rate discount, you are giving away money to people irrespective of whether those people have an affordable bill or not affordable bill. Under the percentage of income program, you are giving the amount of money that's needed under the parameters set by city council.

April 13, 2016 Tr. at 47, lines 4-17.

Adoption of a percent of income payment plan will also eliminate the need for PWD to calculate the discount that is necessary to maintain affordability targets each time PWD requests a rate increase. PWD's proposal reflects the discount needed to achieve its affordability targets at projected FY 2018 rates. PA-RDC-60. Should rates increase beyond those proposed for FY 2018, PWD will need to recalculate the applicable discount needed to maintain affordability. February 22, 2016 Tr. at 106, lines 5-13. PWD can ensure that IWRAP continues to meet the affordability targets established in this proceeding, even as rates increase, by adopting a percent of income payment plan design.

D. PWD is legally authorized to implement a percent of income payment plan.[59]

PWD is legally authorized to implement a percent of income payment plan pursuant to the language of the IWRAP ordinance. The ordinance states that the goal of achieving

[59] This section discusses the legality of a percent of income payment plan design. Although the Public Advocate argues that the PWD is permitted to implement a percent of income payment plan design, the Public Advocate continues to maintain that the Board lacks any authority to approve the bill calculation mechanism to be utilized. Should the Board disagree with the Public Advocate as to the limits of the Board's authority over IWRAP design, then this discussion should aid the Board in its evaluation of a percent of income payment plan design.

affordability under IWRAP "shall be achieved through a discount on generally-applicable residential rates **or other** bill calculation mechanism based upon each Customer's actual income and, if practicable, historical usage, in a manner consistent with applicable federal law." Section 19-1605(3)(a) (emphasis added). PWD is not limited to a discount based design. The ordinance permits a percent of income payment plan. A percent of income plan is included in the M-1 manual's non-exhaustive list of water rate affordability program designs. M-1 manual at 191-192.

The fact is, however, that the ordinance's language that achieving affordability "shall be achieved through a discount on generally-applicable residential rates or other bill calculation mechanism based upon each Customer's actual income" does not stand alone. Section 19-1605(3)(a). City Council imposed other limitations on the determination, limitations that the tiered rate discount recommended by Mr. Davis does not meet. The City Council mandated that affordability be based upon "the household's income," not an average; not a hypothetical. Id. The City Council further mandated that each household's bill "shall be affordable," not that IWRAP bills be affordable on average as a class or in the aggregate. Id.

Neither state nor federal law prohibits PWD from implementing a percent of income payment plan.[60] The Pennsylvania PUC Customer Assistance Program (CAP) policy statement

[60] PWD may contend that a percent of income plan is barred by Environmental Protection Agency (EPA) regulations that pertain to low income residential user rates. 40 C.F.R. § 35.2140. These regulations state, in relevant part, "Any lower user charge rate for low income residential users must be defined as a uniform percentage of the user charge rate charged other residential users." 40 C.F.R. § 35.2140(i)(2). In fact, a PIPP does charge low income users, as a population, a uniform percentage of the rate charged to other users. For example, if non-low income users pay, on average 2% of household income for water and wastewater services, and low-income customers pay (without any discounts) on average, 4% of household income for water and wastewater services, a PIPP, providing low-income customers a 2% of household income bill uniformly charges low-income customers 50% of the rate charged to other customers.

The EPA regulations do not prohibit PWD from establishing a percent of income payment plan. The Public Advocate is not aware of any court or administrative agency decisions that have determined that

permits PUC regulated utilities to implement percent of income payment plans. See 52 Pa Code Sec. 69.265. Though not binding on the Department, both of Philadelphia's gas and electric utilities now or will imminently operate percent of income payment plans consistent with the CAP policy statement.

E. PWD's Proposal That IWRAP Customers Pay an Arrearage Contribution Should be Denied.

The Board lacks the authority to approve IWRAP design features beyond the affordability targets and number of low-income tiers to be included in the program because the IWRAP ordinance does not grant the Board broad authority over program design. If the Board disagrees with the Public Advocate and chooses to approve additional features of the IWRAP design, then the Board should deny PWD's proposal as it pertains to arrearage contribution. PWD's IWRAP proposal assumes that all IWRAP customers will make a contribution to pre-program arrears. Davis at 3; PA-RDC-60. An arrears contribution requirement for all IWRAP customers is a clear violation of the IWRAP ordinance. Section 19-1605(3)(h) states as follows:

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the EPA regulations prohibit the establishment of a percent of income payment plan. Nor is the Public Advocate aware of any specific legal guidance that the EPA has provided to PWD regarding impermissible IWRAP designs. Absent a showing that the EPA regulations have been interpreted, by a court or other legal authority, to prohibit the establishment of a percent of income payment plan, PWD should not be permitted to rely on its own self-serving interpretation of the EPA's regulations. The IWRAP ordinance clearly permits bill calculation mechanisms other than the tiered discount approach that has been proposed by PWD.

If PWD seeks to rely on EPA regulations as a justification for its refusal to implement a percent of income payment plan, PWD should have to prove that the EPA regulations both bind PWD and supersede the City Council's ordinance. The EPA, itself, has authoritatively said that it accepts a wide range of affordability options. See the EPA's Dialogue with Local Government Financial Capability Framework, publically available at: https://www3.epa.gov/npdes/pubs/sw_regionalmemo.pdf. Accordingly, it is the City Council ordinance, and not any EPA regulation, that determines the type of program to be adopted in Philadelphia. For the reasons set forth in this brief, the Public Advocate maintains that a percent of income design is the optimal IWRAP design.

> (h) Total bill. Low-income customers who are enrolled in IWRAP shall be required to make no additional payment in respect to any pre-IWRAP arrears to maintain service.

In his direct testimony, Mr. Davis states that PWD's program "makes allowances for delinquency payments that fall within accepted affordability thresholds." Mr. Davis does not attempt to reconcile this statement with the prohibition on requiring an arrears contribution from Low-income customers contained in Section 19-1605(3)(h). Pursuant to the ordinance, Low-income is defined as income equal to or less than 150% of FPL. Phila. Code § 19-1605(2)(d). A separate provision of the ordinance provides that Customers with income from 150% to 250% of FPL, shall be offered payment plans that result in a total bill – including arrearages that is affordable. Phila. Code § 19-1605 (h.2). While the language at Section 19-1605(h.2) could support an argument for an arrears contribution calculation for customers above 150% of poverty, PWD's arrearage contribution proposal is not limited to customers above 150% of poverty. PWD instead requires an arrears contribution for IWRAP customers at every income tier. PA-RDC-60; PA St.-3 at 17, line 22, through 20, line 11. The IWRAP ordinance does not permit an arrears contribution from Low-income customers. This is true even if the contribution would not increase the affordability target beyond the target that is set by the Board. PWD's proposal for an arrears contribution requirement for all IWRAP customers should be denied.

F. The Public Advocate's Recommendations Regarding the Design of an Earned Arrearage Forgiveness Program Should be Accepted.

The Board lacks the authority to approve IWRAP design features beyond the affordability targets and number of low-income tiers to be included in the program because the IWRAP ordinance does not grant the Board broad authority over program design. If the Board

disagrees with the Public Advocate and chooses to approve additional features of the IWRAP design, then the Board should approve the Public Advocate's recommendations regarding the design of earned arrearage forgiveness. The IWRAP ordinance requires earned forgiveness of pre-program arrearages. It provides as follows:

> Earned forgiveness. Earned forgiveness of arrearages **shall** be available under such terms and conditions as are adopted by regulation. Customers with household income from one hundred fifty percent (150%) to two hundred fifty percent (250%) of FPL, shall be offered payment plans that result in a total bill – including arrearages – that is affordable.

Phila. Code § 19-1605(h.2). The ordinance compels PWD to include earned forgiveness of arrearages in the IWRAP design. PWD's proposal fails to address earned forgiveness. In contrast, Mr. Colton's direct testimony describes the essential elements of an arrearage forgiveness program. PA St.-3 at 21, line 22, through 25, line21. Mr. Colton proposes terms and conditions for arrearage forgiveness that are consistent with his experience with low income affordability programs. Id. Mr. Colton recommends that the pre-existing arrearages of IWRAP customers be forgiven over a two-year period. Id. at 22, line 15, through 23, line 13. He also recommends that arrearage forgiveness be earned as bills are paid, even if such payments are made in cure of a previously missed payment. Id. at 23, line 15, through 24, line 14.

Mr. Colton provides a separate recommendation for customers between 150%-250% of poverty because the earned forgiveness provision of the IWRAP ordinance includes these customers in addition to the Low-income customers defined at Section 19-1605(2)(d) of the ordinance. PA St.-3 at 24, line 16, through 25, line 21. The ordinance also states that "any amount paid for a monthly IWRAP bill in excess of the customer's current water liabilities shall reduce the balance of his or her arrears." Phila. Code § 19-1605(3)(e). In recognition of these provisions of the ordinance, Mr. Colton recommends that customers in the 150% - 250% income

tier be required to pay 4% of their income toward their bill should such customers seek pre-program arrearage forgiveness. PA St.-3 at 25, lines 4-7. If the 4% payment exceeds the amount that the customer would pay for actual use, Mr. Colton recommends that the portion of the payment that exceeds the actual bill be applied against the customer's pre-program arrearages. Id. at lines 7-8. If the payment does not cover the entire pre-existing arrearage, the remaining balance of the customer's pre-program arrearage shall be forgiven under similar terms to other IWRAP participants. Id. at lines 8-11. Mr. Colton proposes reasonable terms for earned forgiveness that are consistent with the IWRAP ordinance. If the Board concludes that it has authority over additional features of IWRAP design, then the Board should adopt these recommendations.

IX. INCOME-BASED WATER RATE ASSISTANCE PROGRAM COSTS.

A. The Public Advocate's Recommendation for IWRAP Discount Costs Should Be Accepted.

Neither the Public Advocate nor PWD dispute the Board's jurisdiction to determine the revenue requirement needed to fund IWRAP. The parties disagree over the cost to PWD of providing IWRAP and when PWD can begin to recover that cost. One area of disagreement concerns the cost of providing discounts to IWRAP customers. PWD concedes that its projection of $16.3 million is based on a simulation and not on the actual customer affordability program subscription rate of any known jurisdiction. April 12, 2016 Tr. at 13, line 2, through 14, line 2; PA-RDC-67; PA-RDC-63. Mr. Colton's recommendation for IWRAP discount costs should be accepted because it reflects the likely subscription rate for IWRAP and provides the greatest latitude for alternative program designs.

Mr. Colton proposes that PWD include $9.002 million in base rates for the operation and administration of a percentage of income-based IWRAP program.[61] PA St.-3 at 30, lines 1-6. Mr. Colton's analysis is not based on a simulation of hypothetical subscription rate scenarios. Mr. Colton's recommendation assumes a subscription rate for IWRAP that is consistent with the actual subscription rate of a known, local, municipal utility, Philadelphia Gas Works. PA St.-3 at 30, line 16, through 31, line 18.

Further, Mr. Colton's recommendation factors in the cost to PWD of providing earned arrearage forgiveness to IWRAP customers. The IWRAP ordinance states that earned forgiveness of arrearages "**shall** be available under such terms and conditions as are adopted by regulation." Phila. Code § 19-1605(e)(h.2) (emphasis added). Although earned arrearage forgiveness is mandated by the ordinance, PWD has not conducted any assessment of the cost of providing arrearage forgiveness. April 12, 2016 Tr. at 34, line 17, through 35, line 7. PWD also has not analyzed the cost of a percent of income payment plan design. Mr. Colton has assessed both the cost of arrearage forgiveness and the cost of a percent of income payment plan design and has arrived at lower total program costs than those proposed by PWD. The Public Advocate urges the Board to adopt Mr. Colton's proposed IWRAP costs because they are based on likely subscription rates, provide for the inevitable addition of an earned arrearage forgiveness component to the IWRAP design, allow for multiple bill calculation mechanisms, and result in a lower rate increase for PWD's customers.

[61] This figure represents the net increase in rates and does not include the $4.000 million, which PWD already collects in rates for existing low income programs.

B. The Public Advocate's Recommendations for IWRAP Administrative Costs Should Be Accepted.

PWD projects the need for approximately $2.8 million annually to cover two full-time equivalent positions for IT support and 22 new WRB positions for program administration. Davis at 3. The Public Advocate urges the Board to reject these projected expenses and to limit administration costs to no more than 10% of program benefits as proposed by Mr. Colton. PA St.-3 at 33-42. There is substantial evidence on the record to demonstrate that the costs included by PWD are overinflated and unreasonable. Mr. Colton's testimony establishes that PWD lacks the information necessary to accurately determine the number of new staff positions that are required. Mr. Colton testified:

> The Department concedes that it does not now even record or track, on either a per-applicant basis or on an aggregated basis, the number of person-hours its staff annually devotes to the WRAP intake process. (PA-RDC-95). Nor does the Department track, on either a per applicant basis or on an aggregated annual basis, the number of person-hours its staff devotes to the existing process of communicating with WRAP participants. (PA-RDC-96). When communicating with other utilities having a low-income bill assistance program for purposes of preparing the management report, the Department did not request information from those utilities on the estimated number of person-hours devoted annually to ongoing program administration, or the estimated person-hours devoted annually for ongoing IT support for the low-income program. (PA-RDC-97 and PA-RDC-98).

PA St.-3 at 33, line 21, through 34, line 9. Put simply, PWD's projections for IWRAP staff and associated costs are purely fabricated.

The data that does exist and supports a finding that PWD does not need additional staff because existing staff could be more effectively utilized if PWD took steps to limit redundancy, and to standardize and computerize application processing. Mr. Colton cites to PWD's Management Report and its analysis of the problems that plague WRAP application processing.

PA St.-3 at 34-36; PWD St.-8, Testimony of Henrietta Locklear, Exhibit HL-2 (hereinafter "Management Audit" at 79-84).

Similarly, the technical hearing record is replete with admissions from PWD witnesses that confirm Mr. Colton's opinions. The record confirms the following:

- In requesting 22 new staff persons for the IWRAP program, PWD has not considered cost saving recommendations of RFC regarding elimination of duplication of work under the current WRAP program. April 12, 2016 Tr. at 87, line 19, through 89, line 22.
- PWD does not intend to transfer the 9 current staff persons in the WRAP program over to the IWRAP program. April 12, 2016 Tr. at 89, line 24, through 90, line 12;
- PWD has not considered cost savings from outsourcing the IWRAP application processing, as recommended by RFC. April 12, 2016 Tr. at 91, 3-10; 123, line 22, through 125, line 22.
- The City has no plans to offer an online option for applications to WRAP or IWRAP, as recommended by RFC, so has not considered the staff cost savings that could result. April 12, 2016 Tr. at 91, line 11, through 93, line 10; 118, line 1 through 120, line 7.
- In its request for 22 new staff persons for the IWRAP program, PWD has not considered the streamlining and efficiencies that would result from accepting proxy income and residency eligibility determinations from another City low-income program, as provided in the IWRAP legislation. April 12, 2016 Tr. at 93, line11, through 95, line 17; 120, line 9 through 121, line 2.

In short, PWD is well aware that its current WRAP application processing is beset by inefficiencies, which can and should be addressed prior to the implementation of IWRAP. PWD has not proposed to take any action to address these inefficiencies and instead maintains that it needs to nearly triple its application processing staff. PWD's staffing projections are unfounded. PWD's request for additional staffing has not been substantiated by the evidence on the record and should be denied.

Mr. Colton articulates several additional reasons for limiting PWD's IWRAP administrative costs. Mr. Colton notes that PWD's projected costs far exceed the total administrative costs of other low-income utility assistance programs in the state of Pennsylvania and in other jurisdictions where Mr. Colton has worked. PA St.-3 at 37, line 16, through 38, line 12. Mr. Colton's cost recommendations are more appropriate. As he stated in surrebuttal testimony, his cost estimates are appropriate for not only existing low-income utility assistance programs but also for start-up programs and redesigned programs. April 13, 2016 Tr. at 110, line 20, through 112, line 10.

An additional reason for limiting PWD's IWRAP administrative costs is that PWD could control these costs if it outsources the intake and enrollment functions for IWRAP. PA St.3-at 40, line 18, through 42, line 11. PWD's third party audit suggests entirely or partially outsourcing this function. Management Audit 84. As Mr. Colton testified:

> Since a utility is not designed to operate as an intake and enrollment center for means-tested affordability programs, and lacks the trained staff needed to engage in such intake and enrollment, the process of contracting the intake and enrollment process to third party community-based organizations is nearly universal in the utility industry.

PA St.-3 at 41, lines 4-7. For these reasons, the Public Advocate recommends that the Board order PWD to outsource the intake and enrollment functions for IWRAP to a community-based organization in order to minimize IWRAP administrative costs.

PWD has vaguely asserted that "collective bargaining agreements with the City's unions and general principals of labor law **may** preclude the City from outsourcing the qualifications and requalifications to another agency." PA-RDC-111 (emphasis added). PWD does not cite to any specific bargaining agreement or principal of labor law in support of this position. When

questioned at the technical hearing about the possibility of outsourcing, PWD's witness, Michele Bethel, testified as follows:

> Ms. Bethel: What I was saying is the fact that we – there is nothing in the – in our charter that precludes us from outsourcing. However, because we are in a collective bargaining unit and we are currently in-taking applications for the WRAP program, we were not looking to outsource a function that we are currently doing right now.
>
> Hearing Officer: Is there something in the collective bargaining agreement that precludes you from doing that for IWRAP?
>
> Ms. Bethel: No. There is nothing that precludes that.

April 12, 2016 Tr. at 124, lines 5-17. Shortly thereafter, counsel for Ms. Bethel stepped in to assert that PWD would need to review its collective bargaining agreements and obtain an opinion from the City Solicitor before it could make a decision on outsourcing. Id. at 125, lines 10-15. This confirms that PWD is not aware of any prohibitions on outsourcing contained in bargaining agreements. PWD's concerns are speculative at best.

In response to the Hearing Officer's transcript request for clarification on the terms of the collective bargaining agreements, PWD provided several agreements between the City and various bargaining units. TR-11.[62] The bargaining agreements between AFSCME District Council 33 and the City permit the City to contract out City functions if two conditions are met:

> (i) the work can be performed more economically by a union contractor (or other contractor in the event no union contractor is available) as opposed to the employees represented by the Union and (ii) the City shall give the District Council no less than thirty (30) days prior written notice before issuing a formal Request for Proposal or a formal Bid Solicitation Package, in order to afford the Union an opportunity to meet and discuss whether the work can be performed more economically by a union contractor (or other contractor in the event no union contractor is available) as opposed to employees represented by the Union.

[62] Available at http://www.phila.gov/water/rateboard/Transcripts/TR-11-Attachment.pdf.

TR-11 at 18; 31. Although the bargaining agreements indicate that the use of private contractors is a significant issue for unionized employees, the agreement does not prohibit the use of private contractors. Id. at 85. The City and the union have agreed to a process of managed competition on City contracts of $1,000,000 or more. Id. Pursuant to this process, the union is permitted to bid on contracts of $1,000,000 or more and to be held to the same standards as private bidders. Id. There is nothing on the face of these agreements that prohibits the outsourcing of the intake and enrollment functions for IWRAP.[63] Further, the Public Advocate's recommendation for controlling IWRAP administrative costs is more economical than what PWD proposes and should easily satisfy the conditions set forth in these agreements. Mr. Colton proposes total administrative costs that are not to exceed 10% of IWRAP benefits. PA St.-3 at 33, lines 3-5. He estimates an incremental administrative cost of approximately $900,000 per year, which is less than the $1,000,000 managed competition threshold established in the bargaining agreements. Id. The Public Advocate recommends that the Board order PWD to outsource the intake and enrollment functions for IWRAP in order to control IWRAP administrative costs.

C. The Public Advocate's Recommendations for IWRAP Start-up Costs Should be Accepted.

[63] The bargaining agreements do contain language which may prohibit layoffs or demotions that result from contracting. TR – 11 at 31, line94. The Department has not indicated that this language is a barrier to outsourcing. Nor could the Department do so convincingly. The Department maintains that its existing WRAP staff will not be transferred to IWRAP when the program becomes operational. April 12, 2016 Tr. at 89, line 24 through 90, line 12. The Department maintains that its WRAP staff have other duties in addition to WRAP processing. It follows that these staff will not be at risk of layoff or demotion if IWRAP intake processing is outsourced because, as the Department maintains, there is other work for them to do. Accordingly, the replacement in full of WRAP by IWRAP, as contemplated by legislation, would permit outsourcing without creating labor strife.

PWD projects upfront costs of approximately $1.1 million to cover five person years of effort. Davis at 3. The Public Advocate recommends that the Board deny any separate cost recovery for the net incremental program start-up costs for IWRAP for the reasons set forth in Mr. Colton's testimony. PA St.-3 at 42-47. Mr. Colton testified that PWD's start-up costs are unreasonable because front-end costs will be collected in the ramp-up period prior to full subscription in IWRAP. PA St.-3 at 43, lines 4-8. During this period PWD will collect the full cost of program benefits but will not expend them. Id. Mr. Colton opines that these unexpended funds will be available to pay for PWD's incremental start-up costs. Id. at 43, lines 8-9. A second reason Mr. Colton provides for rejecting PWD's proposed start-up costs is that the costs are already embedded in the rates. Id. at 43, lines 10-11. In support of this opinion, Mr. Colton cites to the Management Audit and its description of WRAP related Information Technology projects that are currently underway. PA St.-3 at 44-47. PWD's responses to the Public Advocate's discovery requests reveal that costs related to these projects are already included in PWD's 2016 budget. Id. at 44, line 20, through 45, line 9. Mr. Colton concludes that because these projects will no longer need to implemented in the absence of WRAP, the costs that have already been budgeted can instead be used for IWRAP related Information Technology projects. Id. at 45, line 11, through 46, line 5. In consideration of Mr. Colton's testimony, the Public Advocate recommends that the Board deny PWD's projected IWRAP start-up costs.

D. The Public Advocate's recommendations for IWRAP cost offsets should be accepted.

The Public Advocate recommends that the Board accept the offsets that Mr. Colton specifies should be taken into account in assessing the costs of IWRAP. PA St.-3 at 47-59. Specifically, Mr. Colton proposes that PWD account for the rate of non-collection for low-

income customers. PA St.-3 at 48-53. The costs of providing discounts to IWRAP customers should not assume that PWD would have collected all of its revenue in the absence of IWRAP. Mr. Colton concludes that the rate of non-collection for IWRAP customers will be 12.1%. Id. at 50, lines 3-8. PWD offered no rebuttal testimony to controvert this testimony.

Additionally, Mr. Colton proposes an offset for increased revenue due to reduced expenses. Id. at 53-59. In sum, Mr. Colton testified that IWRAP will result in a lower level of non-collection and higher revenue to PWD as billings to low income customers are transformed into billings to non-low income customers, via the IWRAP credits. Id. at 55, lines 10-14. Mr. Colton proposes that any increased revenue that results from a lower level of non-collection caused by IWRAP should be treated as an offset. Id. at 55, lines14-16. He proposes an offset of 6.6%. Id. at 57, lines 17-21. The Public Advocate recommends that the Board accept Mr. Colton's proposed offsets as they are an important safeguard against double recovery when IWRAP is ultimately implemented. PWD offered no rebuttal testimony to controvert this testimony.

E. The Department Should Not Be Permitted to Recover IWRAP Costs Until They are Known and Measurable.

As established in Section III of this brief, the known and measurable standard is a fundamental principle applicable to PWD rate making. Accordingly, the Department's IWRAP costs must be projected on the basis of known and measurable changes in revenues and expenses. PWD should not be permitted to recover costs for the operation and administration of IWRAP until those costs are known and measurable, at which time PWD should present the Board with a request to recover the actual costs of providing IWRAP. As argued in the preceding paragraphs

of this brief, the Public Advocate agrees with PWD that there will be costs associated with IWRAP; however, the Public Advocate submits that PWD should not be permitted to recover those costs until the IWRAP design and implementation details have been established. At present, there are significant IWRAP design features that have yet to be determined and that are not within the purview of the Board, e.g., earned arrearage forgiveness, the bill calculation mechanism to be utilized, the practicability of using historical usage data, and other features. PWD will not have this information until after the conclusion of this rate proceeding. For these reasons, it is premature for the Board to include IWRAP costs in FY 2018 rates.

At present IWRAP costs remain unknown and unmeasurable. The Public Advocate submits that any rates approved for the operation or administration of IWRAP should be approved on a conditional basis. The Public Advocate proposes that the Board conditionally approve Mr. Colton's recommendations for IWRAP costs and a reconcilable rider. Mr. Colton's costs are more conservative than PWD's and will result in lower rate increases for PWD's non-IWRAP customers. Further, the reconcilable rider will permit PWD to account for and redress any under- or over-collection of IWRAP expenses. These conditional rates should go into effect only after PWD presents the Board with a comprehensive and holistic IWRAP design.

F. Mr. Colton's Proposal For an IWRAP Rider Should be Accepted.

If the Board determines that IWRAP costs should be approved in this proceeding, then an IWRAP rider should also be accepted. In his direct testimony, Mr. Colton proposes that PWD promulgate an IWRAP rider to collect the net incremental real costs of the IWRAP program. PA

St.-3 at 59, lines 7-9.[64] The adoption of an IWRAP rider would effectively eliminate the Public Advocate's concern that PWD will over-collect program expenses in the event that subscription rates are lower than those estimated in this proceeding. Id. The rider would also ensure that PWD can recover the net incremental real costs if subscription rates are higher than estimated. Id. The Public Advocate recommends that the Board approve an IWRAP rider to ensure that PWD does not over-collect IWRAP expenses.

X. PWD'S REQUEST FOR INCREASED RATES IS INAPPROPRIATE WHEN IT HAS NOT MET PRIOR RATE CASE COMMITMENTS AND PREREQUISITES FOR FILING A MULTI-YEAR RATE INCREASE.

As demonstrated through public input hearings, expert testimony and technical hearings, PWD has fallen short of satisfying several material provisions of the Settlement Agreement entered into in 2012 and adopted in the PWD Commissioner's Rate Determination for FY 2013-2015. Although the expert analysis conducted by Mr. Morgan indicated that several significant adjustments to PWD's projections should be made which would eliminate the need for PWD to increase rates at this time, the Board should also take into consideration the ramifications of PWD's failure to satisfy the terms and conditions of the Settlement Agreement. That Settlement Agreement established reciprocal obligations: customers would be charged higher rates, and PWD would perform certain specific tasks. Federal and state courts have upheld denial of utility

[64] On cross examination, Mr. Colton indicated that if the Department does not want to use a reconcilable rider there are other options; however, Mr. Colton stated that the recommended approach is a reconcilable rider, which is the approach that the Pennsylvania Public Utility Commission has adopted for gas and electric utilities throughout Pennsylvania. April 13, 2016 Tr. at 19, lines 12-21. Although Mr. Colton testified regarding the use of maximum credits as a vehicle for limiting costs in the PUC context, he did not endorse the use of a maximum credit in the context of IWRAP. Id. at 23, line 7, through 24, line 7. As Mr. Colton opined on surrebuttal, the IWRAP ordinance says that bills are to be affordable based on actual household income. Id. at 102, line 24 through 103, line 9. The ordinance does not authorize the use of maximum credits. Id.

rate increase requests where the utility has failed to provide assurance of fulfilling its obligations to the ratepayer and where there has been a history of utility noncompliance. Nat'l Utilities, Inc. v. Pa. PUC, 709 A.2d 972, 979 (Pa. Cmwlth. 1998), following D.C. Transit Sys., Inc. v. Washington Metro. Area Transit Comm'n, 466 F.2d 394, 411 (D.C. Cir. 1972), *cert denied.* PWD customers have indeed been charged higher rates, but PWD has not performed all of the tasks it agreed to perform as the precondition to being allowed to collect those rates. The Board should likewise deny the PWD's rate request and decline to impose such a one-sided and unjust burden on ratepayers.

A. The Stipulation to Mediation from the 2012 Rate Case Settlement Has Not Been Fulfilled.

As was discussed during the technical hearings, PWD entered into a Stipulation to Mediation with the Public Advocate with the express purpose of improving customer service in four specific areas. The four issue areas that were to be addressed by the Mediation included:

(1) Improvement of the informal dispute and hearings process;

(2) The structure and delivery of WRAP;

(3) The delivery of deferred payment agreements; and

(4) The treatment of tenant arrears and applications for service.

PA Hearing Exhibit VI, at 13-14; April 12, 2016, Tr. at 83-87.

To date, PWD has not implemented the agreed upon improvements arising from the mediation. Despite specific agreements to implement improvements to its informal hearings and appeals process, PWD has not taken any action. During public input hearings, customers continue to complain of being summarily denied access to programs and service without any

notice of appeal rights, in violation of due process, and the express agreements reached during the mediation.[65] The stipulation was *not* simply to engage in the mediation, but to actually implement improvements. PWD has taken none of the actual improvements, even those agreed to or ordered as a result of the mediation.

The Mediation over the structure and delivery of WRAP was replaced by the intervening introduction and passage of City legislation that established the new IWRAP program. However, as City Council members have stated, including the sponsor of the IWRAP legislation Councilwoman Sanchez, IWRAP was meant to be first implemented under existing rates.[66] Indeed, since the Stipulation to Mediation was a condition of the 2012 rate case settlement, and establishment of the new IWRAP program replaced the Mediation over the structure and delivery of WRAP, it follows that some improvement to affordability was already paid for by ratepayers. At the least, customers have already paid, under existing rates, for the Department to design and create an implementation plan for a program fully satisfying the IWRAP legislation. The Department has not delivered a complete program. However, Mr. Colton has delivered an IWRAP program in full compliance with the IWRAP authorizing legislation.

Also, PWD incorrectly asserts that issues concerning deferred payment arrangements have been resolved through legislative action concerning low-income payment agreements. PA-RDC-3, PA St.-3 at 75, lines 12-16. The IWRAP legislation covers options for customers and

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[65] April 7, 2016 (Public Input) Tr. at 44, line 17, through 46, line11 (Michael Lightbody, WRAP denial with no appeal notice), 47, line 5, through 49, line 5 (Lois Stewart, no opportunity to dispute WRAP amount), Public Written Comment of Lois Stewart April 13, 2016 at http://www.phila.gov/water/rateboard/Public%20Comment/Stewart.Lois-4.13.16.pdf. Mr. Colton's testimony also provided examples of an unresponsive bureaucracy at PA St.-3, at 82, lines 1-3, citing to several parts of the public input record.

[66] April 7, 2016 (Public Input) Tr. at 31, lines 21-23 (Councilwoman Blackwell: "I don't believe we should have a rate increase until these programs [for low income people] are in place."), April 7, 2016 (Public Input) Tr. at 33, line 22, through 34, line 11 (Councilwoman Sanchez: "I was very clear that a water affordability rate should not be factored into the increase of water rate… there is enough money in the rate stabilization fund for us to put together an affordable rate that is fair…").

applicants with household income up to 250% of the federal poverty level, and replaces the current WRAP program, which also covers customers with household income up to 250% of the federal poverty level. PWD regulations on deferred payment arrangements, however, cover options for *all* residential customers regardless of their income levels. While the City admits that its current deferred payment arrangement practices do not comply with its regulations, (April 14, 2016 Tr. at 15, lines 1-9), it does not provide any assurance of prompt improvement and compliance with binding regulations. Instead, the City states an intention to attempt to change regulations to reflect its currently inadequate and longstanding illegal policies regarding deferred payment arrangements. The results of the rulemaking process for these proposed regulations are yet to be seen. It is a strange world, indeed, when the entity in non-compliance with the law (PWD in this case) seeks to excuse its non-compliance because it has unilaterally proposed to bring the law into compliance with its actions rather than proposing changes in its actions to bring those into compliance with the law.

Further, Mr. Colton testified extensively in the 2012 rate case regarding the City's non-compliance with deferred payment arrangement regulations. That pertinent excerpt of the 2012 testimony is in the current Hearing Record attached to PA St.-3 at Appendix C. Deferred payment arrangement issues became one of the four issues for mediation to which the city agreed as a condition of the Settlement Agreement. As discussed by Mr. Colton, the failure of the City to offer reasonable deferred payment arrangements likely contributed to the deterioration in collections, in the meantime. PA St.-3 at 76, lines 10-15. Indeed, not only has the Department failed to bring its deferred payment arrangement practices into compliance with the law, but, in addition, the Department has stopped collecting the data that demonstrates the extent to which its actions are in non-compliance. Data on deferred payment arrangements that was available at the

time of the last rate case is no longer available. PA St.-3 at 77, line 4, through 78, line 7. The Board should reject the City's claims that a document floating around for review that contains proposed regulations will address this issue of non-compliance.

Furthermore, PWD took active steps to frustrate and avoid continuing in the mediation, by asserting that tenant arrears issues had been resolved through legislative action concerning low-income payment agreements and seeking to have certain issues affecting tenants removed from the purview of the mediation. PA Hearing Exhibit VIII, at 6-7. The issue of applications for service, also within the fourth issue area for mediation along with treatment of tenant arrears, remains fundamentally unresolved as evidenced by multiple testifiers at public input hearings, which included stories of many families living without water for extended periods of time.[67]

B. The City Has Failed to Conduct a Collaborative Workshop That Is a Prerequisite to Any Multi-Year Rate Increase Request.

To the Public Advocate's astonishment, PWD falsely claims it fulfilled its obligations to conduct a workshop with the Public Advocate and its experts to attempt to come to agreement on certain basic rate design principles prior to filing for increased rates. It asserts that a two hour conference call held on December 10 satisfied the following condition of the rate case settlement:

Budget and Growth Factors Workshop

[67] March 1, 2016, Tr. at 23, line 9, through 28, line 1 (Cassandra Fitzgerald-Black, Drexel Law Community Lawyering Clinic), 29, line 3, through 34, line 12 (Sam Scavuzzo, Drexel Law Community Lawyering Clinic), 40, line 24, through 45, line 9 (Roxanne Crowley, Philadelphia VIP). Mr. Colton also testified about the Department's refusal to work with, and take into account, the many complex occupancy status situations that present themselves to the Department, PA St.-3 at 81, lines 7-10, citing to several examples in public input testimony of persons living without water service for extended periods of time.

> i. Before proposing the implementation of permanent new rates using a rate setting methodology that projects the Department's revenue requirement over a period longer than one single fiscal year, the Department shall convene a collaborative workshop with Community Legal Services and the respective Department and CLS experts, with the goal of agreeing upon an appropriate methodology to set budget growth factors for use in its rate filing.

PA Hearing Exhibit II at 5 of 15.

First, it should be noted that the objective of this workshop was to endeavor to eliminate controversy from future rate case proceedings concerning the budget and growth factors utilized to forecast PWD revenue requirements. Having failed to undertake this endeavor, the record demonstrates these factors continue to be the subject of extensive testimony and examination in this case. Second, to the extent PWD and/or the Board has concerns about the cost of PWD rate proceedings, PWD's refusal to honor this term of the Settlement Agreement is counter-productive and frustrates a reasoned approach to minimizing those costs.

Third, the facts simply do not support PWD's claims. PWD acknowledges and refers to PWD Exhibit 5 as the definitive source of its budget and growth factor assumptions in this case. PWD Exhibit 5 is referred to on the record of this proceeding as the "Assumptions Provided to the Public Advocate on December 8, 2015" for purposes of discussion on December 10. PWD admits that this document was developed through a back-and-forth process between PWD and its rate consultants, Black & Veatch. It specifically acknowledges that no other persons provided any input into the establishment of the assumptions utilized in PWD Exhibit 5. April 5, 2016, Tr. at 14-16. No changes were made to this document after December 8, and PWD admits that, contrary to seeking to obtain agreement on these assumptions, it simply informed the Public Advocate of them as a courtesy.[68] At no point did PWD endeavor to provide the Public

[68] See April 5, 2016 Tr. at 176, lines 7-9 (explaining that the two hour conference call PWD submits satisfied its obligation to convene a collaborative workshop was "to acquaint [the Public Advocate] with the rate filing assumptions so there would be no surprises later.")

Advocate or its experts with any reasonable opportunity, prior to this rate proceeding, to offer any input or collaborate with PWD on budget and growth factors to be used in PWD's rate filing.

The obligation to convene this workshop was unilaterally imposed upon PWD, reflecting the fact that PWD, and PWD alone, is in control of the timing of its rate filing. Although the Public Advocate cannot be expected to anticipate the point at which PWD would finally fail to perform the obligations imposed upon it, the Public Advocate did specifically seek to alert PWD to its obligation and request information about when PWD would convene this collaborative in advance of the Formal Notice. On January 8, 2016, a full month before PWD's Formal Notice was filed commencing this rate proceeding, the Public Advocate requested confirmation that PWD had not yet convened this collaborative, citing to the clear language of the agreement, and requesting PWD inform the Public Advocate of the date on which it proposed to convene this workshop in advance of the Formal Notice. PWD provided the following response, submitting that it had fulfilled its obligation, on January 15, 2016:

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

PA-RDC-1. Reference paragraph 13.j of the Joint petition for Settlement of Phase 1 of the FY 2013-2016 Rate Proceeding ("[b]efore proposing the implementation of permanent new rates using a rate setting methodology that projects the Department's revenue requirement over a period longer than one single fiscal year, the Department shall convene a collaborative workshop with Community Legal Services and respective Department and CLS experts, with the goal of agreeing upon an appropriate methodology to set budget and growth factors for use in the rate filing"), adopted and confirmed by PWD Commissioner on December 7, 2012:

a. Please confirm the Department did not convene the aforementioned workshop in advance of submitting the Advance Notice.
b. Please provide any anticipated date on or by which the Department intends to convene such workshop in advance of the Formal Notice.

Response: (a-b) The Department scheduled the aforementioned workshop via conference call on December 8, 2015. The Public Advocate and their designated experts (Michael Bleiweis and Exeter Associates) participated in the conference call where all rate filing assumptions set forth in PWD Exhibit 5 (Assumptions Provided to Public Advocate) were addressed. The rate filing assumptions were circulated to the parties prior to the conference call.

Response Provided By: Andre Dasent

See PWD Response to PA-RDC-1.[69]

The PWD has not fulfilled the workshop prerequisite prior to requesting "permanent new rates using a rate setting methodology that projects the Department's revenue requirement over a period longer than one single fiscal year." PA Hearing Exhibit II at 5. Given that PWD has not fulfilled the Settlement Agreement, at most PWD could request approval fora single year rate increase; and as Mr. Morgan has testified, no rate increase is warranted for FY17.[70]

[69] http://www.phila.gov/water/rateboard/PDF/PA-RDC-Set1Response2016.01.15.pdf.
[70] See also Councilwoman Sanchez' statement at April 7, 2016 (Public Input) Tr. at 36, lines 9-16 ("I think this is one of those times when we put on the pause button. We get some stuff done right and then we come back to the table and say, what kind of rate hike can we do that makes sense, that ensures that our collection rate is better and that we are being very deliberate in protecting low income folks in the City of Philadelphia.")

C. The Board Should Deny the Department's Request and Instead Condition Any Future Rate Request Upon Meeting Unfulfilled Conditions of the Prior Rate Determination.

In addition to the reasons stated by Mr. Morgan, the Board should not approve any rate increase and should not entertain any future rate increase request until PWD can demonstrate fulfillment of its commitments made in the 2012 rate case. The Public Advocate urges the Board to order the PWD and WRB to fulfill its 2012 commitments to improve customer service and customer assistance programs, and to conduct the requisite collaborative workshop prior to wasting the Board's time with another multi-year rate increase request.

Specifically, the Board should order PWD to:

1. Complete the mediation process stipulated to in the Settlement Agreement. That Settlement Agreement remains in full force and effect today as a condition of the increased rates in the previous rate case.[71]

2. Achieve full implementation of informal hearing agreements, the procedure intended to catch Department mistakes and provide adequate due process to customers and applicants with disputes.[72]

3. Complete the planning process for IWRAP including Mr. Colton's recommended percentage of income payment plan design and regulations that cover earned forgiveness and other program requirements.

4. Adopt Mr. Colton's recommendations for fulfilling commitments regarding deferred payment agreements, (Pa. St. 3 at 73-81), as follows:

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[71] Also recommended by Mr. Colton at PA St.-3 at 81-83.

[72] Instead of addressing concerns raised during public input regarding lack of notice of appeal rights, e.g., April 7, 2016 (Public Input) Tr. at 44, line 17, through 46, line 11, the City attempts to assert during technical hearings that the City was factually correct in its underlying denial or that the City has unilaterally "resolved" the disputed issue. April 14, 2016 Tr. at 147, line 11, through 149, line 8. The customer whose issue that the City claims was resolved submitted a public input statement reiterating her request for an informal hearing to get clarity about the WRB's calculation and to demand retroactive application of new payment terms to the date of the initial WRAP decision when she should have been granted those terms. Lois Stewart, April 13, 2016. The City appears to continue to believe that it is infallible on certain issues that do not warrant a notice of dispute rights. The City should not seek to excuse itself of systemic problems of lack of notice by attempting to resolve individual complaints on an ad hoc basis through this rate proceeding.

i. Resume collecting relevant data that would contribute to a review of payment plan reasonableness and to meet with the Public Advocate on a quarterly basis to address regulatory compliance.[73]

ii. With regard to the regulation that any initial payment on a payment plan is to be limited to "25% of the outstanding delinquency, including restoration charges, if any, or 15% of the customer's household income, whichever is less,"[74]

    a. Exempt from the disconnection of service for nonpayment, pending negotiation of a new deferred payment agreement that is in compliance with this regulation, every account on which the Department cannot affirmatively demonstrate compliance with this regulation.

    b. Exempt from the disconnection of service for nonpayment, pending negotiation of a new deferred payment agreement that is in compliance with this regulation, every account on which the Department cannot affirmatively demonstrate compliance with this regulation including when the Department requires/d a 50% downpayment plus payment of the restoration fee in "water off" situations.

iii. Immediately stay all service disconnections for nonpayment pending the Department's affirmative demonstration of: (1) a revised policy regarding initial payments and the treatment of "water off" accounts in compliance with applicable regulations; (2) the provision of staff training to all staff engaged in the process of negotiating deferred payment plans on the revised policy; and (3) the adoption of appropriate IT modifications incorporating the revised policy.

iv. Immediately stay all refusals to restore "water off" service pending the Department's affirmative demonstration of: (1) a revised policy regarding initial payments and the treatment of "water off" accounts in compliance with applicable regulations; (2) the provision of staff training to all staff engaged in the process of negotiating deferred payment plans on the revised policy; and (3) the adoption of appropriate IT modifications incorporating the revised policy.

v. Exempt from the termination of service for nonpayment, pending a renegotiation of that active payment plan, under which renegotiation

[73] The deferred payment agreement process now engaged in by the Department, under which an astonishing 85% of customers entering into payment plan with PWD defaulted before successfully completing their DPAs is fundamentally broken. PA St.-3 at 73-81.
[74] PWD Regulations, section 100.9(a), payment agreements for customers with income above 250% of the federal poverty level, http://www.phila.gov/water/PDF/PWDregCH1.pdf.

each customer is affirmatively offered a payment plan of 18 months, all customers currently on a deferred payment plan, including when the Department had established a "default" payment plan of less that the 18 months.[75]

vi. Immediately stay all service disconnections for nonpayment pending the Department's affirmative demonstration of: (1) a revised policy regarding the length of payment plans offered to delinquent customers in compliance with applicable regulations; (2) the provision of staff training to all staff engaged in the process of negotiating deferred payment plans on the revised policy; and (3) the adoption of appropriate IT modifications incorporating the revised policy.

vii. Beginning with the commencement of the IWRAP program, to refer any customer contacting the Department to the staff, or to the entities responsible for engaging in outreach, intake and enrollment in IWRAP, for a determination of income for, and enrollment in, IWRAP.

5. Adopt the Mediator's recommendations for treatment of tenant arrears and applications for service as provided in the Mediators' Report included in the Hearing Record at PA Hearing Exhibit VIII.

6. Adopt a workable process for applicants for service for occupants who have been unfairly denied water accounts as described by CLC and Philly VIP during public input hearings.[76]

7. Convene a meaningful process to review and attempt to obtain agreement on spend factors and escalation factors prior to filing any future rate increase request.

[75] Id.
[76] March 1, 2016, Tr. at 23, line 9, through 28, line 1 (Cassandra Fitzgerald-Black, Drexel Law Community Lawyering Clinic), 29, line 3, through 34, line 12 (Sam Scavuzzo, Drexel Law Community Lawyering Clinic), 40, line 24, through 45, line 9 (Roxanne Crowley, Philadelphia VIP).

XI. ANY RATE INCREASE APPROVAL SHOULD BE CONDITIONED UPON SUBSTANTIATED IMPROVEMENTS IN CUSTOMER SERVICE AND COLLECTION PRACTICES.

The Board cannot ignore the overwhelming evidence in the Hearing Record of the critical need to eliminate waste and inefficiencies in the Department's customer service and collections operations. Longstanding legal precedent supports the Board's power to impose conditions of customer service improvements in its rate determination. Federal and state courts have consistently upheld utility commissions' decisions in favor of "[p]reconditions to fare increases designed to assure quality of service." D.C. Transit Sys., Inc. v. Washington Metro. Area Transit Comm'n, 466 F.2d 394, 411 (D.C. Cir. 1972), *cert denied* (holding that the Commission did not "err[ ] in conditioning further consideration of a fare increase for a financially ailing carrier upon satisfaction of requirements designed to improve its service"). In Pennsylvania, the Commonwealth Court applied the reasoning of D.C. Transit to uphold a Pennsylvania Utility Commission's decision denying a regional water utility a rate increase due to its poor customer service. Nat'l Utilities, Inc. v. Pa. PUC, 709 A.2d 972, 979 (Pa. Cmwlth. 1998). Likewise, the Board should deny the PWD's rate request or, in the alternative, condition any rate increase upon substantiated improvements in customer service and collections operations. What those "substantial improvements" are is not theoretical or soft. There are specific, objective, measurable improvements that should be adopted as outlined below.

A. Improving Call Centers and Intake Operations.

The Hearing Record is replete with evidence – including third-party evaluations, public input, expert testimony and technical hearings – of the Department's significant shortcomings in

the areas of customer service and collections. The most damning exhibit is likely the Schumaker and Company report that was discussed during the April 12th Technical Hearings. Schumaker was hired by PWD "to provide consulting services related to evaluation of various customer service and field activities for opportunities to optimize operations, including evaluation of its resource utilization so as to ensure that it is cost effective, to improve customer service…." PA Hearing Exhibit VI at 3, PA-RDC-70 at 3; see also April 12, 2016 Tr. at 76. The study reached 24 findings that can, at best, be described as opportunities to optimize and, at worst, revealed recklessly incompetent[77] call center and intake operations.[78]

Schumaker observed that "[h]aving multiple answering points staffed by agents with differing skills is a prescription for awful customer service. What's more, it is a main driver of inefficiency." PA-RDC-70 at 36. PWD ratepayers should not have to pay even higher rates for the same "awful customer service." The Schumaker report provides for 24 recommendations, some of which are very basic management functions, such as "Implement a learning management system," "Develop a skills based competency progression," and "Align direct supervision to shifts." (PA-RDC-70 at 55, 56, 58). When the City was questioned during hearings as to plans for implementation of these sensible Schumaker recommendations, it could

[77] The report provides an example of a woman caller who "was reduced to tears" after being transferred to "multiple call centers" and speaking with "agents with differing and limited skills." PA-RDC-70 at 35. Schumaker cautioned that "It would be a mistake to dismiss this call as exceptional," as the evaluator "listened to many examples of callers who spent a great deal of time on the phone trying to explain their issue only to be transferred somewhere else." Id. at 36.

[78] A short list of the most egregious findings of the Schumaker report are as follows:

• Finding II-6: Multiple call centers confuse and anger customers, reduce staffing efficiency, and increase costs. (PA-RDC-70 at 35-36)

• Finding II-10: Training and development for call center agents at the PWD and WRB call centers are inconsistently and infrequently conducted and are insufficient to adequately train agents. (PA-RDC-70 at 38)

• Finding II-11: Agent monitoring and associated coaching and development are infrequent and inconsistent among call centers and supervisors. (PA-RDC-70 at 40)

• Finding II-19: The satellite intake staff has limited access to supervisors. (PA-RDC-70 at 47)

• Finding II-24: Intake staff indicate that call center staff do not provide appropriate documentation information to customers when customers must visit an intake office. (PA-RDC-70 at 49)

not speak to any "timeline" or "specifics,"[79] nor to whether implementation will occur in FY17 or FY18.[80] Even the City's response to the transcript request for an implementation timeline simply states: "Schumaker is under contract to assist with the implementation. The completion date is unknown at this time." Response to TR-10. These are sorely inadequate responses to the many findings of glaringly substandard and inefficient customer service at the call centers and intake offices. Ratepayers deserve better assurance that "awful customer service" will finally be addressed before any higher rates go into effect in FY17 and FY18.

B. Understanding Declining Collections.

Mr. Colton discusses in his testimony the City's problem of decreasing rates of collections on billings, as shown in its collectability studies.[81] Mr. Colton recommends that the Department engage in fundamental proactive planning processes, instead of continuing in its current manner, "haphazard, lacking both strategic or operational direction, and based almost exclusively on supposition."[82] Part of this planning would be a customer segmentation study for purposes of determining the causes of, and appropriate responses to, inability-to-pay. Otherwise, the Department may fall into the trap, if it has not already, of implying to frontline collections personnel that the response to rising arrears would be to "get tough" by disconnecting more accounts. However, studies have shown that such behavior may produce the illusion of action

[79] Cross-examination of Michelle Bethel, Deputy Revenue Commissioner in charge of Revenue Bureau, and Mark Harvey, Senior Revenue Collections Officer – the two WRB staff presented as responsible for customer service and oversight of the call centers. April 12, 2016 Tr. at 80, line 21 through 81, line 24.
[80] April 12, 2016 Tr. at 81, lines 13-17.
[81] PA. St. 3 at 63-64, citing City Responses to PA-RDC-6, and PA-RDC-81(c)-(d).
[82] PA. St. 3 at 64-69.

(more disconnects) but with no corresponding improvement in collection of money or reduced arrears.[83]

C. Customers' Needs, Attitudes and Preferences.

The Public Advocate is puzzled and concerned that the Department has repeatedly been dismissive of customer service issues, refusing even to recognize them as a relevant factor in this rate case. The industry standard for ratemaking recommends investigating customer concerns. The M-1 provides as follows:

> As a final element of the data requirements and information that may be of assistance to the utility in establishing a rate form that meets the objectives and goals of the utility, it is important to find out what your customers want, or perceive to be important…[T]he utility should investigate its customers' needs, attitudes and preferences.
> M-1 at 308.

Indeed, the Board's governing ordinance and regulations require at least four public input hearings, for collection of customer input.[84] The PWD argument that customer service is not relevant to a rate proceeding is at fundamental odds with this ordinance and these governing regulations. The PWD's legal argument would render the ordinance nonsensical by requiring public input hearings into customer service, but then denying their relevance to the rate determination. The Board should not adopt an approach that undermines the City's ordinance. Surely, the Board should provide more than just lip service to the customer issues raised during these hearings.

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[83] Id. at 65-68.

[84] Philadelphia Code §13-101(3)(c) ("The Board shall establish open and transparent processes and procedures for public input and comment on proposed water rates and charges."); Regulations if the Philadelphia Water, Sewer and Storm Water rate Board, Section II.6(c) ("A minimum of four (4) public hearings shall be held. Additional public hearings may be scheduled by the Hearing Officer at the Board's discretion.")

Finally, during public input hearings, customers urged the Department to provide a paperless billing option and to make online payment easier and at no cost. March 1, 2016, Tr. at 58, line 1, though 60, line 10; April 7, 2016 (Public Input) Tr. at 42, lines 14-22 (Councilwoman Blackwell). With the great demands on the call center and intake offices, as discussed earlier, the Department should explore the expansion of electronic options for customers to interact with the Department.

D. Any Rate Determination Approving Increased Rates Should Include Conditions to Improve Customer Service and Address Customer Concerns.

In addition to the recommendations to fulfill commitments for improvement in customer service discussed in section IV above, the Public Advocate urges the Board to order PWD to take steps to improve customer service and address customer concerns raised in this proceeding. The Commonwealth Court has held that "a utility's fulfillment of its service commitment is a *sine quo non* to constitutional protection under confiscation principles."[85] Nat'l Utilities, 709 A.2d at 979. The Board should order the City to do the following:

- Proceed in earnest with implementing the recommendations in the Schumaker Report, providing quarterly reports to the Board and Public Advocate on the progress of this effort, including enforceable deadlines and meaningful sanctions should those deadlines not be met.
- Begin, no later than six months after a final decision in this proceeding, reporting basic consumer credit and collection activities and outcomes.[86]
- Hold regular quarterly public input hearings through which the Board can directly hear comments from the public, including the Public Advocate, on customer service issues.

[85] Sine qua non. : something that is absolutely needed, www.merriam-webster.com.
[86] One reasonable model for such collection is the list of data elements included in a resolution of the National Association of State Utility Consumer Advocates (NASUCA). NASUCA's proposed list of data reporting elements is attached as Schedule RDC-13. PA St.-3 at 72-73.

The Board can determine, after receiving this regular input, what appropriate remedies should be pursued.[87]

- Begin, no later than six months subsequent to a final decision in this rate case, to pursue "point-of-contact" (sometimes referred to as "moment of truth") customer satisfaction surveys for call center contacts and field contacts. These point-of-contact customer satisfaction surveys should be filed with the Board, provided to the Public Advocate, and made available for public review.[88]
- Begin development of an implementation plan to provide a paperless billing option and no cost online payment options, reporting to the Board and Public Advocate on a quarterly basis on the progress of this effort.

XII. CONCLUSION.

For all of the foregoing reasons, the Public Advocate asserts that PWD has not satisfied its burden to obtain approval of an approximately $106 million rate increase over FY 2017 and FY 2018. The Board should direct PWD to make those revenue requirement, rate design, and customer service adjustments described in this Main Brief.

Respectfully Submitted,

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[87] PA St.-3 at 84.
[88] A point-of-contact survey is a customer satisfaction survey that is undertaken at each point where a customer engages in a customer contact, whether the contact involves an inquiry, a dispute, a response to a shutoff notice, an attempt to negotiate a payment plan, an attempt to enroll in an assistance program, and the like. PA St.-3 at 84-85.