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August 26, 2010

VIA FIRST CLASS MAIL

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
P.O. Box 3265
Harrisburg, PA 17105-3265

Re: Pennsylvania Public Utility Commission v. Pennsylvania-American Water Company – Northeast Wastewater Operations
Docket No. R-2010-2166214

Dear Secretary Chiavetta:

Enclosed for filing is a Certificate of Service (original and three copies) evidencing service of the Rebuttal Testimony and Exhibits of Pennsylvania-American Water Company, Northeast Wastewater Operations, upon the parties of record.

Very truly yours,

Anthony C. DeCusatis cv

Anthony C. DeCusatis

ACD/tp
Enclosures

cc: Per Certificate of Service
Seth A. Mendelsohn
Rod Nevirauskas

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
v.	:	
	:	
PENNSYLVANIA-AMERICAN WATER COMPANY – Northeast Wastewater Operations	:	**DOCKET NO. R-2010-2166214**

CERTIFICATE OF SERVICE

I hereby certify and affirm that I have this day served copies of the Rebuttal Testimony and Exhibits on behalf of Pennsylvania-American Water Company upon the following persons in the matter specified in accordance with the requirements of 52 Pa. Code § 1.54:

VIA ELECTRONIC MAIL AND FEDERAL EXPRESS

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Date: August 26, 2010

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PAWC STATEMENT NO. 2-R

PENNSYLVANIA-AMERICAN WATER
COMPANY
(NORTHEAST WASTEWATER OPERATIONS)

DOCKET NO. R-2010-2166214

REBUTTAL TESTIMONY
OF
DAVID R. KAUFMAN

CONCERNING CAPACITY NEEDS OF THE
BLUE MOUNTAIN AND LEHMAN PIKE
WASTEWATER SYSTEMS

AUGUST 26, 2010

REBUTTAL TESTIMONY
OF
DAVID R. KAUFMAN

I. INTRODUCTION AND PURPOSE OF TESTIMONY

1. Q. Please state your name and business address.

A. My name is David R. Kaufman. My business address is 800 West Hershey Park Drive, Hershey, PA 17033.

2. Q. Have you previously submitted testimony in this proceeding?

A. Yes. I submitted PAW Statement No. 2, which includes a statement of my experience and qualifications.

3. Q. What is the purpose of your testimony?

A. The purpose of my rebuttal testimony is to respond to the direct testimony of OCA witness Scott J. Rubin concerning allegations of excess capacity associated with wastewater treatment plant capital improvement projects in the Blue Mountain and Lehman Pike Wastewater systems (Northeast Wastewater Operations).

II. OVERVIEW

4. Q. Please provide an overview of the principal facts that will frame the issues and provide the necessary context.

A. The key points are summarized below and explained further later in this statement:

Blue Mountain Wastewater Treatment Plant

- The Company had to substantially upgrade the Blue Mountain Wastewater Treatment Plant. The plant was at the end of its life when the Company acquired the Blue Mountain system in 2005. As I explained in my direct testimony, the plant was in poor condition, was experiencing numerous failures of key process units and could not reliably meet National Pollutant Discharge Elimination System (NPDES) effluent standards. Consequently, the plant had to be substantially rebuilt, even without regard to the fact that it was in a projected hydraulic overload condition, as I explain below.

- The treatment plant was in a "projected hydraulic overload" condition at the time PAW acquired the Blue Mountain Wastewater system. This regulatory designation indicates that the current wastewater treatment plant capacity will be exceeded within a five-year time frame. Under these conditions, the facility's permittee (PAW) must take appropriate corrective action to prevent an actual hydraulic overload from occurring at the plant.

- The Company is currently upgrading the outdated and failing treatment process units and expanding the treatment capacity from 135,000 gallons per day (gpd) to 183,000 gpd to meet the projected needs of developments within the Blue Mountain community, consistent with regulatory guidelines. Pa. DEP would not have permitted the necessary upgrades to the wastewater treatment plant without increasing the plant capacity to meet projected growth needs of this community.

- The Company is responsible for providing capacity at its Blue Mountain Wastewater Treatment Plant to meet the projected sewage needs associated with signed Planning Modules for new development activity in the Blue Mountain service territory. This is not excess capacity as Mr. Rubin contends.

Lehman Pike Wastewater Treatment Plant

- The upgrade of the Lehman Pike Wastewater Treatment Plant focused on rehabilitation and re-use of the plant's existing facilities. No increase in capacity resulted from these capital improvements.

- At the time PAW acquired the Lehman Pike system, the plant, at its current capacity, has been recognized in rate base as fully used and useful.

III. RESPONSE TO MR. RUBIN

5. Q. Briefly summarize the condition of the existing Blue Mountain Wastewater Treatment Plant since the acquisition by PAW.

A. When the Blue Mountain Lake Wastewater system was purchased by PAW on October 31, 2005, the existing Rotating Biological Contactor (RBC) treatment equipment was in poor condition and was at the end of its expected useful life. The RBC process units have failed on more than 10 separate occasions since acquisition. In addition to the failing RBC units, the existing primary and secondary clarifiers operate poorly during periods of higher than normal flows, which compromises the effluent qualify of the treatment plant. Finally, the plant has been in a projected hydraulic overload condition since the time of acquisition.

6. Q. Why did the Company pursue an upgrade and expansion to the Blue Mountain facility?

A. The decision to replace the existing Rotating Biological Contactor (RBC) treatment system with a new Sequencing Batch Reactor (SBR) system was influenced by several factors. To continue to provide reliable wastewater service, the RBC system would have needed a very costly complete replacement. The existing RBC treatment process could not reliably meet the effluent limitations of the existing National Pollutant Discharge Elimination System (NPDES) permit and was not capable of meeting pending nutrient effluent limitations required by the Delaware River Basin Commission

(DRBC) for Nitrate-Nitrite Nitrogen (9.5 mg/L) and total Phosphorus (2.0 mg/L) without making significant modifications and additions to the process. Finally, based on projected sewage flows over the next five years from the developments within the Blue Mountain community, the existing wastewater treatment capacity of 135,000 gallons per day was projected to be exceeded. The failures of the existing RBC system in conjunction with the hydraulic limitations of the primary and secondary clarifiers, the inability of the existing system to meet NPDES permit effluent limitations, and the need for additional capacity prompted PAW to consider alternatives to the outdated RBC process. It was ultimately determined that the best solution would be to replace the existing RBC process with a new Sequencing Batch Reactor (SBR) process. The SBR system would not only eliminate the failing RBC's and the problematic primary and secondary clarifiers, but would also be capable of meeting the pending nutrient effluent requirements.

7. Q. **Please explain the consequences of the "projected hydraulic overload condition" for the Blue Mountain system.**

A. Since the time of acquisition, the Blue Mountain Wastewater Treatment Plant has been in a projected hydraulic overload condition based upon existing sewage flows and signed planning modules, pursuant to Act 537, for residential developments within the Blue Mountain community. The adequacy of sewage facilities is determined in part by current and projected sewage flows. Planning Modules that were signed by the former owners of the Blue Mountain system, and approved by the municipality and Pa. DEP,

obligated the Company to provide for the projected capacity needs of new development activity. A projected hydraulic overload condition exists when the sewage facilities are projected to become hydraulically overloaded within the next five years, based upon known development projects and applicable sewage needs projections. In the case of the Blue Mountain Wastewater Treatment Plant, the projected average daily flow rate for year 2014 is 137,000 gallons per day; (Kaufman response to MSG 17-9) which will exceed the current plant capacity of 135,000 gpd. Therefore, because the plant will not have adequate capacity four years from now, the plant is in a projected hydraulic overload condition. The corrective action that was taken consisted of constructing additional capacity to meet the projected growth needs. Infiltration and Inflow (I&I) levels are extremely low in the Blue Mountain system and had no impact on plant sizing requirements.

8. Q. What is PAW's responsibility, as a treatment provider, to make conveyance and treatment capacity available?

A. In conformity with the requirements of Title 25, Chapter 94 (relating to Municipal Wasteload Management) of the Pa. DEP's regulations, signing Planning Modules for the equivalent dwelling units ("EDUs") in new developments certifies that the additional flows can be collected, conveyed and treated at the Company's wastewater treatment plant in compliance with regulatory permits and that capacity is available so that the projected new development will not create a hydraulic or organic overload within a five-year horizon. In essence, when Planning Modules are signed for new development,

capacity is allocated to serve the projected new customers. PAW is obligated to handle the future sewage flows at the Company's Blue Mountain Wastewater Treatment Plant based on signed Planning Modules for development within the Blue Mountain service territory.

9. Q. **Mr. Rubin states that the existing plant capacity would not be exceeded in five years (Rubin page 11, line 7 and 8). Is he correct?**

A. No. Mr. Rubin references my response to Interrogatory OCA 30-10, which states, as described above, that the existing wastewater treatment plant capacity would be exceeded within the next five years.

10. Q. **What considerations were given when sizing the plant expansion?**

A. Although the downturn on the economy has slowed the increase in sewage flow, the plant remains in a projected hydraulic overload, with the existing capacity of 135,000 gpd projected to be exceeded by year 2014. Pursuant to Pa. DEP guidelines, the design flow for a proposed plant expansion should be based on historical flows plus the additional projected flow due to future flow contributions during the design period of the plant. Pa. DEP's Domestic Wastewater Facilities Manual indicates that plant upgrades should have an approximate 20-year planning horizon. Act 537 planning intervals are typically at least ten years. The plant's NPDES permit has been based on a maximum discharge rate into the receiving stream of 275,000 gpd. Based on guidance from Pa. DEP, the capacity upgrade had to meet the build-out needs of the developments within the Blue Mountain service territory and was sized

accordingly at 183,000 gpd. Given the modular nature of the SBR process units, this capacity would also equate to 2/3 of the maximum permitted NPDES discharge rate. Pa. DEP also allowed the Company to use a reduced unit flow rate of 200 gpd for future EDUs, which is comparable to existing actual unit flow rates. This was permitted by Pa. DEP only because they knew that, with the design chosen by the Company, the third modular treatment process unit could be readily added if flows increased in the future.

11. Q. Is it your opinion that all of the Blue Mountain facilities will be used and useful by the end of 2010?

A. Yes. All components of the 183,000 gpd expanded Blue Mountain plant will be in use and be providing wastewater service to customers in the Blue Mountain wastewater service territory by December 31, 2010.

12. Q. Why did the Company pursue an upgrade and expansion to the Lehman Pike Wastewater Treatment Plant facility?

A. Steel tankage and piping systems associated with treatment process units were in poor condition and needed to be rehabilitated. Updated process control and monitoring equipment was installed together with more efficient pumps and blowers. Additionally, an old chlorine gas disinfection system was replaced with a new liquid chlorine disinfection system.

13. Q. Was the capacity of the Lehman Pike Wastewater Treatment Plant changed as a result of these capital improvements?

A. No.

14. Q. At the time of acquisition by PAW, were all of the Lehman Pike facilities considered used and useful?

A. Yes, it is my understanding that they were and had been reflected in the rate base of the prior owner.

15. Q. Do you agree with Mr. Rubin that the Lehman Pike facilities are not fully "used and useful" in providing utility service to present customers (Rubin page 5, Line 1).

A. No. All components of the Lehman Pike Wastewater Treatment Plant are both used and useful in providing wastewater service to customers in the Lehman Pike service territory.

CONCLUSION

16. Q. Does this conclude your testimony?

A. Yes.

PAWC STATEMENT NO. 3-R

REBUTTAL TESTIMONY
OF
ROD P. NEVIRAUSKAS

WITH REGARD TO

PENNSYLVANIA AMERICAN WATER

NORTHEAST WASTEWATER OPERATIONS

REVENUE DEFICIENCY SUMMARY, UTILITY PLANT ACQUISITION ADJUSTMENT, AVAILABILITY CHARGES, O&M EXPENSES, INCOME TAXES, RATE OF RETURN, CUSTOMER ASSISTANCE PROGRAM, AND PHASE-IN OF RATES.

DOCKET NO. R-2010-2166214

DATE: August 26, 2010

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REBUTTAL TESTIMONY
OF
ROD P. NEVIRAUSKAS

I. INTRODUCTION

1. Q. Please state your name, occupation and business address.

A. My name is Rod P. Nevirauskas and my business address is 800 West Hersheypark Drive, Hershey, Pennsylvania 17033. I am the Director of Rates and Regulations for Pennsylvania American Water ("PAW").

2. Q. Have you submitted any other testimony in this proceeding?

A. Yes, I submitted PAWC Statement No. 3, which includes a statement of my work experience and qualifications.

3. Q. What is the purpose of your testimony?

A. The purpose of my rebuttal testimony is as follows:

1) To provide the Company's revised statement of revenue requirement in this proceeding, as set forth in Exhibit 3-A-Revised.

2) To detail the Company's adjustments to its claimed revenue requirement and to acknowledge the Company's acceptance of several adjustments proposed by witnesses for the Office of Trial Staff ("OTS") and Office of Consumer Advocate ("OCA")

3) To detail and address the proposed adjustments by the opposing parties that the Company is not accepting.

II. THE COMPANY'S REVISED STATEMENT OF REVENUE REQUIREMENT

4. Q. Has the Company made any revisions to its revenue requirement claim in this proceeding?

A. Yes, it has. The Company has accepted various adjustments proposed by the opposing parties in this case which serve to reduce the revenue requirement originally requested by the Company. In addition, PAW has decided to propose a rate phase-in plan similar to the rate phase-in plan recommended by the OTS.

5. Q. Has the Company prepared a revised statement of its revenue requirement?

A. Yes, it has. PAWC Exhibit 3-A-Revised presents the Company's updated revenue requirement claim in this proceeding. It incorporates the changes explained in my rebuttal testimony, as well as revisions to the Company's original claims as previously supplied in interrogatory responses and the acceptance of certain adjustments proposed by other parties. Each page of Exhibit 3-A Revised that has been revised from the original Exhibit 3-A carries the designation "R" following the page number. In addition, a summary of the revisions is provided as the first page of Exhibit 3-A-Revised, which sets forth: (1) a brief description of the revision; (2) the page of Exhibit 3-A to which it relates; (3) a reference to where the revision has been identified or discussed in an interrogatory response or testimony; (4) the Company's original claimed amount; (5) the Company's revised claim; and (6) the

net change between the original and revised claim. The result of these revisions is a proposed revenue increase of $1,886,639, in lieu of the $2,099,490 increase originally requested by the Company.

III. COMPANY ADJUSTMENTS

6. Q. Please identify and explain the Company adjustments that have been reflected in Exhibit 3-A Revised.

A. The Company adjustments consist of the following:

Cash Working Capital

Expense Lag – The Company has eliminated rate case amortization from its cash working capital calculations.

Amortization of Net Salvage – The Company has reflected in its revised revenue requirement a 10 year amortization of the removal costs associated with the treatment facilities in Lehman Pike (Saw Creek) and Blue Mountain wastewater operations. The Company recognizes that the upgrades of the Saw Creek and Blue Mountain treatment plants are somewhat extraordinary events and it is reasonable to extend the amortization period for net salvage from five years to 10 years. The adjustment to reflect the 10 year amortization is shown on page 32 R of Exhibit 3-A-Revised.

IV. OTS AND OCA ADJUSTMENTS ACCEPTED

7. Q. Please identify the adjustments proposed by OTS and OCA that the Company is not contesting.

A. The adjustments the Company is not contesting consist of the following:

Operating Expenses		
Inflation Factor – Updated GDP %	1.20%	OCA Ex. LA-2, Sch. C-5
Negative Acquisition Adj. Amortization	$ (8,587)	OTS Ex. 3, Sch. 2
Rate Case Expense	$ (25,495)	OTS St. 2, p. 16
Capitalization Ratio		
Capitalization Ratio	$ (13,496)	OCA Ex. LA-4, Sch. C-12
Rate Base		
Deferred Taxes – Repairs and Maint.	$ (108,235)	OCA Ex. LA-2, Sch. B-1
Income Taxes		
Consolidated Tax Savings	$ (30,000)	OCA Ex. LA-2, Sch. C-2
Negative State and Federal Income Tax at Present Rates December 31, 2010	Company will reflect	OCA Ex. LA-2, Sch. C-1
State Tax NOL – Carry Forward	20% reduction	OCA Ex LA-2, Sch. A-1

Inflation Factor – Mr. Smith proposes that the most recent average quarterly forecasted change in GDP be used to calculate the inflation factor to be applied to HTY expenses upon which the inflation adjustment is based. The Company agrees with Mr. Smith and has applied the 1.20% forecasted GDP in its Exhibit 3-A-Revised.

Negative Acquisition Adjustment – OTS witness Kubas has recommended reflecting the net negative amortization of the acquisition adjustments, for the Lehman Pike and Blue Mountain wastewater acquisitions, as an increase to annual income. The Company accepts this adjustment.

In addition, Mr. Kubas has proposed that the Company remove the original $85,865 net negative acquisition adjustment (i.e. excess of depreciated original cost over purchase price) from plant in service, and subtract a corresponding $289,351 from rate base as the amount amortized as of December 31, 2010. The Company disagrees with this adjustment. Counsel advises that Section 1311(a) of the Public Utility Code requires that property purchased at less than depreciated cost be included in rate base at depreciated original cost and that the net effect of Mr. Kubas's proposal would be to flow back to customers the same amount twice.

Rate Case Expense – Ms. Wilson recommends a thirty-six (36) month, or three-year, normalization period for the recovery of rate case expense for Northeast in lieu of the two-year period utilized by PAW. The Company accepts this adjustment.

Deferred Taxes – In response to Interrogatory OCA-28-8, the Company quantified the effect on income taxes of the accounting change regarding "repairs and maintenance". Based on that response, Mr. Smith has proposed to reduce rate base by $108,235 to reflect the increase in deferred taxes associated with this accounting change. The Company agrees with the proposed adjustment, which is reflected on page 18R of Exhibit No. 3-A-Revised.

Capitalization Ratio – In response to Interrogatory OTS-RE-4, both OCA witness Smith and OTS witness Wilson proposed an adjustment to the Company's claimed capitalization ratio. Mr. Smith proposed a capitalization ratio of 8.96% based upon a three year average and Ms. Smith proposed a capitalization rate of 8.9% based upon a 5 year average. PAW agrees with Mr. Smith that a three year average of the capitalization rate is appropriate and accepts his adjustment.

Consolidated Tax Savings – In response to Interrogatory OCA-28-74, the Company quantified the effect of so-called Consolidated Tax Savings (CTS) employing the most recent 5-year data. Based on that response, Mr. Smith has proposed a $30,000 allocation of the total Company CTS in this wastewater filing. Even though it believes that customers received the full benefit of the total Company CTS in PAW's last water rate proceeding, the Company is accepting Mr. Smith's proposed adjustment for purposes of this case.

State Net Operating Loss (SNOL) – Mr. Smith has proposed to reduce State taxable income by 20% as a result of the Company's 2008 State net operating loss. The Company has reflected this adjustment in the calculation of State income taxes in its Exhibit 3-A-Revised.

V. ADJUSTMENTS CONTESTED

8. Q. Please identify the adjustments the Company is contesting.

A. The adjustments the Company is contesting that I will address consist of the following:

Revenues		
Availability Charges	OCA	Discussed Below
Rate Base		
Negative Acquisition Adjustment	OTS	OTS Ex. 3, Sch. 2
Operating Expenses		
Salary and Wages	OTS & OCA	Discussed below
Purchased Power Expense	OTS & OCA	Discussed below
Eliminated Items	OCA	Discussed below
Rate Case Expense	OCA	Discussed below

Capital Structure - Inclusion of short term debt in overall capital structure.

Customer Assistance Program		
Customer Assistance Program	OCA	Discussed below
Property Tax Adjustment		
Property Tax Adjustment	OCA	Discussed below

In addition to the foregoing items, Mr. Kaufman responds to a proposed excess capacity adjustment (PAWC St. No. 2-R), Mr. Spanos addresses depreciation expense (PAWC St. No. 8-R), Mr. Herbert addresses rate design (PAWC St. No. 7-R) and Mr. Moul addresses rate of return (PAWC St. No. 9-R).

A. Negative Acquisition Adjustment

9. Q. ***Please address OTS witness Kubas's proposed adjustment to reduce utility plant in service below original cost to reflect his understanding of the proper ratemaking treatment of negative acquisition adjustments.***

A. This approach is flawed because if the acquisition adjustment were both deducted from rate base and amortized to income, the same amount would be flowed-through to customers twice. If the acquisition adjustment were eliminated (by deducting it from rate base), there would be nothing to amortize to income. In addition, and as previously noted, I am advised that Section 1311(a) of the Public Utility Code requires that property purchased for less than its depreciated original cost is to be included in rate base at depreciated original cost.

B. Availability Charges

10. Q. Please address OCA witness Rubin's proposed adjustment for availability fees.

A. PAW opposes Mr. Rubin's proposed adjustment for availability charges. In the Company's rate filing at Docket No. R-0072229, the Commission approved the elimination of water availability charges for the Company's water customers whose property is located within the Northeast Wastewater Operations. The elimination of the availability charges was not contested by any of the opposing parties in that case. The loss of availability revenue was recovered from those customers receiving service, as is being proposed in this rate filing. Therefore, the Company believes Mr. Rubin's proposal is inappropriate and should be rejected.

C. Salary and Wages

11. Q. Please describe OTS witness Wilson's and OCA witness Smith's proposed adjustments to Salary and Wages.

A. Ms. Wilson and Mr. Smith have both recommended adjustments to eliminate the January, 1, 2011 salary increase proposed by the Company.

12. Q. Do you agree with their proposed adjustments?

A. No, I do not. It has been the practice of the Commission to grant PAW recovery of wage increases that will occur within six months of the end of the future test year. Such adjustments have historically included both actual contracted-for increases and estimated increases for non union and union employees whose contracts will expire. The hourly employees of Northeast are non-union, there are no documented performance issues and they will receive an increase on January 1, 2011. While the Company concedes it does not know the exact amount of the increase, its 3.0% estimate is reasonable and generally consistent with the increases awarded in prior years.

Mr. Smith acknowledges that the Commission has previously allowed the annualization of salary and wage increases six months beyond the FTY, but argues for a deviation from Commission practice because PAW's claim purportedly would place an undue burden on customers. However, the total salary increase associated with the January 1, 2011 increase is only approximately $6,900.

13. Q. Do Mr. Smith and Ms. Wilson propose any additional adjustments to payroll related expenses based upon their elimination of the Company's proposed January 1, 2011 wage increase?

A. Yes, Mr. Smith and Ms. Wilson propose derivative adjustments to payroll tax expense, 401K/defined contribution plan expense and group insurance expense based upon their proposed elimination of the Company's January 1, 2011 wage increase. Given that Mr. Smith's and Ms. Wilson's proposed elimination of the Company's claimed January 1, 2011 wage increase is improper, their derivative adjustments should also be rejected.

D. Purchased Power Expense

14. Q. Please address OTS witness Wilson's and OCA witness Smith's proposed adjustments to PAW's claim for purchased power expense.

A. Ms. Wilson and Mr. Smith both propose an adjustment to purchased power expense based on the Company's response to Interrogatory OTS-RE-9. In short, their adjustments would reduce PAW's claim based on a limited sampling of actual costs incurred to date in 2010. The Company believes that its use of twelve months of historical data is more reliable and should be approved.

E. Rate Case Expense

15. Q. Please address OCA witness Smith's proposed adjustment to reduce rate case expense to a level associated with settlement.

A. Mr. Smith has proposed to reduce PAW's rate case expense claim to a level that the Company might expect to incur if this proceeding were settled and did not proceed to full litigation. If the case settles, it will be because the parties were able to agree on a "black box" rate increase amount; if the case does not settle, Mr. Smith's proposed adjustment is not applicable.

F. Capital Structure

16. Q. OCA witness Woolridge has advocated the inclusion of short term debt (STD) as a part of the Company's permanent capital structure for purposes of determining the Company's overall rate of return. Do you agree?

A. Absolutely not. This Commission has routinely eliminated STD from PAW's capital structure, recognizing its purpose for what it is, which is a temporary funding source for infrastructure that is eventually and timely converted to permanent capital in the form of LTD and common equity. The Company has in fact converted its STD balance to permanent capital routinely, as demonstrated by the permanent financings that have taken place over recent years. One needs to look no further then the approximate $1 Million STD balance at 3/31/10 as a portion of an almost $2 billion capital structure for PAW. For these and the other reasons explained by Mr. Moul, Dr. Woolridge's proposals should be rejected.

G. Phase-In

17. Q. What is the Company's position in regards to OTS witness Kubas's phase -in proposal?

A. After reviewing all of the testimony presented in this proceeding, the Company is willing to phase-in its requested rate increase as follows: (1) rates would be increased to recover an additional $982,000 in annual base rate wastewater revenue at the conclusion of this case (the Effective Date); (2) rates would be increased to recover an additional $904,639 in annual base rate wastewater revenue commencing one year later; (3) rates would be increased by an additional $904,639 in annual base rate wastewater revenue, plus carrying charges thereon, commencing two years from the Effective Date to recover the amount not recovered in year one; and (4) rates would be decreased by $904,639 in annual base rate wastewater revenue commencing three years from the Effective Date.

H. Customer Assistance Program

18. Q. Please address OCA witness Rubin's proposed change to the Company's proposed Customer Assistance Program.

A. Mr. Rubin recommends that the discount provided to low income customers be equal to 15% of the total wastewater bill. In contrast, the Company proposes a 65% reduction to the monthly service charge portion of the bill. The Company believes that its proposal, which generally mirrors the low income customer assistance program previously approved for PAW's water operations, is in the best interests of its customers and should be approved.

I. Property Tax Adjustment

19. Q. Please discuss OCA witness Wilson's elimination of the Company's proposed property tax adjustment.

A. In her testimony, Ms. Wilson proposes the elimination of the Company's proposed property tax adjustment. Ms. Wilson believes it is more prudent to wait for the actual property tax bills reflecting the assessment of the treatment facility upgrades before providing the Company with rate recovery. The Company understands Ms. Wilson's reservations concerning the property tax adjustment. Therefore, the Company proposes it be permitted to implement a STAS that authorizes the Company to reflect in the STAS changes in local property taxes from the levels included in base rates. The STAS employed by electric, gas and water utilities recovers changes in state taxes, including the tax imposed on public utility reality by the Public Utility Realty Tax Act (PURTA). As a wastewater utility, the Northeast Wastewater Operations, unlike other types of utilities, is not subject to Public Utility Realty Tax, but, instead, is subject to local property taxes. The Company believes this proposal would fairly protect both the customer and the Company. If a STAS or similar surcharge mechanism is approved, PAW's revenue requirement would be reduced by approximately $103,799.

VI. CONCLUSION

20. Q. Does this conclude your rebuttal testimony?

A. Yes, it does

Exhibit 3-A Revised

R-2010-2166214

August 26, 2010

Pennsylvania American Water
Northeast Wastewater Operations
R-2010-2166214
Exhibit 3-A Revised

Adjustment	Reference	Description	Revised Page No.	Original Adjustment	Revised Adjustment	Change
Rate Base:						
Deferred Taxes	Stmt 3-R	Reflect repairs and maint. Adjustment	18 R	887,081	995,316	108,235
Cash Working Capital	Stmt 3-R	Eliminate Rate Case Amortization from Expense Lag	14 R	76,484	-	(76,484)
Expenses:						
Rate Case Expense	Stmt 3-R	Three year normalization period	28 R	76,484	50,987	(25,495)
Inflation	Stmt 3-R	Updated GDP Indicator	29 R	1,450	1,160	(290)
Depreciation - Net Salvage Amort.	Stmt 3-R	Adjust NNS amortization period from 5 years to 10 years	32 R	438,533	371,002	(67,531)
Negative UPAA Amortization	Stmt 3-R	Negative UPAA Amortization flowed to income over 10 yrs	32 A	-	(8,587)	(8,587)
Capitalization Ratio - 8.96%	Stmt 3-R	Salary and Wages	22 R	2,135	(7,958)	(10,093)
Capitalization Ratio - 8.96%	Stmt 3-R	Group Insurance	23 R	(705)	(2,495)	(1,791)
Capitalization Ratio - 8.96%	Stmt 3-R	401K and DCP	24 R	4,202	3,581	(621)
Capitalization Ratio - 8.96%	Stmt 3-R	Leased Vehicles	27 R	(6,385)	(6,559)	(174)
Capitalization Ratio - 8.96%	Stmt 3-R	Payroll Taxes	33 R	1,072	255	(817)
Income Taxes						
Consolidated Tax Savings	Stmt 3-R	Allocate Consolidated Tax Savings	37 R line 31	0	30,000	30,000
State NOL 20%	Stmt 3-R	Reflect 20% State Net Operating Loss on State Taxable Inc.	37 R line 18	0	218,965	218,965

Concomitant Changes:

Revenues	2 & 3 R
Penalties	5 R
Summary of Rate Base Elements	10 R
CWC Expenses	13 R
Expense Lag	14 R
Accrued and Prepaid Taxes	15 R
CWC Interest	17 R
Summary of Operating Expenses	21 R
uncollectibles	31 R
General Assessment	34 R
Income Taxes	36 R & 37 R
Long Term Debt	38 R & 39 R

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

PRO FORMA STATEMENT OF INCOME FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2009

AND DECEMBER 31, 2010 UNDER PRESENT AND PROPOSED RATES

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/09 PER BOOKS	ADJUSTMENT	AMOUNT	12/31/10 ADJUSTMENT	AMOUNT	ADJUSTMENT	PROPOSED RATES AMOUNT	LINE NO.
1	OPERATING REVENUE	$916,589	-$9,392	$907,197	-$33,378	$873,819	$1,886,639	$2,760,458	1
2	OPERATING REVENUE DEDUCTIONS:								2
3	OPERATING EXPENSES	753,923	-21,567	732,356	-21,322	711,034	49,349	760,383	3
4	DEPRECIATION	172,033	160,497	332,530	210,505	543,035	0	543,035	4
5	AMORTIZATIONS	0	0	0	-8,587	-8,587	0	-8,587	5
6	TAXES, OTHER THAN INCOME:								6
7	LOCAL PROPERTY AND MISCELLANEOUS	8,419	0	8,419	103,799	112,218	0	112,218	7
8	FEDERAL ENVIRONMENTAL TAX	0	0	0	0	0	0	0	8
9	PUBLIC UTILITY REALTY TAXES	0	0	0	0	0	0	0	9
10	PAYROLL TAXES	16,778	0	16,778	255	17,033	0	17,033	10
11	GENERAL ASSESSMENT	4,031	1,504	5,535	-203	5,332	11,512	16,844	11
12	STATE CAPITAL STOCK TAX	0	0	0	0	0	0	0	12
13	TOTAL TAXES OTHER THAN INCOME	29,228	1,504	30,732	103,851	134,583	11,512	146,095	13
14	UTILITY OPERATING INCOME BEFORE INCOME TAXES	-38,595	-149,826	-188,421	-317,825	-506,246	1,825,778	1,319,532	14
15	INCOME TAXES:								15
16	STATE INCOME TAX	-36,487	907	-35,580	-22,850	-58,430	145,917	87,487	16
17	FEDERAL INCOME TAX	-110,968	-52,756	-163,724	-136,212	-299,936	587,954	288,018	17
18	AMORTIZATION OF ITC & EXCESS DEFERRED TAXES	0	0	0	0	0	0	0	18
19	TOTAL INCOME TAXES	-147,455	-51,849	-199,304	-159,062	-358,366	733,871	375,505	19
20	TOTAL OPERATING REVENUE DEDUCTIONS	807,729	88,585	896,314	125,385	1,021,699	794,732	1,816,431	20
21	UTILITY OPERATING INCOME	108,860	-97,977	10,883	-158,763	-147,880	1,091,907	944,027	21
22	INCOME DEDUCTIONS:								22
23	INTEREST ON LONG TERM DEBT	229,124	0	229,124	94,306	323,430	-7	323,423	23
24	AMORTIZATION OF DEBT DISCOUNT EXPENSE	0	0	0	0	0	0	0	24
25	INTEREST ON NOTES PAYABLE TO OTHERS	104	0	104	-104	0	0	0	25
26	TOTAL INCOME DEDUCTIONS	229,228	0	229,228	94,202	323,430	-7	323,423	26
27	NET INCOME	-120,368	-97,977	-218,345	-252,965	-471,310	1,091,914	620,604	27
28	PREFERRED DIVIDENDS	4,434		4,434		6,230		6,230	28
29	NET INCOME TO COMMON	-$124,802		-$222,779		-$477,540		$614,374	29

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

TOTAL INCREASE IN REVENUES BY TARIFF SUBDIVISIONS PROJECTED TO

AN ANNUAL BASIS FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2009

LINE NO.	ACCT NO.	CUSTOMER CLASS	PER BOOKS 12/31/2009	CHANGE IN NUMBER OF CUSTOMERS	SPECIFIC CUSTOMER ADJUSTMENTS	OTHER REVENUE ADJUSTMENTS					PRO FORMA PRESENT RATES 12/31/2009
1		OPERATING REVENUES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2		METERED SALES									
3	461.1	RESIDENTIAL	$735,204	(3,022)	$0	$0	$0	$0	$0	$0	$732,182
4	461.2	COMMERCIAL	69,829	0	0	0	0	0	0	0	69,829
5	461.3	INDUSTRIAL	0	0	0	0	0	0	0	0	0
6	464	MUNICIPAL	0	0	0	0	0	0	0	0	0
7	466	SALES FOR RESALE	0	0	0	0	0	0	0	0	0
9		TOTAL METERED SALES	805,033	(3,022)	0	0	0	0	0	0	802,011
10		UNMETERED SALES									
11	460	RESIDENTIAL	76,429	407	0	0	0	0	0	0	76,836
12	460	COMMERCIAL	0	0	0	0	0	0	0	0	0
13	460	INDUSTRIAL	0	0	0	0	0	0	0	0	0
14	460	MUNICIPAL	0	0	0	0	0	0	0	0	0
15	460	MISCELLANEOUS	0	0	0	0	0	0	0	0	0
16		TOTAL UNMETERED SALES	76,429	407	0	0	0	0	0	0	76,836
17	462.1	PRIVATE FIRE PROTECTION	0	0	0	0	0	0	0		0
18	462.2	PUBLIC FIRE PROTECTION	0	0	0	0	0	0	0		0
19		TOTAL WATER SALES	881,462	(2,615)	0	0	0	0	0	0	878,847
20		OTHER OPERATING REVENUES									
21	470	PENALTIES	35,127	0	0	(6,777)	0	0	0	0	28,350
22	471	MISC SERVICE REVENUES	0	0	0	0	0	0	0	0	0
23	472	RENTS FROM PROPERTIES	0	0	0	0	0	0	0	0	0
24	474	OTHER WATER REVENUES	0	0	0	0	0	0	0	0	0
25		TOTAL OTHER OPERATING									
26		REVENUES	35,127	0	0	(6,777)	0	0	0	0	28,350
27		TOTAL OPERATING REVENUES	$916,589	($2,615)	$0	($6,777)	$0	$0	$0	$0	$907,197

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

TOTAL INCREASE IN REVENUES BY TARIFF SUBDIVISIONS PROJECTED TO

AN ANNUAL BASIS FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2010

LINE NO.	ACCT. NO.	CUSTOMER CLASSIFICATION	PRO FORMA PRESENT RATES 12/31/2010	CUSTOMER CHANGES	ELIMINATE AVAILABILITY	OTHER OPERATING REVENUES	RECLASSIFY REVENUE	PRO FORMA PRESENT RATES 12/31/2010	PERCENT	AMOUNT	PRO FORMA PROPOSED RATES
1		OPERATING REVENUES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2		METERED SALES									
3	461.1	RESIDENTIAL	$732,182	$13,512	$0	$0	$27,367	$773,061	207.77%	1,606,176	$2,379,237
4	461.2	COMMERCIAL	69,829	0	0	0	0	69,829	306.37%	213,934	283,763
5	461.3	INDUSTRIAL	0	0	0	0	0	0	0.00%	0	0
6	464	MUNICIPAL	0	0	0	0	0	0	0.00%	0	0
7	466	SALES FOR RESALE	0	0	0	0	0	0	0.00%	0	0
9		TOTAL METERED SALES	802,011	13,512	0	0	27,367	842,890	215.94%	1,820,110	2,663,000
10		UNMETERED SALES									
11	460	RESIDENTIAL	76,836	776	(46,623)	0	(27,367)	3,622	209.06%	7,572	11,194
12	460	COMMERCIAL	0	0	0	0	0	0	0.00%	0	0
13	460	INDUSTRIAL	0	0	0	0	0	0	0.00%	0	0
14	460	MUNICIPAL	0	0	0	0	0	0	0.00%	0	0
15	460	MISCELLANEOUS	0	0	0	0	0	0	0.00%	0	0
16		TOTAL UNMETERED SALES	76,836	776	(46,623)	0	(27,367)	3,622	0.00%	7,572	11,194
17	462.1	PRIVATE FIRE PROTECTION	0	0	0	0	0	0	0.00%	0	0
18	462.2	PUBLIC FIRE PROTECTION	0	0	0	0	0	0	0.00%	0	0
19		TOTAL WASTEWATER SALES	878,847	14,288	(46,623)	0	0	846,512	215.91%	1,827,682	2,674,194
20		OTHER OPERATING REVENUES									
21	470	PENALTIES	28,350	0	0	(1,043)	0	27,307	215.90%	58,957	86,264
22	471	MISC SERVICE REVENUES	0	0	0	0	0	0	0.00%	0	0
23	472	RENTS FROM PROPERTIES	0	0	0	0	0	0	0.00%	0	0
24	474	OTHER REVENUES	0	0	0	0	0	0	0.00%	0	0
25		TOTAL OTHER OPERATING									
26		REVENUE	28,350	0	0	(1,043)	0	27,307	215.90%	58,957	86,264
27		TOTAL OPERATING REVENUES	$907,197	$14,288	($46,623)	(1,043)	$0	$873,819	215.91%	$1,886,639	$2,760,458

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

OPERATING REVENUES

PENALTIES

The following adjustment reflects the annualization of penalty revenues associated with billed sales projected during 2010. Additionally, annualized late payment charges are calculated based on revenues at the proposed rate level.

LINE NO.	DESCRIPTION	PER BOOKS 12/31/09	PRESENT RATES 12/31/10	PROPOSED RATES
1	TOTAL BILLED SALES	$881,462	$846,512	$2,674,194
2	% OF PENALTIES TO TOTAL			
3	SALES (3 YEAR AVERAGE)		3.2258000%	3.2258000%
4	PENALTIES	35,127	27,307	86,264
5	LESS: PER BOOKS AT 12-31-09		35,127	
6	LESS: PRESENT RATES AT 12-31-10			27,307
7	PRO FORMA ADJUSTMENTS		($7,820)	$58,957

WITNESS: JO ANNE LONTZ

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO RATE BASE ELEMENTS

SUMMARY OF RATE BASE ADJUSTMENTS

LINE NO.	DESCRIPTION		DEPRECIATED ORIGINAL COST 12/31/09	DEPRECIATED ORIGINAL COST 12/31/10	DEPRECIATED ORIGINAL COST PROPOSED
1	NON-DEPRECIABLE PLANT		$8	$8	$8
2	DEPRECIABLE PLANT		11,591,467	13,806,761	13,806,761
3	TOTAL UTILITY PLANT IN SERVICE		11,591,475	13,806,769	13,806,769
4	DEDUCT:				
5	CONTRIBUTIONS IN AID OF CONSTRUCTION		2,176,836	2,176,836	2,176,836
6	CUSTOMER ADVANCES FOR CONSTRUCTION		20,000	20,000	20,000
7	SUB-TOTAL		2,196,836	2,196,836	2,196,836
8	NET UTILITY PLANT IN SERVICE		9,394,639	11,609,933	11,609,933
9	ACCRUED DEPRECIATION		1,101,161	17,325	17,325
10	DEPRECIATED UTILITY PLANT IN SERVICE		8,293,478	11,592,608	11,592,608
11	ADD:				
12	MATERIALS AND SUPPLIES		4,190	4,190	4,190
13	CASH WORKING CAPITAL - EXPENSES		59,783	54,650	54,650
14	ACCRUED AND PREPAID TAXES		6,704	49,490	49,260
15	DEDUCT:				
16	CASH WORKING CAPITAL - INT AND DIV		25,563	36,066	36,066
17	DEFERRED TAXES		950,487	995,316	995,316
18	TOTAL RATE BASE ELEMENTS		$7,388,105	$10,669,556	$10,669,326
19	UTILITY OPERATING INCOME				
20	PER BOOKS	$108,860	1.47%	1.02%	1.02%
21	PRESENT RATES AT 12-31-09	$10,883	0.15%	-	-
22	PRESENT RATES AT 12-31-10	-$147,880	-	-1.39%	-
23	PROPOSED RATES	$944,027	-	-	8.85%

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO RATE BASE ELEMENTS

CALCULATION OF CASH WORKING CAPITAL REQUIREMENTS

Charges for water and wastewater services are billed in arrears on a monthly basis. The calculation set forth below reflects summarized operating revenues billed for the twelve months ended December 31, 2009, and as annualized under present rates for the twelve months ending December 31, 2009 and 2010. The calculation further reflects the average lag in receipt of revenues less the lag in payment of operating expenses to determine cash working capital requirements.

LINE NO.	DESCRIPTION	PER BOOK AMOUNT	PRESENT RATES 12/31/09 AMOUNT	PRESENT RATES 12/31/10 AMOUNT
1	OPERATING REVENUE BILLED DURING THE TWELVE MONTHS ENDED 12/31/09			
2	BI-MONTHLY BILLINGS			
3	LAG DAYS			
4	DOLLAR DAYS			
5	QUARTERLY			
6	LAG DAYS			
7	DOLLAR DAYS			
8	MONTHLY BILLINGS	881,462	878,847	846,512
9	LAG DAYS	50.5	50.5	50.5
10	DOLLAR DAYS	44,513,831	44,381,774	42,748,856
11	TOTAL BILLED REVENUE	$881,462	$878,847	$846,512
12	TOTAL DOLLAR DAYS	$44,513,831	$44,381,774	$42,748,856
13	AVERAGE LAG IN RECEIPT OF REVENUE			
14	(LINE 12 / LINE11)	50.5	50.5	50.5
15	DEDUCT:			
16	AVERAGE LAG IN PAYMENT			
17	OF OPERATING EXPENSES	19.7	19.7	19.2
18	AVERAGE LAG BETWEEN PAYMENT OF OPERATING			
19	EXPENSES AND RECEIPT OF REVENUES	30.8	30.8	31.3
20	WORKING CAPITAL REQUIREMENTS			
21	ANNUAL OPERATING EXPENSES		$708,626	$637,190
22	OPERATING EXPENSES PER DAY			
23	(LINE 18 / 365 DAYS)		1,941	1,746
24	CASH WORKING CAPITAL REQUIRED			
25	(LINE 16 * LINE 20)		$59,783	$54,650

WITNESS: JOHN COX

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO RATE BASE ELEMENTS

SUPPORT OF EXPENSE DAYS

LINE NO.	DESCRIPTION	LAG DAYS	PER BOOKS AMOUNT	PER BOOKS DOLLAR DAYS	PRESENT RATES 12-31-09 AMOUNT	PRESENT RATES 12-31-09 DOLLAR DAYS	PRESENT RATES 12-31-10 AMOUNT	PRESENT RATES 12-31-10 DOLLAR DAYS
1	CHEMICALS	30 0	$21,375	$641,250	$21,375	$641,250	$24,144	$724,320
2	GROUP INSURANCE	(13.4)	39,810	(533,454)	39,810	(533,454)	37,314	(500,008)
3	LABOR AND LABOR RELATED	12 5	227,572	2,844,650	227,572	2,844,650	223,195	2,789,938
4	*LEASED EQUIPMENT*	2.0	*0*	*0*	*0*	*0*	*0*	*0*
5	TRANSPORTATION	29.1	26,201	762,449	26,201	762,449	19,842	571,582
6	MISCELLANEOUS	25.3	80,665	2,040,825	80,665	2,040,825	61,825	2,070,173
7	PURCHASED POWER	26 5	118,771	3,147,432	118,771	3,147,432	113,904	3,015,806
8	WASTE DISPOSAL	26.1	194,232	5,069,455	194,232	5,069,455	137,268	3,582,643
9	TOTALS		708,626	13,972,607	708,626	13,972,607	637,190	12,254,454
10	AVERAGE LAG			19.7		19 7		19 2

WITNESS JOHN COX

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO RATE BASE ELEMENTS

ACCRUED AND PREPAID TAXES

LINE NO.	DESCRIPTION	NET LEAD/ LAG DAYS FUTURE	PRESENT RATES 12-31-09 TAXES PAYABLE	PRESENT RATES 12-31-09 ACCRUED TAXES ADJ	PRESENT RATES 12-31-10 TAXES PAYABLE	PRESENT RATES 12-31-10 ACCRUED TAXES ADJ	PROPOSED RATES TAXES PAYABLE	PROPOSED RATES ACCRUED TAXES ADJ
1	GENERAL ASSESSMENT	125	$5,535	$1,896	$5,332	$1,826	$16,844	$5,768
2	PROPERTY TAX	145.0	8,419	3,345	112,218	44,580	112,218	44,580
3	STATE INCOME TAX	21.8	-35,580	-2,125	-58,430	-3,490	87,487	5,225
4	FEDERAL INCOME TAX	-8.0	-163,724	3,588	-299,936	6,574	288,018	-6,313
5	TOTALS			$6,704		$49,490		$49,260

WITNESS: JOHN COX

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO RATE BASE ELEMENTS

CALCULATION OF CASH WORKING CAPITAL REQUIREMENTS
INTEREST AND PREFERRED DIVIDENDS

The payment of interest on the Company's long term debt is made six months in arrears. Payment of interest on the Company's short term debt is made monthly in arrears. The payment of dividends on the Company's preferred stock is made quarterly. The average lag days of interest and dividend payments and the deduction of the average lag days for the receipt of revenue is calculated below to determine capital requirements.

LINE NO.	DESCRIPTION						
1	AVERAGE LAG CALCULATION	LONG TERM INTEREST		SHORT TERM INTEREST		PREFERRED DIVIDEND	
2	FUTURE REVENUE LAG DAYS	50.5		50.5		50.5	
3	LESS: INTEREST PAYMENTS LAG DAYS	91.3		15.2		45.6	
4	AVERAGE LAG BETWEEN THE PAYMENT						
5	OF INTEREST AND THE RECEIPT						
6	OF REVENUES	-40.8		35.3		4.9	
7	LONG TERM DEBT	PRESENT RATES 12/31/09		PRESENT RATES 12/31/10		PROPOSED AMOUNT	
8	WORKING CAPITAL REQUIREMENTS						
9	PRO FORMA ANNUAL INTEREST EXPENSE	$229,124		$323,430		$323,423	
10	INTEREST EXPENSE PER DAY						
11	(LINE 9 / 365 DAYS)	628		886		886	
12	CASH WORKING CAPITAL REQUIRED						
13	(LINE 6 COL.1 x LINE 10)		(25,622)		(36,149)		(36,149)
14	SHORT TERM DEBT						
15	WORKING CAPITAL REQUIREMENTS						
16	PRO FORMA ANNUAL INTEREST EXPENSE	104		0		0	
17	INTEREST EXPENSE PER DAY						
18	(LINE 16 / 365 DAYS)	0		0		0	
19	CASH WORKING CAPITAL REQUIRED						
20	(LINE 6 COL.2 x LINE 17)		0		0		0
21	PREFERRED DIVIDENDS						
22	WORKING CAPITAL REQUIREMENTS						
23	PRO FORMA ANNUAL DIVIDEND EXPENSE	4,434		6,230		6,230	
24	DIVIDEND EXPENSE PER DAY						
25	(LINE 23 / 365 DAYS)	12		17		17	
26	CASH WORKING CAPITAL REQUIRED						
27	(LINE 6 COL.3 x LINE 24)		59		83		83
28	TOTAL CASH WORKING CAPITAL REQUIRED						
29	(LINE 13 + LINE 20 + LINE 27)		($25,563)		($36,066)		($36,066)

WITNESS: JOHN COX

PENNSYLVANIA AMERICAN WATER- NORTHEAST WW OPERATIONS

NOTES TO RATE BASE ELEMENTS

CALCULATION OF DEFERRED INCOME TAXES

The following calculation is being made to reflect the tax difference between using accelerated and straight-line depreciation, and is carried as a rate base reduction.

LINE NO.	VINTAGE YEARS	TAX BASE PROPERTY	ACCELERATED TAX DEPRECIATION	STRAIGHT-LINE REMAINING LIFE	EXCESS DEPRECIATION	DEFERRED FEDERAL TAXES
1	04/02 - 12/10	$10,708,614	$290,318	$471,478	-$181,160	-$63,406
2	PLUS: REPAIRS & MAINTENACE ADJUSMTENT					108,235
3						44,829
4	BALANCE OF DEFERRED INCOME TAXES AT 12-31-09					(950,487)
5	BALANCE OF DEFERRED INCOME TAXES AT 12-31-10					($995,316)

WITNESS: JOHN COX
REFERENCE: FR IV.4

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

OPERATING EXPENSES

SUMMARY OF OPERATING EXPENSE ADJUSTMENTS

LINE NO.	DESCRIPTION	12/31/09 DETAIL	PRESENT RATES 12/31/09 AMOUNT	12/31/10 DETAIL	PRESENT RATES 12/31/10 AMOUNT
1	PER BOOKS		$753,923		
2	PRESENT RATES AT 12-31-09				$732,356
3	SALARIES AND WAGES	0		(7,958)	
4	GROUP INSURANCE	0		(2,496)	
5	401K & DEFINED CONTRIBUTION PLAN	0		3,581	
6	CHEMICALS	0		2,769	
7	PURCHASED POWER	0		(4,967)	
8	LEASED VEHICLES	0		(6,559)	
9	RATE CASE EXPENSE	0		50,987	
10	INFLATION	0		1,160	
11	WASTE DISPOSAL	0		(56,966)	
12	UNCOLLECTABLES	(21,567)		-873	
13	PRO FORMA ADJUSTMENTS		(21,567)		-21,322
14	PRESENT RATES 12-31-09		$732,356		
15	PRESENT RATES 12-31-10				$711,034

PENNSYLVANIA AMERICAN WATER- NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

OPERATING EXPENSES

SALARY AND WAGES

The following adjustment sets forth a summary of the Company's annualization of labor expenses. The pro forma payroll for the future annualization was developed by applying pay rates that will become effective during the six month period immediately following the end of the future test year, as approved at Docket No. R-943231, to the Company's full complement of employees.

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/2010 AMOUNT
1	ANNUALIZED SALARY AND WAGES	$230,945
2	LESS: 8.96% NOT CHARGED TO OPERATING EXPENSE	20,693
3	SUB-TOTAL	210,252
4	LESS: AMOUNT CHARGED TO OPERATING EXPENSE	
5	DURING THE TWELVE MONTHS ENDED 12-31-09	218,210
6	PRO FORMA ADJUSTMENT	-$7,958

601.1 SALARY AND WAGES - SOURCE OF SUPPLY	$0
601.2 SALARY AND WAGES - SOURCE OF SUPPLY	0
601.3 SALARY AND WAGES - WATER TREATMENT	-5,685
601.4 SALARY AND WAGES - WATER TREATMENT	-6
601.5 SALARY AND WAGES - TRANSMISSION & DISTRIBUTION	0
601.6 SALARY AND WAGES - TRANSMISSION & DISTRIBUTION	-231
601.7 SALARY AND WAGES - CUSTOMER ACCOUNTING	0
601.8 SALARY AND WAGES - ADMINISTRATIVE AND GENERAL	-2,036
603.8 SALARY AND WAGES - SALARY OF OFFICERS	0

REFERENCE: EXHIBIT NO. 3-B
WITNESS: DANIEL P. HUNNELL II

PENNSYLVANIA AMERICAN WATER- NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

OPERATING EXPENSES

GROUP INSURANCE

The annualization of the group insurance cost was based on the January 2010 premiums annualized for the future test year number of employees less the annualized employee contribution. The following calculation reflects the annualization less the adjustment for that portion not charged to operations.

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/2010 AMOUNT
1	ANNUALIZED GROUP INSURANCE COST	$40,986
2	LESS: 8.96% NOT CHARGED TO OPERATING EXPENSE	3,672
3	SUB-TOTAL	37,314
4	LESS: AMOUNT CHARGED TO OPERATING EXPENSE	
5	DURING THE TWELVE MONTHS ENDED 12-31-09	39,810
6	PRO FORMA ADJUSTMENT	($2,496)
	604.8 A&G EMPLOYEES PENSION AND BENEFITS	($2,496)

REFERENCE: EXHIBIT NO. 3-B
WITNESS: DANIEL P. HUNNELL II

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

OPERATING EXPENSES

401K & DEFINED CONTRIBUTION PLAN COST (DCP)

The following adjustment is being made to annualize the cost associated with the Company's contribution for 401k and DCP associated with the full complement of employees at December 31, 2010.

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/2010 AMOUNT
1	ANNUALIZED 401 K & DCP COST	$14,217
2	LESS: 8.96% NOT CHARGED TO OPERATING EXPENSE	1,274
3	SUBTOTAL	12,943
4	LESS: AMOUNT CHARGED TO OPERATING EXPENSE	
5	DURING THE TWELVE MONTHS ENDED 12-31-09	9,362
6	PRO FORMA ADJUSTMENT	$3,581
	604.8 A&G EMPLOYEES PENSION AND BENEFITS	$3,581

REFERENCE: EXHIBIT NO. 3-B
WITNESS: DANIEL P. HUNNELL II

PENNSYLVANIA AMERICAN WATER- NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

OPERATING EXPENSES

LEASED VEHICLES

Starting in 2010 the Company will begin purchasing vehicles utilized in its operations. The following adjustment reflects the elimination of lease expense for those vehicles to be replaced during 2010. In addition, the December 2009 monthly lease costs were annualized for the number of leased vehicles that remain in service at December 31,2010.

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/2010 AMOUNT
1	ANNUALIZED LEASED VEHICLES COST	$3,972
2	LESS: 8.96% NOT CHARGED TO OPERATING EXPENSE	356
3	SUB-TOTAL	3,616
4	LESS: AMOUNT CHARGED TO OPERATING EXPENSE	
5	DURING THE TWELVE MONTHS ENDED 12-31-09	10,175
6	PRO FORMA ADJUSTMENT	($6,559)
	650.8 A & G - MISCELLANEOUS GENERAL EXPENSE	($6,559)

REFERENCE: EXHIBIT 3B
WITNESS: JOHN R. COX

PENNSYLVANIA AMERICAN WATER- NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

OPERATING EXPENSES

RATE CASE EXPENSE

The following adjustment reflects the estimated cost of this rate case at December 31, 2010.

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/2010 AMOUNT
1	LEGAL FEES AND EXPENSES	$120,000
2	RATE OF RETURN	7,000
3	COST OF SERVICE AND RATE DESIGN	6,449
4	DEPRECIATION	6,750
5	MISCELLANEOUS	12,769
6	TOTAL	152,968
7	NORMALIZED OVER 3 YEARS	50,987
8	LESS: AMOUNT CHARGED TO OPERATING EXPENSE DURING THE TWELVE MONTHS ENDED 12-31-09	0
9	PRO FORMA ADJUSTMENT	$50,987
	666.8 REGULATORY COMMISSION EXPENSE	$50,987

REFERENCE: EXHIBIT 3B
WITNESS: JOHN COX

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

OPERATING EXPENSES

INFLATION

The Company has presented various pro forma adjustments for specific expense items. The remaining expense items are anticipated to continue to rise due to inflationary increases. The following adjustment reflects projection of increases due to inflation.

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/2010 AMOUNT
1	TOTAL O & M EXPENSES	$753,923
2	LESS: ADJUSTMENTS	657,232
3	EXPENSES SUBJECT TO INFLATION	96,691
4	INFLATION FACTOR	1.20%
5	PRO FORMA ADJUSTMENT	$1,160
	675.3 MISCELLANEOUS EXPENSE	$1,160

REFERENCE: EXHIBIT 3B
WITNESS: JOHN COX

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

OPERATING EXPENSES

CALCULATION OF UNCOLLECTABLE ACCOUNTS EXPENSE

The following adjustment reflects the uncollectable accounts expense calculated on the ratio of actual per books revenue to net write-offs. This ratio is applied to pro forma water sales at present and proposed rates.

LINE NO	DESCRIPTION	PER BOOKS	PRESENT RATES 12/31/09 AMOUNT	PRESENT RATES 12/31/10 AMOUNT	PROPOSED RATES AMOUNT
1	WASTEWATER SALES	$881,462	$878,847	$846,512	$2,674,194
2	3 YEAR AVERAGE	0.027001091	0.027001091	0.027001091	0.027001091
3	ANNUALIZED UNCOLLECTABLE EXPENSE		$23,730	$22,857	$72,208
4	LESS: AMOUNT CHARGED TO OPERATING EXPENSE DURING THE TWELVE MONTHS ENDED 12-31-09		45,297	-	-
5	LESS: PRESENT RATES AT 12-31-09		-	23,730	-
6	LESS: PRESENT RATES AT 12-31-10		-	-	22,857
7	PRO FORMA ADJUSTMENT		(21,567)	-$873	$49,349
670.7	CUSTOMER ACCOUNTING AND COLLECTING - BAD DEBT		(21,567)	-$873	$49,349

WITNESS: JOHN COX
REFERENCE: EXHIBIT 3-B

PENNSYLVANIA AMERICAN WATER- NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

ANNUAL DEPRECIATION CALCULATED BY STRAIGHT

LINE-REMAINING LIFE OVER BOOK ANNUAL DEPRECIATION

LINE NO.	DESCRIPTION		PRESENT RATES 12/31/2010 AMOUNT
1	ANNUALIZED DEPRECIATION		$610,566
	LESS: AMORTIZATION OF NET SALVAGE ADJUSTMENT TO 10 YEARS		(67,531)
			543,035
	NET SALVAGE		
	LEHMAN PIKE WWTP	417,440	
	BLUE MOUNTAIN WWTP	257,870	
	TOTAL NET SALVAGE	675,310	
	5 YEAR AMORTIZATION	135,062	
	10 YEAR AMORTIZATION	67,531	
	ADJUSTMENT	(67,531)	
2	PER BOOKS AT 12/31/09		172,033
3	PRO FORMA ADJUSTMENT		$371,002
	403 DEPRECIATION		$371,002

PENNSYLVANIA AMERICAN WATER

NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

ACQUISITION ADJUSTMENT

The following adjustment is being made to reflect a ten year amortization of the negative utility plant acquisition adjustment.

LINE NO.	DESCRIPTION		PRESENT RATES 12/31/2010 AMOUNT
1	ACQUISITION ADJUSTMENT (NET OF LEHMAN PIKE AND BLUE MOUNTAIN)	$	(85,865)
2	PERIOD - 10 YEARS		10
3	ANNUAL AMORTIZATION	$	(8,587)
4	LESS: PER BOOKS		0
5	ADJUSTMENT	$	(8,587)

WITNESS: ROD NEVIRAUSKAS

PENNSYLVANIA AMERICAN WATER- NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

TAXES OTHER THAN INCOME

PAYROLL TAXES

The following adjustment is being made to annualize payroll tax expense based on the annualized salary and wage claim at December 31, 2010.

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/2010 AMOUNT
1	ANNUALIZED PAYROLL TAXES	$18,709
2	LESS: 8.96% NOT CHARGED TO OPERATING EXPENSE	$1,676
3	SUB-TOTAL	$17,033
4	LESS: AMOUNT CHARGED TO OPERATING EXPENSE	
5	DURING THE TWELVE MONTHS ENDED 12-31-09	$16,778
6	PRO FORMA ADJUSTMENT	$255
	408.12 - TAXES - PAYROLL	$255

REFERENCE: EXHIBIT NO. 3-B
WITNESS: DANIEL P. HUNNELL II

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

CALCULATION OF GENERAL ASSESSMENT BY THE PENNSYLVANIA PUBLIC UTILITY COMMISSION, CONSUMER ADVOCATE AND SMALL BUSINESS ADVOCATE FEES

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/09 AMOUNT	PRESENT RATES 12/31/10 AMOUNT	PROPOSED AMOUNT
1	TOTAL WASTEWATER SALES	$878,847	$846,512	$2,674,194
2	ESTIMATED GENERAL ASSESSMENT BY THE PENNSYLVANIA			
3	PUBLIC UTILITY COMMISSION AT .004777980298			
4	PER DOLLAR OF TOTAL WASTEWATER SALES SUBJECT TO TAX	4,199	4,045	12,777
5	CONSUMER ADVOCATE FEE AT .001388377500			
6	PER DOLLAR OF TOTAL WASTEWATER SALES	1,220	1,175	3,713
7	SMALL BUSINESS ADVOCATE FEE AT .000132518596			
8	PER DOLLAR OF TOTAL WASTEWATER SALES	116	112	354
		5,535	5,332	16,844
9	LESS: AMOUNT CHARGED TO OPERATING EXPENSES DURING			
10	THE TWELVE MONTHS ENDED 12-31-09	4,031	-	-
11	LESS: PRO FORMA UNDER PRESENT RATES AT 12-31-09	-	5,535	-
12	LESS: PRO FORMA UNDER PRESENT RATES AT 12-31-10	-	-	5,332
13	PRO FORMA ADJUSTMENT	$1,504	-$203	$11,512
	507.1 TAXES OTHER THAN INCOME			$12,813

WITNESS: JOHN COX

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

PRO FORMA STATE AND FEDERAL INCOME TAXES UNDER PRESENT AND PROPOSED RATES

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/09 AMOUNT	PRESENT RATES 12/31/10 AMOUNT	PROPOSED AMOUNT
1	STATE INCOME TAX PER COMPUTATION			
2	SHOWN ON FOLLOWING PAGE	-$35,580	-$58,430	$87,487
3	LESS: STATE INCOME TAX PER BOOK			
4	COMPUTATION SHOWN ON FOLLOWING PAGE	-36,487	-	-
5	LESS: PRESENT RATES 12-31-09	-	-35,580	-
6	LESS: PRESENT RATES 12-31-10	-	-	-58,430
7	PRO FORMA ADJUSTMENT	$907	($22,850)	$145,917
8	FEDERAL INCOME TAX PER COMPUTATION			
9	SHOWN ON FOLLOWING PAGE	-$163,724	-$299,936	$288,018
10	LESS: FEDERAL INCOME TAX PER BOOK			
11	COMPUTATION SHOWN ON FOLLOWING PAGE	-110,968	-	-
12	LESS: PRESENT RATES 12-31-09	-	-163,724	-
13	LESS: PRESENT RATES 12-31-10	-	-	-299,936
14	PRO FORMA ADJUSTMENT	($52,756)	($136,212)	$587,954

WITNESS: ROD NEVIRAUSKAS

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

CALCULATION OF STATE AND FEDERAL INCOME TAXES

LINE NO.	DESCRIPTION	PER BOOKS	PRESENT RATES 12/31/09 AMOUNT	PRESENT RATES 12/31/10 AMOUNT	PROPOSED AMOUNT
1	UTILITY OPERATING INCOME BEFORE TAXES	-$38,595	-$188,421	-$506,246	$1,319,532
2	LESS: INTEREST EXPENSE	229,228	229,228	323,430	323,423
3	TAXABLE OPERATING INCOME	-267,823	-417,649	-829,676	996,109
4	ADD:				
5	PREMATURE PROPERTY LOSSES	0	0	0	0
6	DEPR - STRAIGHT LINE-REMAINING LIFE	172,033	332,530	543,035	543,035
7	TAXABLE MEALS & ENTERTAINMENT	0	0	0	0
8					
9	TOTAL	172,033	332,530	543,035	543,035
10	DEDUCT:				
11	TAX DEPRECIATION:				
12	ADR ON PRE 1981 ASSETS	0	0	0	0
13	ACRS ON POST 1980 ASSETS	0	0	0	0
14	MACRS ON POST 1986 ASSETS	333,894	333,894	372,902	372,902
15	COST OF REMOVAL	0	0	71,557	71,557
16	TOTAL	333,894	333,894	444,459	444,459
17	TAXABLE INCOME	-429,684	-419,013	-731,100	1,094,685
18	STATE NOL	-64,453	-62,852	-146,220	218,937
19	TAXABLE INCOME AFTER STATE NOL	-365,231	-356,161	-584,880	875,748
20	STATE INCOME TAX AT:				
21	HISTORIC - 9.99%, FUTURE - 9.99%	-36,487	-35,580	-58,430	87,487
22	TAXABLE INCOME AFTER STATE INCOME TAX	-328,744	-320,581	-526,450	788,261
23	ADD:				
24	COST OF REMOVAL NON ADR PROPERTY	0	0	71,557	71,557
25	ACRS ON POST 1980 ASSETS	0	0	0	0
26	MACRS ON POST 1986 ASSETS	333,894	333,894	372,902	372,902
	STATE NOL	-64,453	-62,852	-146,220	218,937
27	DEDUCT:				
28	SLRL ON POST 1980 ASSETS	172,033	332,530	543,035	543,035
29	INCOME SUBJECT TO FEDERAL INCOME TAX (IF NEGATIVE USE 0)	-231,336	-382,069	-771,246	908,622
30	FEDERAL INCOME TAX AT 35%	-$80,968	-$133,724	-$269,936	$318,018
31	CONSOLIDATED TAX SAVINGS ADJUSTMENT	$30,000	$30,000	$30,000	$30,000
32	FEDERAL TAX LIABILITY	-$110,968	-$163,724	-$299,936	$288,018

WITNESS: ROD NEVIRAUSKAS

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

PRO FORMA INTEREST UNDER PRESENT AND PROPOSED RATES

LINE NO.	DESCRIPTION	PRESENT RATES 12/31/09 AMOUNT	PRESENT RATES 12/31/10 AMOUNT	PROPOSED AMOUNT
1	INTEREST ON LONG TERM DEBT PER COMPUTATION			
2	SHOWN ON FOLLOWING PAGE	$229,124	$323,430	$323,423
3	LESS: INTEREST ON LONG TERM DEBT AS PER BOOK			
4	COMPUTATION ON FOLLOWING PAGE	229,124	-	-
5	LESS: PRESENT RATES AT 12-31-09	-	229,124	-
6	LESS: PRESENT RATES AT 12-31-10	-	-	323,430
7	PRO FORMA ADJUSTMENT	$0	$94,306	($7)
8	INTEREST ON SHORT TERM DEBT PER COMPUTATION			
9	SHOWN ON FOLLOWING PAGE	$104	$0	$0
10	LESS: INTEREST ON SHORT TERM DEBT AS PER BOOK			
11	COMPUTATION ON FOLLOWING PAGE	104	-	-
12	LESS: PRESENT RATES AT 12-31-09	-	104	-
13	LESS: PRESENT RATES AT 12-31-10	-	-	0
14	PRO FORMA ADJUSTMENT	$0	($104)	$0

WITNESS: ROD NEVIRAUSKAS

PENNSYLVANIA AMERICAN WATER - NORTHEAST WW OPERATIONS

NOTES TO STATEMENT OF INCOME

APPLICATION OF INCOME DEDUCTIONS

LINE NO.	DESCRIPTION	PRESENT RATES AT DECEMBER 31, 2009 AMOUNT	CAPITAL STRUCTURE	COST RATE	PRESENT RATES AT DECEMBER 31, 2010 AMOUNT	CAPITAL STRUCTURE	COST RATE
1	CAPITAL STRUCTURE						
2	LONG TERM DEBT	$951,447,759	49.62%	6.25%	$966,055,512	49.21%	6.16%
3	SHORT TERM DEBT	7,496,277	0.39%	0.36%	0	0.0%	0.00%
4	TOTAL DEBT	958,944,036	50.01%		966,055,512	49.21%	
5	PREFERRED STOCK	14,171,700	0.74%	8.11%	14,171,700	0.72%	8.11%
6	COMMON EQUITY	944,413,846	49.25%		982,987,846	50.07%	
7	TOTALS	$1,917,529,582	100.0%		$1,963,215,058	100.0%	

		PRESENT RATES 12-31-09 AMOUNT	PRESENT RATES 12/31/2010 AMOUNT	PROPOSED AMOUNT
8	APPLICATION OF LONG TERM DEBT INTEREST:			
9	ORIGINAL COST RATE BASE	$7,388,105	$10,669,556	$10,669,326
10	DEBT PERCENTAGE (FROM ABOVE)	49.62%	49.21%	49.21%
11	DEBT PORTION OF RATE BASE	3,665,978	5,250,489	5,250,375
12	INTEREST COST (FROM ABOVE)	6.25%	6.16%	6.16%
13	PRO FORMA LONG TERM INTEREST DEDUCTION	$229,124	$323,430	$323,423
14	APPLICATION OF SHORT TERM DEBT INTEREST:			
15	ORIGINAL COST RATE BASE	$7,388,105	$10,669,556	$10,669,326
16	DEBT PERCENTAGE (FROM ABOVE)	0.39%	0.00%	0.00%
17	DEBT PORTION OF RATE BASE	28,814	0	0
18	INTEREST COST (FROM ABOVE)	0.36%	0.00%	0.00%
19	PRO FORMA SHORT TERM INTEREST DEDUCTION	$104	$0	$0

WITNESS: ROD NEVIRAUSKAS

PAWC STATEMENT NO. 7-R

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

REBUTTAL TESTIMONY OF
PAUL R. HERBERT

ON BEHALF OF PENNSYLVANIA-AMERICAN
WATER COMPANY

DOCKET NO. R-2010-2166214

CONCERNING

NORTHEAST WASTEWATER OPERATIONS
COST OF SERVICE ALLOCATION

AND

CUSTOMER RATE DESIGN

AUGUST 26, 2010

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

RE: PENNSYLVANIA-AMERICAN WATER COMPANY
DOCKET R-2010-2166214
REBUTTAL TESTIMONY OF PAUL R. HERBERT

Line No.

Q. Please state your name and address.

A. My name is Paul R. Herbert. My business address is 207 Senate Avenue, Camp Hill, Pennsylvania.

Q. By whom are you employed?

A. I am employed by Gannett Fleming, Inc.

Q. Are you the same Paul R. Herbert that submitted direct testimony in this case?

A. Yes. I submitted Statement No. 7 and Exhibit No. 7-A concerning cost of service allocation and the proposed rate design for the Northeast Wastewater Operations.

Q. What is the subject of your rebuttal testimony?

A. I will address the cost of service allocation issues raised by OTS witness Joseph Kubas and the rate design proposal of OCA witness Scott Rubin concerning the residential customer charge.

Q. Please address Mr. Kubas' cost allocation revision.

A. Mr. Kubas corrects my cost allocation study to reflect a more accurate estimate for I&I. He uses a 3% Infiltration and Inflow (I&I) factor based on the information contained in OTS Exhibit No. 3. Upon review of the information in OTS Exhibit No. 3, it appears that the data for 2009 may be unreliable

because the I&I amounts are actually negative for Lehman Pike. I calculate a 4.29% I&I percentage for 2008 and a 7.68% I&I percentage for the 4 months of 2010. Based on this data, I would estimate a 5% I&I percentage that would more closely reflect actual I&I flows.

Q. How does this revised estimate of I&I flows affect the results of you cost allocation study?

A. The result of using a 5% I&I factor would shift approximately $60,000 of costs from residential to the commercial class. See revised cost allocation based on a 5% I&I factor attached as Exhibit No. 7-R-1.

Q. Will you revise your rate design proposal based on the revised cost allocation results?

A. Yes. I will discuss the revised rate design later in my rebuttal testimony.

Q. What is Mr. Rubin's proposal with respect to the residential customer charge?

A. Mr. Rubin recommends that the residential customer charge should not exceed $6.70 per month.

Q. What is the Company's proposal?

A. The Company proposed a monthly residential customer charge of $20.00 per month with no allowance. The existing charge for Blue Mountain is $20.00 per month which includes a 2,667 gallon allowance. The existing charge for Lehman Pike is $9.45 per month and the Winona Lakes flat rate charge is $27.33 per month.

Q. Do you agree with Mr. Rubin's recommendation?

A. No, I do not. First, for Blue Mountain, the existing customer charge is $20.00 per month with a 2,667 gallon allowance. If you remove the value of the 2,667 gallon allowance at the existing first block consumption rate of $1.75 per thousand gallons, the effective existing customer charge is $15.33 per month. ($20.00 – $1.75 x 2.667 = $15.33). Mr. Rubin's recommended rate of $6.70 per month would be a decrease of 76.7% from the $15.33 charge.

For Lehman Pike, the existing customer charge is $9.45 per month with no allowance. Mr. Rubin's recommended rate of $6.70 per month would be a decrease of 29.1% from the $9.45 charge.

For Winona Lakes, the existing flat rate charge is $27.33 per month including all usage. If you remove the value of an average use of 4,000 gallons at $3.00 per thousand, the effective customer charge would be $15.33 per month. ($27.33 - $3.00 x 4). Mr. Rubin's recommended rate of $6.70 per month would be a decrease of 76.7% from the $15.33 effective charge.

Q. What is your opinion of Mr. Rubin's recommended decreases in customer charges?

A. It makes no sense to reduce the customer charge by any percentage when the overall increase is approximately 231.5%. Customers have been paying either $9.45, $20.00, or $27.33 per month under the existing rate structure. To reduce this minimum bill to $6.70 will place an even greater burden on those customers that have just average usage while at the same time, give customers with little or no usage large decreases. I think that this kind of

change is particularly inappropriate where there are, as here, a meaningful number of customers who are weekend or partial-year residents.

Q. For what other reasons do you disagree with Mr. Rubin's recommendation?

A. Mr. Rubin excludes uncollectible accounts expense and costs associated with I&I from the customer charge. I will address each of these items separately.

Mr. Rubin excluded the costs associated with uncollectible accounts of $77,774 from his customer charge, As a result, nearly 100% of these costs would be recovered in the volumetric charge under his proposal. (Mr. Rubin's 2.7% factor would include only about 15 cents per month in his customer charge).

Q. Do uncollectible accounts vary with usage?

A. No, they do not. Uncollectible accounts vary with the number of customers and the occurrence of uncollectible accounts closely tracks how many customers are on the system, not the total volume. Large commercial customers for example typically pay their bills on time and do not cause any uncollectible account expense, but Mr. Rubin would have such customers pay a disproportionate share of uncollectible accounts expense by recovering such costs almost entirely in the volumetric charge. By including such costs in the customer charge, however, each customer pays a small amount each month to cover uncollectible expense and customers with relatively higher usage are not required to pay a disproportionate amount of such costs.

Q. Please explain Mr. Rubin's reason for excluding I&I costs from the customer charge.

A. Mr. Rubin excludes I&I costs from the customer charge because he contends that I&I costs are not incurred when a new customer is added to the system.

Q. Do you agree with that statement?

A. No, I do not. Mr. Rubin adequately describes the causes of I&I in the system on pages 5 and 6 of his direct testimony. These causes include groundwater entering the system through broken pipes, defective pipe joints, illegal connection of foundation drains, leaks through manholes and manhole covers, and possible cross connections with storm sewers. All of these causes of I&I are directly related to adding new customers. In fact, they are the predominant cause of additional I&I flow. When the collection system is extended to add new customers, you have more pipe in the ground with the potential for defective joints, added service laterals where additional joints are created, additional manholes for potential leakage, additional property-owners who may connect their downspouts or foundation drains, and additional storm sewers that potentially could lead to cross connections. Mr. Rubin is simply wrong that additional customers do not cause additional I&I flow.

Q. Is it proper to recover a portion of the costs associated with I&I flow in the customer charge?

A. Yes, it is. In the text "Financing and Charges for Wastewater Systems", published by the Water Environment Federation (WEF), Chapter 8,

"Development and Design of a Schedule of Rates and Charges", discusses fixed charges on pages 146 and 147, where it states:

> "Finally, a meter charge and service charge may be combined with a quantity allowance to establish a minimum charge. In this case, a fixed charge could recover all or a portion of volume-related costs (including infiltration and inflow [I/I] costs allocated on a customer basis) as part of the minimum."

Further in the same chapter discussing fixed charges, on page 154, it states:

> "For those rate designs that include a fixed charge, additional revenue stability may be achieved by recovering some of those costs allocated to volume and strength parameters through the customer charge. For example, I/I costs allocated in proportion to customers are often recovered through the fixed-charge component."

Q. How do you propose to recover the costs associated with I&I flow?

A. Consistent with the text, "Financing and Charges for Wastewater Systems", I have allocated two-thirds of the costs associated with I&I flow to customer charges and one-third to volume charges. The one-third of I&I costs to the volume charge recognizes that larger customers have larger impervious areas such as parking lots and roof tops which cause additional runoff.

The two-thirds allocation of I&I costs to the customer charge is appropriate and properly reflects the cost causation of I&I flow and the fixed cost recovery of such costs. Based on my revised cost allocation study, the revised customer costs with the lower I&I costs result in a monthly cost of $9.54. I would recommend the Company's originally proposed customer charge of $20.00 per month be lowered to $15.00 to avoid substantially decreasing the effective existing rate. The proposed commercial customer charge will be lowered from $40 per month to $30 per month. The volume

rate will be increased to recover the lost revenue as a result of lowering the customer charges.

Q. Are customer charges for sewer utilities in Pennsylvania common at this level?

A. Yes. See the attached Exhibit No. 7-R-2, which shows a summary of the Commission-approved rates for Pennsylvania sewer utilities. The applicable tariff pages are also attached. Most of the customer charges shown on the summary far exceed the $15.00 per month customer charge proposed for Northeast.

Q. What do you recommend regarding Mr. Rubin's proposed $6.70 customer charge?

A. I recommend that it be rejected.

Q. Please comment on Mr. Rubin's recommendation for low-income customers.

A. The Company proposed a customer charge for low income customers of $7.00 per month or 35% of the $20.00 originally proposed residential customer charge. Consistent with lowering the proposed customer charge to $15.00 explained above, the low income rate would also be lowered to $5.25 or a $9.75 monthly reduction for low income customers. This is consistent with the Company's water tariff for low income customers.

Mr. Rubin suggests an alternative calculation for low income users because his recommended customer charge of $6.70 per month is too low. At 35% of his $6.70, the low income charge would be $2.35 or only a $4.35 reduction in the bill. This is another reason to reject Mr. Rubin's

recommendation. To remedy this, Mr. Rubin recommends a 15% reduction in the total bill for low income customers. This method would produce different reductions for each customer depending on the level of usage.

The Company's low income tariff is straight forward, is consistent with the water tariff, and provides a significant and uniform reduction for each low income customer. The Company's revised proposal should be approved and Mr. Rubin's recommendation should be rejected.

Q. Does this complete your rebuttal testimony at this time?

A. Yes, it does.

EXHIBIT NO. 7-R-1 (Northeast)

EXHIBIT NO. 7-R-1
WITNESS: P. R. HERBERT

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS

HERSHEY, PENNSYLVANIA

REVISED

COST OF SERVICE ALLOCATION STUDY
AS OF DECEMBER 31, 2010
AND
PROPOSED CUSTOMER RATES

Gannett Fleming
Valuation and Rate Division

Harrisburg, Pennsylvania **Calgary, Alberta** **Valley Forge, Pennsylvania**

052138

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS - REVISED
COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010

Customer Classification	Cost of Service		Revenues, Present Rates		Revenues, Proposed Rates		Proposed Increase	
	Amount***	Percent	Amount	Percent	Amount	Percent	Amount	Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential*	$ 2,514,631	87.3%	$ 776,683	91.8%	$2,546,725	88.4%	$ 1,770,042	227.9%
Commercial**	365,761	12.7%	69,829	8.2%	333,915	11.6%	264,086	378.2%
Total Sales	2,880,392	100.0%	846,512	100.0%	2,880,640	100.0%	2,034,128	240.3%
Other Revenues	92,916		27,307		92,916		65,609	240.3%
Total	$ 2,973,308		$ 873,819		$ 2,973,556		$ 2,099,737	240.3%

* Includes revenue from Unmetered Sales.

** Includes revenue from Unmetered Sales.

***Revised based on 95% flow and 5% I&I.

Schedule A

PENNSYLVANIA AMERICAN WATER COMPANY
WASTEWATER OPERATIONS

ALLOCATION OF COST OF SERVICE BY FUNCTION TO CUSTOMER CLASSIFICATIONS

Description	Flow	Infiltration & Inflow	Customer Facilities	Customer Accounting	Total
(1)	(2)	(5)	(6)	(7)	(8)
Total Cost of Service	$ 2,440,367	$ 128,437	$ 194,840	$ 116,749	$ 2,880,393
Factor Reference	A	D	B	C	
Residential					
Factor	0.8543	0.9491	0.9833	0.9965	
Cost of Service	$ 2,084,805	121,899	191,586	116,341	2,514,631
Commercial					
Factor	0.1457	0.0509	0.0167	0.0035	
Cost of Service	$ 355,561	6,537	$ 3,254	409	$ 365,761
Total	2,440,366	128,436	194,840	116,750	$ 2,880,392

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COSTS BY FUNCTION TO CUSTOMER CLASSIFICATIONS

FACTOR A. ALLOCATION OF FLOW COSTS.

Factors are based on the pro forma test year average daily consumption for each customer classification.

Classification	Average Daily Consumption, 100 gallons	Allocation Factor
(1)	(2)	(3)
Residential	3,540	0.8543
Commercial	604	0.1457
Total	4,144	1.0000

FACTOR B. ALLOCATION OF COSTS ASSOCIATED WITH CUSTOMER FACILITIES.

Factors are based on the estimated relative cost of customer facilities, as follows:

Customer Classification	Service Equivalents	Allocation Factor
(1)	(2)	(3)
Residential	3,425	0.9833
Commercial	58	0.0167
Total	3,483	1.0000

PENNSYLVANIA WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS
BASIS FOR ALLOCATING CUSTOMER FACILITIES TO CUSTOMER CLASSIFICATIONS

		Residential		*Commercial*		*Total*	
Meter Size	5/8" Equivalent	Number of Meters	Weighting	Number of Meters	Weighting	Number of Meters	Weighting
(1)	(2)	(3)	(4)=(2)X(3)	(5)	(6)=(2)X(5)	(17)	(18)
5/8	1.0	3,425	3,425	7	7	3,432	3,432
3/4	1.5	0	0	0	0	0	0
1	2.5	0	0	2	5	2	5
1-1/2	5.0	0	0	0	0	0	0
2	8.0	0	0	3	21	3	21
3	15.0	0	0	0	0	0	0
4	25.0	0	0	1	25	1	25
6	50.0	0	0	0	0	0	0
8	80.0	0	0	0	0	0	0
10	115.0	0	0	0	0	0	0
Total		3,425	3,425	12	58	3,437	3,483

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COSTS BY FUNCTION TO CUSTOMER CLASSIFICATIONS

FACTOR C. ALLOCATION OF COSTS ASSOCIATED WITH BILLING AND COLLECTING.

Factors are based on the number of customers.

Customer Classification	Number of Customers	Allocation Factor
(1)	(2)	(3)
Residential	3,425	0.9965
Commercial	12	0.0035
Total	3,437	1.0000

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COSTS BY FUNCTION TO CUSTOMER CLASSIFICATIONS

FACTOR D. ALLOCATION OF COSTS ASSOCIATED WITH INFILTRATION AND INFLOW.

Factors are based on a 1/3-2/3 weighting of flow and number of customers.

Customer Classification	Average Daily Flow		Number of Customers		Allocation Factor
	Factor A	Weight	Factor C	Weight	
(1)	(2)	(3)=(2) x 0.3333	(4)	(5)=(4) x 0.6667	(6)=(3)+(5)
Residential	0.8543	0.2847	0.9965	0.6644	0.9491
Commercial	0.1457	0.0486	0.0035	0 0023	0.0509
Total	1.0000	0.3333	1.0000	0.6667	1.0000

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS
COST OF SERVICE FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2010, ALLOCATED TO COST FUNCTIONS

Account		Factor Ref.	Cost of Service	Flow	Infiltration & Inflow	Customer Facilities	Customer Accounting
(1)		(2)	(3)	(4)	(7)	(8)	(9)
OPERATION AND MAINTENANCE EXPENSES							
	COLLECTION						
615.1	Purchased Power	1	0	0	0	0	0
616.1	Purchased Fuel	1	0	0	0	0	0
633.1	Contract Services - Legal	1	726	690	36	0	0
675.1	Miscellaneous Operating Expense	1	1,038	986	52	0	0
675.1	Miscellaneous Maintenance Expense	1	992	942	50	0	0
	TOTAL COLLECTION EXPENSE - OPERATION		2,756	2,618	138	0	0
	SEWAGE TREATMENT						
601.3	Salary and Wages	1	157,378	149,509	7,869	0	0
601.4	Salary and Wages	1	159	151	8	0	0
615.3	Purchased Water	1	113,804	108,114	5,690	0	0
618.3	Chemicals	1	24,144	22,937	1,207	0	0
620.3	Materials and Supplies - Operation	1	0	0	0	0	0
631.3	Contract Services - Engineering	1	0	0	0	0	0
633.3	Contract Services - Legal	1	0	0	0	0	0
634.3	Contract Services - Management	1	0	0	0	0	0
635.3	Contract Services Test	1	15,870	15,077	794	0	0
636.3	Contract Services - Operation	1	0	0	0	0	0
641.3	Rental of Building	1	0	0	0	0	0
642.3	Rental of Equipment	1	0	0	0	0	0
650.3	Transportation	1	0	0	0	0	0
620.4	Materials and Supplies - Maintenance	1	2,590	2,461	130	0	0
636.4	Contract Services - Maintenance	1	0	0	0	0	0
675.4	Misc. Maintenance Expense	1	14,685	13,951	734	0	0
675.3	Misc. Operating Expense	1	147,100	139,745	7,355	0	0
	TOTAL SEWAGE TREATMENT EXPENSE		475,730	451,944	23,787	0	0

PENNSYLVANIA AMERICAN WATER COMPANY

NORTHEAST WASTEWATER OPERATIONS

COST OF SERVICE FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2010, ALLOCATED TO COST FUNCTIONS

Account (1)		Factor Ref. (2)	Cost of Service (3)	Flow (4)	Infiltration & Inflow (7)	Customer Facilities (8)	Customer Accounting (9)
	TRANSMISSION						
601.5	Salary and Wages	1	0	0	0	0	0
601.6	Salary and Wages	1	6,408	6,088	320	0	0
604.5	Employee Pension and Benefits	1	0	0	0	0	0
615.5	Purchased Power	1	0	0	0	0	0
620.5	Materials and Supplies	1	0	0	0	0	0
631.5	Contract Services - Engineering	1	0	0	0	0	0
636.5	Contract Services	1	0	0	0	0	0
641.5	Rental of Building	1	0	0	0	0	0
642.5	Rental of Equipment	1	0	0	0	0	0
650.5	Transportation	1	0	0	0	0	0
	Miscellanous Operating Expenes	1	0	0	0	0	0
	TOTAL T & D EXPENSE OPERATION		6,408	6,088	320	0	0
620.6	Materials and Supplies	1	3,347	3,180	167	0	0
636.6	Contract Services	1	0	0	0	0	0
675.6	Miscellaneous Maintenance Expense	1	26,750	25,413	1,338	0	0
675.5	Miscellaneous Operating Expense	1	0	0	0	0	0
	TOTAL T & D EXPENSE - MAINTENANCE		30,097	28,592	1,505	0	0
	TOTAL T & D EXPENSE		36,505	34,680	1,825	0	0

PENNSYLVANIA AMERICAN WATER COMPANY

NORTHEAST WASTEWATER OPERATIONS

COST OF SERVICE FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2010, ALLOCATED TO COST FUNCTIONS

Account (1)		Factor Ref. (2)	Cost of Service (3)	Flow (4)	Infiltration & Inflow (7)	Customer Facilities (8)	Customer Accounting (9)
	CUSTOMER ACCOUNTS						
601.7	Salary and Wages	3	0	0	0	0	0
620.7	Materials and Supplies	3	0	0	0	0	0
633.7	Contract Services - Legal	3	0	0	0	0	0
634.7	Contract Services- Management	3	0	0	0	0	0
636.7	Contract Services	3	0	0	0	0	0
642.7	Rental of Equipment	3	0	0	0	0	0
650.7	Transporation	3	0	0	0	0	0
657.7	Insurance	3	0	0	0	0	0
670.7	Bad Debts	3	77,774	0	0	0	77,774
675.7	Miscellaneous Expense	3	2,741	0	0	0	2,741
	TOTAL CUSTOMER ACCOUNTING EXPENSE		80,515	0	0	0	80,515
	ADMINISTRATIVE AND GENERAL EXPENSES						
601.8	Salaries and Wages	4	56,400	44,150	2,324	0	9,926
603.8	Salaries of Officiers	4	0	0	0	0	0
604.8	Employee Pension & Benefits	5	52,669	47,787	2,512	0	2,370
615.8	Purchased Power	4	0	0	0	0	0
620.8	Materials and Supplies	4	0	0	0	0	0
631.8	Contract Services	4	0	0	0	0	0
632.8	Contract Services - Accounting	4	0	0	0	0	0
633.8	Contract Services - Legal	4	0	0	0	0	0
634.8	Contract Services - Management	4	0	0	0	0	0
635.8	Contract Services - Test	4	0	0	0	0	0
636.8	Contract Services	4	0	0	0	0	0
641.8	Rental of Building	4	0	0	0	0	0
642.8	Rental of Equipment	4	0	0	0	0	0
650.8	TransporTation	4	19,816	15,512	816	0	3,488
656.8	Insurance - Vehicles	4	0	0	0	0	0

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS
COST OF SERVICE FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2010, ALLOCATED TO COST FUNCTIONS

	Account	Factor Ref.	Cost of Service	Flow	Infiltration & Inflow	Customer Facilities	Customer Accounting
	(1)	(2)	(3)	(4)	(7)	(8)	(9)
657.8	Insurance - Vehicles	4	0	0	0	0	0
658.8	Workers Compensation	5	0	0	0	0	0
659.8	Insurance	4	0	0	0	0	0
660.8	Advertising	4	0	0	0	0	0
666.8	Amortization of Rate Case	8	76,484	64,644	3,404	3,067	5,369
667.8	Regulatory Commission	4	0	0	0	0	0
675.8	Miscellaneous Expense	4	3,542	2,773	146	0	623
	TOTAL A & G EXPENSE		208,911	174,865	9,202	3,067	21,777
	Total Operation & Maintenance Expenses		804,417	664,107	34,951	3,067	102,292
	DEPRECIATION EXPENSE						
354.20	Structures and Improvements - Collection	1	79	75	4	0	0
354.30	Structures and Improvements - Pumping	1	24,559	23,331	1,228	0	0
354.40	Structures and Improvements - Treatment	1	165,776	157,487	8,289	0	0
354.70	Structures and Improvements - General	6	17,606	14,953	787	1,701	165
355.00	Power Generation Equipment	1	3,472	3,298	174	0	0
360.10	Collection Sewers - Force Mains	1	43,425	41,254	2,171	0	0
361.10	Collection Sewers - Gravity Mains	1	2,424	2,303	121	0	0
361.20	Manholes	1	4,547	4,320	227	0	0
363.00	Services	2	46,318	0	0	46,318	0
364.00	Flow Measuring Devices	1	1,436	1,364	72	0	0
371.00	Pumping Equipment	1	22,867	21,724	1,143	0	0
380.00	Treatment Equipment	1	229,658	218,175	11,483	0	0
381.00	Plant Sewers	1	12,993	12,343	650	0	0
382.00	Outfall Sewer Lines	1	6,873	6,530	344	0	0
390.00	Office Furniture and Equipment	4	699	547	29	0	123
391.00	Transportation Equipment	4	1,724	1,350	71	0	303
393.00	Tools, Shop and Garge Equipment	4	246	193	10	0	43
394.00	Laboratory Equipment	1	5,103	4,848	255	0	0
396.00	Communications Equipment	4	20,261	15,860	835	0	3,566
397.00	Miscellaneous Equipment	4	500	391	21	0	88
	Total Depreciation Expense		610,566	530,345	27,913	48,019	4,289

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS
COST OF SERVICE FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2010, ALLOCATED TO COST FUNCTIONS

Account		Factor Ref.	Cost of Service	Flow	Infiltration & Inflow	Customer Facilities	Customer Accounting
(1)		(2)	(3)	(4)	(7)	(8)	(9)
	Taxes Other Than Income						
685100	Utility Reg Assessment Fee	8	18,143	15,334	807	728	1,274
685200	Property Taxes	7	112,218	95,307	5,016	10,818	1,077
685320	Payroll Taxes	5	17,850	16,195	851	0	803
	Total Taxes, Other Than Income		148,211	126,837	6,675	11,545	3,154
	Total Operating Expense		1,563,194	1,321,289	69,539	62,631	109,735
4091	**Income Taxes**	7	455,852	387,155	20,377	43,944	4,376
	Utility Income Available for Return	7	954,263	810,456	42,656	91,991	9,161
	Total Cost of Service		2,973,309	2,518,899	132,571	198,566	123,272
	Less: Other Water Revenues	8	(92,916)	(78,533)	(4,135)	(3,726)	(6,523)
	Total Cost of Service Related to Sales of Wastewater Services		2,880,393	2,440,367	128,437	194,840	116,749

PENNSYLVANIA AMERICAN WATER
NORTHEAST WASTEWATER OPERATIONS

FACTORS FOR ALLOCATING COST OF SERVICE TO COST FUNCTIONS

Reference	Flow	Infiltration & Inflow	Customer Facilities	Customer Accounting	Total
Factor 1 - Flow and I&I	0.9500	0.0500			1.0000
Factor 2 - Customer Facilities			1.0000		1.0000
Factor 3 - Customer Accounting				1.0000	1.0000
Factor 4 - O&M Exp less Power and Chemicals					
Cost	358,191	18,852	0	80,515	457,558
Factor	0.7828	0.0412	0.0000	0.1760	1.0000
Factor 5 - Labor Expense					
Cost	199,898	10,521	0	9,926	220,345
Factor	0.9073	0.0477	0.0000	0.0450	1.0000
Factor 6 - Rate Base less Allocated Costs					
Cost	9,845,746	518,197	1,120,018	108,652	11,592,613
Factor	0.8493	0.0447	0.0966	0.0094	1.0000
Factor 7 - Rate Base					
Cost	9,159,260	482,065	1,039,698	103,988	10,785,011
Factor	0.8493	0.0447	0.0964	0.0096	1.0000
Factor 8 - Total Cost of Service					
Cost	1,241,310	65,328	58,836	103,092	1,468,567
Factor	0.8452	0.0445	0.0401	0.0702	1.0000
Factor 9 - O&M Exp					
Cost	664,107	34,951	3,067	102,292	804,417
Factor	0.8256	0.0434	0.0038	0.1272	1.0000

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS
COST OF SERVICE FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2010, ALLOCATED TO COST FUNCTIONS

	Account (1)	Factor Ref. (2)	Cost of Service (3)	Flow (4)	Infiltration & Inflow (7)	Customer Facilities (8)	Customer Accounting (9)
RATE BASE							
353.20	Land and Land Rights - Collection	1	3	3	0	0	0
353.30	Land and Land Rights - Pumping	1	3	3	0	0	0
353.40	Land and Land Rights - Treatment	1	3	3	0	0	0
354.20	Structures and Improvements - Collection	1	2,555	2,427	128	0	0
354.30	Structures and Improvements - Pumping	1	141,019	133,968	7,051	0	0
354.40	Structures and Improvements - Treatment	1	3,106,913	2,951,567	155,346	0	0
354.70	Structures and Improvements - General	4	376,884	295,025	15,528	0	66,332
355.00	Power Generation Equipment	1	41,201	39,141	2,060	0	0
360.10	Collection Sewers - Force Mains	1	1,719,462	1,633,489	85,973	0	0
361.10	Collection Sewers - Gravity Mains	1	107,817	102,426	5,391	0	0
361.20	Manholes	1	129,509	123,034	6,475	0	0
363.00	Services	2	1,120,018	0	0	1,120,018	0
364.00	Flow Measuring Devices	1	28,075	26,671	1,404	0	0
371.00	Pumping Equipment	1	554,597	526,867	27,730	0	0
380.00	Treatment Equipment	1	3,342,640	3,175,508	167,132	0	0
381.00	Plant Sewers	1	541,405	514,335	27,070	0	0
382.00	Outfall Sewer Lines	1	71,859	68,266	3,593	0	0
390.00	Office Furniture and Equipment	4	12,356	9,672	509	0	2,175
391.00	Transportation Equipment	4	22,500	17,613	927	0	3,960
393.00	Tools, Shop and Garge Equipment	4	4,063	3,181	167	0	715
394.00	Laboratory Equipment	1	68,191	64,781	3,410	0	0
396.00	Communications Equipment	4	192,480	150,673	7,930	0	33,876
397.00	Miscellaneous Equipment	4	9,060	7,092	373	0	1,595
	TOTAL UTILITY PLANT IN SERVICE SEWER		11,592,613	9,845,746	518,197	1,120,018	108,652
	Other Rate Base Items:						
	Cash Working Capital	9	24,849	20,515	1,078	94	3,161
	Materials and Supplies	6	4,190	3,559	187	405	39
	Deferred, Accrued and Prepaid Taxes	6	(836,641)	(710,559)	(37,398)	(80,820)	(7,864)
	Total Other Rate Base Elements		(807,602)	(686,485)	(36,132)	(80,320)	(4,664)
	Total Original Cost Measure of Value		10,785,011	9,159,260	482,065	1,039,698	103,988

PENNSYLVANIA AMERICAN WATER
NORTHEAST WASTEWATER OPERATIONS

CALCULATION OF CUSTOMER COST PER MONTH

		Per Month
(1) Cost Related to Customer Facilities	$194,840	
(2) Meter Equivalents X 12	41,800	
(3) Cost per Bill - Meter related		$4.66
(4) Cost Related to Customer Accounting	116,749	
(5) Number of Bills	41,249	
(6) Cost per Bill		$2.83
(7) Cost Related to I&I	128,437	
(8) Percentage of I&I Costs to Customer Charge	67%	
(9) Cost Related to I&I allocated to Customer Charge	85,629	
(10) Meter Equivalents X 12	41,800	
(11) Cost per Bill - I&I Related		$2.05
(12) Total Customer Costs (3)+(6)		$9.54

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS

SUMMARY OF PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2009

Customer Class	Present Rates Monthly Customer Charge	Present Rates Usage Charge Per 100 Gallons	Proposed Rates Monthly Customer Charge	Proposed Rates Usage Charge Per 100 Gallons
Lehman Pike				
Residential				
5/8" & 3/4"	$9.45	$0.2690	$15.00	$1.4970
5/8" & 3/4" Low Income	9.45	$0.2690	5.25	$1.4970
1"	15.75	$0.2690	15.00	$1.4970
1 /2"	31.50	$0.2690	15.00	$1.4970
2"	50.40	$0.2690	15.00	$1.4970
3"	94.50	$0.2690	15.00	$1.4970
4"	157.50	$0.2690	15.00	$1.4970
6"	315.00	$0.2690	15.00	$1.4970
Residential Flat Rate	21.56		71.89	
Commercial				
5/8" & 3/4"	9.45	0.2960	30.00	1.4970
1"	15.75	0.2960	30.00	1.4970
1 /2"	31.50	0.2960	30.00	1.4970
2"	50.40	0.2960	30.00	1.4970
3"	94.50	0.2960	30.00	1.4970
4"	157.50	0.2960	30.00	1.4970
6"	315.00	0.2960	30.00	1.4970
Availability Charge	7.00		-	
Winona Lakes				
Customer Charge	27.33	-	15.00	1.4970
Customer Charge - Low Income	27.33	-	5.25	1.4970
Availability Charge	15.00	-	-	
Blue Mountain				
Residential and Commercial				
Customer Charge	20.00		15.00	
Customer Charge - Low Income	20.00		5.25	
Commercial Customer Charge			30.00	
Minimum (2,667 gallons)		-		NA
Next 2,333 gallons or First 5,000 gallons		0.1750		1.4970
All Over 5,000 gallons		0.3000		1.4970

PENNSYLVANIA AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS
SUMMARY OF REVENUE UNDER PRESENT AND PROPOSED RATES
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010

Customer Classification	Proforma Present Rates Revenue 12/31/2010	Bill Analysis Revenues at Present Rates	Adjustment Factor	Bill Analysis Revenues Proposed Rates	Revenues Under Proposed Rates
(1)	(2)	(3)	(4)=(2)/(3)	(5)	(6)=(5)x(4)
Residential	$776,683	$776,607	1.00009747	$2,546,476	$2,546,725
Commercial	69,829	69,874	0.99935411	334,131	333,915
Total Sales	$846,512	$846,481		$2,880,607	$2,880,640
Other Operating Revenues	27,307	27,307		92,916	92,916
Total	$ 873,819	$ 873,788		$ 2,973,523	$ 2,973,556

PENNSYLVANIA-AMERICAN WATER COMPANY
NORTHEAST WASTEWATER OPERATIONS
SUMMARY OF APPLICATION OF PRESENT RATES TO CUSTOMER BILL ANALYSIS
FOR THE TWELVE MONTHS ENDING DECEMBER 31, 2010

Rate Zone	Residential	Commercial	Total
(1)	(2)	(3)	(4)
Present Rate Application			
Lehman Pike	$527,745	$69,623	$597,368
Winona Lakes	27,367		27,367
Blue Mountain	221,495	251	221,746
Total	776,607	69,874	846,481
Proposed Rate Application			
Lehman Pike	$1,756,991	$333,400	$2,090,390
Winona Lakes	68,629		68,629
Blue Mountain	720,856	731	721,587
Total	2,546,476	334,131	2,880,607

PENNSYLVANIA-AMERICAN WATER COMPANY
BLUE MOUNTAIN WASTEWATER OPERATIONS

APPLICATION OF PRESENT RATES AND PROPOSED RATES TO CONSUMPTION ANALYSIS
YEAR ENDED DECEMBER 31, 2010

Rate Block 100 Gallons (1)	Number Of Bills (2)	Present Total Consumption (3)	Present Rate (4)	Revenue (5)	Proposed Total Consumption (6)	Proposed Rate (7)	Proposed Revenue (8)
		Residential - Monthly					
Service Charge w/ Minimum 2,667 gallons	8,807	199,052	20.00	176,149		15.00	132,112
Low Income	108	2,441	20.00	2,160		5.25	567
Next 2,333 gallons or First 5,000 gallons		113,906	0.1750	19,934	315,399	1.4970	472,152
All Over 5,000 gallons		77,505	0.3000	23,252	77,505	1.4970	116,025
Subtotal	0	191,411		43,186	392,904		588,177
Total Residential	8,915	392,904		221,495	392,904		720,856
		Commercial - Monthly					
Service Charge w/ Minimum 2,667 gallons	10	101	20.00	204		30.00	306
Next 2,333 gallons or First 5,000 gallons		63	0.1750	11	164	1.4970	246
All Over 5,000 gallons		120	0.3000	36	120	1.4970	180
Subtotal	0	183		47	284		425
Total Commercial	10	284		251	284		731
Total Blue Mountain	8,926	393,188		221,746			721,587

PENNSYLVANIA-AMERICAN WATER COMPANY
LEHMAN PIKE WASTEWATER OPERATIONS

APPLICATION OF PRESENT RATES AND PROPOSED RATES TO CONSUMPTION ANALYSIS
YEAR ENDED DECEMBER 31, 2010

Rate Block 100 Gallons (1)	Number Of Bills (2)	Total Consumption (3)	Present Rate (4)	Revenue (5)	Proposed Rate (6)	Proposed Revenue (7)
			Residential - Monthly			
Customer Charge	30,419		9.45	287,463	15.00	456,290
Low Income	600		9.45	5,670	5.25	3,150
All Usage	0	858,700	0.2690	230,990	1.4970	1,285,474
Subtotal	0	858,700		230,990		1,285,474
Total Residential	31,019	858,700		524,123		1,744,913
			Residential Monthly - Flat Rate			
Customer Charge	168		21.56	3,622	71.89	12,078
Total - Residential	31,187	858,700		527,745		1,756,991
			Commercial - Monthly			
Customer Charge						
5/8" & 3/4"	69		9.45	651	30.00	2,066
1"	22		15.75	347	30.00	660
2"	32		50.40	1,613	30.00	960
4"	12		157.50	1,890	30.00	360
Total - Service Charge	135			4,500		4,046
All Usage	0	220,009	0.2960	65,123	1.4970	329,353
Subtotal	0	220,009		65,123		329,353
Total Commercial	135	220,009		69,623		333,400
			Availability Charge - Monthly			
Customer Charge	6,403		7.00	44,822	0.00	0
Total - Lehman Pike	37,725	1,078,709		642,189		2,090,390

PENNSYLVANIA-AMERICAN WATER COMPANY
WINONA LAKES WASTEWATER OPERATIONS

APPLICATION OF PRESENT RATES AND PROPOSED RATES TO CONSUMPTION ANALYSIS
YEAR ENDED DECEMBER 31, 2010

Rate Block 100 Gallons (1)	Number Of Bills (2)	Present Consumption (3)	Present Rate (4)	Revenue (5)	Proposed Consumption (6)	Proposed Rate (7)	Proposed Revenue (8)
			Residential - Monthly				
Customer Charge	989	35,459	27.33	27,039		15.00	14,840
Low Income	12	430	27.33	328		5.25	63
All Usage	0	0	0.0000	0	35,889	1.4970	53,726
Subtotal	0	0		0	35,889		53,726
Total Residential	1,001	35,889		27,367	35,889		68,629
			Availability Charge				
Service Charge	192		0.00	0	0	0.00	0
Total Winona Lakes	1,193	35,889		27,367	35,889		68,629

EXHIBIT NO. 7-R-2 (Northeast)

Monthly Residential Rates for Sewer by Company

Company Name	Flat Rate	Meter Size	Minimum Charge	EDU	Charge Per 1,000 Gallons	Usage Amount 1,000 Gallons
Cecil Wastewater Treatment Company Inc	$ 34.79					
Clean Treatment Sewage Company	$ 58.47					
Delaware Sewer Company	$ 52.00					
Glendale Yearound Sewer Company	$ 20.90					
Johnstown Regional Sewage			$ 7.25			0-2,000
					3.62	2,000-13,333
					2.04	13,333-33,333
					1.23	33,333-66,667
					0.87	66,667-100,000
					0.76	Over 100,000
Little Washington Wastewater Company						
Pinecrest Division - Inside Development	$ 41.95					
Pinecrest Division - Outside Development	$ 50.00					
Willistown Woods Division			$ 42.00		2.40	
Gettysburg Division			$ 44.00		6.13	
East Bradford Division			$ 60.00		7.66	
Twin Hills Division			$ 47.00		1.76	
Plumsock Division			$ 60.00		7.91	
Media Division		5/8	$ 5.07		3.20	
		3/4	$ 7.20		3.20	
		1	$ 12.82		3.20	
		1 1/2	$ 28.94		3.20	
		2	$ 51.34		3.20	
		3	$ 115.60		3.20	
		4	$ 205.35		3.20	
		6	$ 461.88		3.20	
		8	$ 821.10		3.20	
Bridlewood Division - Family Homes			$ 36.00		1.52	
Bridlewood Division - Townhomes			$ 31.00		1.52	
White Haven Division - Metered			$ 41.35	per EDU	1.20	
White Haven Division - Unmetered	$ 41.35			per EDU		
Eagle Rock Division - Step 1			$ 32.25	per EDU	1.20	
Eagle Rock Division - Step 2			$ 35.50	*per EDU*	1.20	
Thornhurst Division - Step 1			$ 36.00	per EDU	0.60	
Thornhurst Division - Step 2			$ 46.75	per EDU	120.00	
Thornhurst Division - Unmetered	$ 35.00					
Rivercrest Division			$ 27.00		5.02	
Little Washington Division			$ 67.00		5.15	
Laurel Lakes Division - Step 1			$ 36.00	per EDU	0.60	
Laurel Lakes Division - Step 2			$ 44.00	per EDU	1.20	

Monthly Residential Rates for Sewer by Company

Company Name	Flat Rate	Meter Size	Minimum Charge	EDU	Charge Per 1,000 Gallons	Usage Amount 1,000 Gallons
Deerfield Knoll Division			$ 45.00		3.37	
CS Sewer Division	$ 20.66					
Peddlers View Division			$ 49.00		4.75	
The Greens at Penn Oaks Division			$ 90.00	per EDU	1.50	
Newlin Green Division			$ 90.00	per EDU	1.50	
Woodloch Springs Division - Metered			$ 47.00	per EDU	1.20	
Woodloch Springs Division - Unmetered	$ 47.00			per EDU		
Loren K. Dixon Sewer Works	$ 15.00					
Manwalamink Sewer Company - Flat Rate	$ 26.50					
Manwalamink Sewer Company - Metered Rate			$ 10.00		3.98	10,000
					1.34	Over 10,000
Regent Acres Mobile Home Park	$ 30.75					
Reynolds Disposal Company	$ 27.57			per EDU		
School House Villages Wastewater Division	$ 45.00			per EDU		
Schuylkill Haven Borough					6.65	
Pennsylvania Utility Company			$ 18.94		10.62	
Wonderview Sanitary Facilities	$ 35.65					

Cecil Wastewater Treatment
Company, Inc.
P.O. Box 253
Cecil, PA 15321-0253

Supplement No. 18 to
Sewage-Pa. P.U.C. 1
9th Revised Page No. 4
Canceling 8th Revised Page No. 4

SCHEDULE OF FLAT RATES (I)

1. This Schedule Shall Apply to All Residential Customers.
The Rate Shall be $34.79 a Month.

(I) Indicates Increase

Issued: January 31, 1996

Effective: February 1, 1996

By: Edward E. Monaco
President

SCHEDULE OF RATES

Application:

This schedule is available to all residential and non-residential customers, as indicated below.

Charges:

(1) Residential Service: (I) (C)

A charge of $23.25 per month per lot shall be payable by the owner of each lot which is located within the development known as Marcel Lake Estates and upon which no structure has been erected. Such charge shall be payable irrespective of the quantity of sewage discharged.

A charge of $58.47 per month per lot shall be payable by the owner of each lot which is located within the development known as Marcel Lake Estates and upon which a structure has been erected. Such charge shall be payable irrespective of the quantity of sewage discharged.

The term "structure" shall be deemed to mean any building connected to the sewage collection system and containing any one or more of the following fixtures: a wash stand, a flush toilet, a bathtub, a shower or a kitchen faucet.

(2) Non-residential Service:	Per Month	(I) (C)
Each Outdoor Pool and Bathhouse	$58.47	
Each Clubhouse	$58.47	
Each Association Office or Maintenance Building	$58.47	
Each Bathhouse at Each Lake Site	$58.47	

Terms of Payment:

Charges will be billed payable monthly. (C)

(I) Indicated Increase
(C) Indicates Change

SCHEDULE OF RATES

Application:

This schedule is available to all residential customers as indicated below.

Charges:

(1) Residential Service:

A charge of $52.00 per month per lot shall be payable by the owner of each lot which is located within the development known as Wild Acres and upon which a structure has been erected which is connected to the Delaware Sewer Company facilities. Such charge shall be payable irrespective of the quantity of sewage discharged.

The term "structure" shall be deemed to mean any building connected to the sewage collection system and containing any one or more of the following fixtures: a wash stand, a flush toilet, a bathtub, a shower or a kitchen faucet.

Terms of Payment:

Charges will be billed payable monthly.

SCHEDULE OF RATES (I)

Application

This schedule is available to all customers.

Rates	Net Rate Per Quarter	Net Rate Per Month
Utilization at Homesites of 5 or less spigots	$62.70	$20.90
Each additional spigot at homesite above 5	8.64	2.88
Campsites with sewer lines extended thereto	41.80	13.93
Campsites which utilize dump station	16.59	5.53
Ski Slope	486.23	162.07
Swimming Pool up to 10,000 gallons capacity	66.76	22.25
Swimming Pool over 10,000 gallons capacity	332.80	110.93
Each Spigot other then Homesite or Campsite	17.41	5.80
Dump Station	272.03	90.68

Pursuant to the terms of the sales agreement utilized in connection with the sale of homesite lots within the Company's service territory, and pursuant to beneficial restrictive covenants filed of record on the Company's service territory, homesite lot owners are obligated to pay a charge when sewer lines are extended to their homesite lots and upon which no structure has been erected. Such charge, as established hereby, is $24.00 per lot per quarter and shall be paid irrespective of the fact that sewage is not discharged.

Terms of Payment

Charges will be billed and payable quarterly, or monthly (C)
at the option of the customer.

(I) Indicates Increase
(C) Indicates Change

SCHEDULE OF RATES AND CHARGES

Rates for Sewer Service (Treatment)

There is hereby imposed upon each property served by Johnstown Regional Sewage (JRS) and having the use thereof, a quarterly sewer rent or charge payable as hereinafter provided, for the use, whether direct or indirect, of JRS's system, based on the rates hereinafter set forth. All owners connected to JRS's system shall be billed according to the following schedule of sewer rates and the billing practice of JRS, by determining the total number of billing units for which such owners are responsible, and the following charges shall be imposed for each such billing unit:

QUARTERLY SEWER RATES, TO BE BILLED MONTHLY

SEWAGE VOLUME	RATES
0 - 6,000 gallons /3	$21.74 Minimum /3
6,000 - 40,000 gallons	$3.62 per 1,000 gallons
40,000 - 100,000 gallons	$2.04 per 1,000 gallons
100,000 - 200,000 gallons	$1.23 per 1,000 gallons
200,000 - 300,000 gallons	$0.87 per 1,000 gallons
ALL OVER - 300,000 gallons	$0.76 per 1,000 gallons

Sewage for properties not served by a metered public water connection shall receive an average bill. JRS reserves the right to have a meter installed and read to compute actual water consumed.

ADDITIONAL CHARGES AND FEES

Accounting and Clerical Fees		
Returned Check Fee	$35.00	
Inquiry Fee (Lien Status)	$15.00	Inquiries made to and check payable to JRS as administrative subcontractor.

SHUT OFF FEES (based upon agreements with local water suppliers):

Greater Johnstown Water Authority	$25.00 - includes both turn-off and turn-on
Southwest Central Water Authority	$50.00 - includes both turn-off and turn-on
Jackson Township Water Authority	$50.00 - includes both turn-off and turn-on
East Taylor Township Water Authority	$50.00 - includes both turn-off and turn-on
Highland Sewer and Water Authority	$25.00 - includes both turn-off and turn-on

SCHEDULE OF RATES

Meter Service (I)

Minimum Charge - for all metered customers.

Customer Charge	
Quarterly	Monthly
$ 125.85	$ 41.95

Pinecrest Unmetered Rates:

Residential-Inside Pinecrest Development $41.95 per month per equivalent dwelling unit

Residential-Outside Pinecrest Development $50.00 per month per equivalent dwelling unit.

Pinecrest Commercial Agreements:
Commercial- The Pinecrest commercial contracts have not been increased in this rate filing because they are not tariff customers. The Company will negotiate escalations to the contracts separately when warranted.

(I) Indicates Increase

SCHEDULE OF RATES

Meter Service

Customer Charge - for all metered customers for which no minimum allowance is given. **(I)**

Customer Charge		
Quarterly	Bi-Monthly	Monthly
$ 126.00	$ 84.00	$42.00

Consumption Charges: **(I)**

Wastewater will be charged for at the following rates:

For water used $2.40 / 1,000 gallons

Multiple Apartment Billing (Willistown Woods Area Only): **(I)**
For apartments that have multiple units and are metered through a master meter, the customer charge shall be calculated by multiplying the customer charge shown above by the number of dwelling units in the apartment being metered. There is no minimum allowance in this division. Therefore, all consumption shall be charged at the $2.40 per thousand gallon rate.

(I) Indicates Increase

SCHEDULE OF RATES

Meter Service (I)

Customer Charge - for all metered customers for which no minimum allowance is given.

	Customer Charge	
	Quarterly	Monthly
Residential	$132.00	$44.00
Commercial	$252.00	$84.00

Consumption Charges:

Waste Water will be charged for at the following rates:

For all water used $6.13 / 1,000 gallons

(I) Indicates Increase

SCHEDULE OF RATES

Meter Service

Customer Charge - for all metered customers.

Customer Charge Monthly	
$ 60.00	(I)

Consumption Charges:

Waste Water will be charged for at the following rates:

For all water used $7.66 / 1,000 gallons (I)

(I) Indicates Increase

SCHEDULE OF RATES

Meter Service

Customer Charge - for all metered customers. (I)

Minimum Charge	
Quarterly	Monthly
$ 141.00	$ 47.00

Consumption Charges: (I)

Wastewater will be charged for at the following rates:

For all water used $1.76 / 1,000 gallons

SCHEDULE OF RATES

Meter Service

Customer Charge - for all metered customers.

	Customer Charge Monthly	
	$ 60.00 ✓	(I)

Consumption Charges:

Wastewater will be charged for at the following rates:

For all water used	$7.91 / 1,000 gallons ✓	(I)

(I) Indicates Increase

SCHEDULE OF RATES

Meter Service

Customer Charge - for all metered customers.

Size	Customer Charge Quarterly	Monthly	(I)
5/8"	$ 15.21	$ 5.07	
3/4"	21.60	7.20	
1"	38.46	12.82	
1 ½"	86.82	28.94	
2"	154.02	51.34	
3"	346.80	115.60	
4"	616.05	205.35	
6"	1385.64	461.88	
8"	2463.30	821.10	

Consumption Charges:

Wastewater will be charged for at the following rates:

For water used in excess of the minimum allowance $3.20 / 1,000 gallons

(I) Indicates Increase

SCHEDULE OF RATES

Metered Rate Service (C)(I)

Residential Customers:

Customer Charge-Single Family Homes	$36.00 per month
Customer Charge-Townhomes	$31.00 per month

Commercial Customers:

Customer Charge-Apartment Complex	$8,344.00 per month
Customer Charge-Childrens World Daycare	$262.00 per month
Consumption Charge:Residential customers	$1.52 per thousand gallons

(C) Indicates Change
(I) Indicates Increase

SCHEDULE OF RATES
White Haven Borough Metered Service (C)(I)

Residential Customers:

Customer Charge	$41.35 per month per EDU
Consumption Charge	$1.20 per thousand gallons
Unmetered Residential	$41.35 per month per EDU

Commercial Customers:

Class A Charge	$62.50 per month per unit
Class B Charge	$37.50 per month per unit
Class C Charge	$25 per month per unit
Class D Charge	$41.35 per month per unit
Unmetered Commercial	$41.35 per month per unit
Consumption Charge (Class D charge only)	$1.20 per thousand gallons

Kidder Township Metered Service (I)

Kidder Township	$750.00 per year per EDU (O&M & debt service)

Municipal Service Contracts

Dennison Township	$240.00 per year per EDU (O&M fee only)
East Side Borough	$352.00 per year per EDU (O&M fee & debt service)
Penn Lake Park Borough	$240.00 per year per EDU (O&M fee only)
Foster Township	$348.00 per year per EDU (O&M fee only)

Please note that the municipal service contracts will be negotiated separately with the municipalities at the appropriate time.

(C) Indicates Change
(I) Indicates Increase

SCHEDULE OF RATES

Metered Service (C)(I)

All Residential metered customers.

		Customer Charge Monthly
Step 1:	Residential	$32.25 per month per EDU
	Consumption Charge	$1.20 per thousand gallons
Step 2:	Residential	$35.50 per month per EDU
	Consumption Charge	$1.20 per thousand gallons

Commercial metered Customers.

		Customer Charge Monthly
Step 1:	Eagle Rock Inn	$516 per month
	Eagle Rock Lodge	$161.25 per month
	Eagle Rock Clubhouse	$129 per month
	Other Commercial	$32.25 per month per EDU
	Consumption Charge	$1.20 per thousand gallons
Step 2:	Eagle Rock Inn	$568 per month
	Eagle Rock Lodge	$177.50 per month
	Eagle Rock Clubhouse	$142 per month
	Other Commercial	$35.50 per month per EDU
	Consumption Charge	$1.20 per thousand gallons

(I) Indicates Increase

SCHEDULE OF RATES

Metered Service (C)(I)

Residential & Non-Residential Customers:

Step 1:	Customer Charge	$36.00 per month per EDU
	Consumption Charge	$.60 per thousand gallons
Step 2:	Customer Charge	$46.75 per month per EDU
	Consumption Charge	$1.20 per thousand gallons

Clubhouse or other building Based on peak flow usage converted to an EDU basis

Unmetered Service

Residential	Lot with no building	$20.00 per quarter
		$36.00 per month

Note: In the event that two or more contiguous lots are merged in a deed into one lot under common ownership, the property owner shall be charged for one lot charge if the lot is vacant, or for no lot charge if a house has been established as a regular customer on the lot.

(C) Indicates Change
(I) Indicates Increase

SCHEDULE OF RATES

Meter Service

Customer Charge - for all metered customers. (I)

Minimum Charge	
Quarterly	Monthly
$ 81.00	$ 27.00

Consumption Charges: (I)

Wastewater will be charged for at the following rates:

For all water used $5.02 / 1,000 gallons

SCHEDULE OF RATES

Meter Service

Minimum Charge - for all Residential metered customers.

	Customer Charge Monthly	
Residential	$67.00	(I)

Consumption Charges:

Wastewater will be charged for at the following rates:

For all water used	$5.15 / 1,000 gallons	(I)

Contract with East Brandywine Township Water & Sewer Authority (EBTWSA)

The EBTWSA owns its collection system and bills its customers independently. Suburban Wastewater Company bills EBTWSA for the use of its wastewater treatment plant at the following rate: $5.49 per thousand gallons

(I) Indicates Increase

SCHEDULE OF RATES

Metered Service (C)(I)

All Residential metered customers.

		Customer Charge Monthly
Step 1:	Residential	$36.00 per EDU
	Consumption Charge	$.60 per thousand gallons
Step 2:	Residential	$44.00 per EDU
	Consumption Charge	$1.20 per thousand gallons

Note: The number of equivalent dwelling units (EDUs) to be billed for Non-Residential connections is determined by dividing the peak daily usage, based on measurements or reasonable estimates, by 230 gallons.

(C) Indicates Change
(I) Indicates Increase

SCHEDULE OF RATES

Metered Service (I)

Metered Rate Charge - for all Residential metered customers

Customer Charge:

	Monthly
Residential	$45.00

Consumption Charge:

For all consumption	$3.37 per thousand gallons

(I) Indicates Increase

SCHEDULE OF RATES

Unmetered Service

Residential Service:

Flat Rate	$20.66 per month

Residential Availability Service:

Flat Rate	$6.00 per month

Apartment Service:

Flat rate per equivalent dwelling unit as specified by the Department of Environmental Protection at 25 PA Code Section 73.17	$20.66 per month

Commercial Service:

Flat rate per equivalent dwelling unit as specified by the Department of Environmental Protection at 25 PA Code Section 73.17	$20.66 per month

SCHEDULE OF RATES

Meter Service

Customer Charge - for all metered customers for which no minimum allowance is given. **(I)**

Customer Charge		
Quarterly	Bi-Monthly	Monthly
$147.00	$98.00	$49.00

Consumption Charges:

Waste Water will be charged for at the following rates:

For all water used	$4.75 / 1,000 gallons	**(I)**

(I) Indicates Increase

SCHEDULE OF RATES

Meter Service

Customer Charge - for all metered customers.

	Minimum Charge	
	Quarterly	Monthly
Per EDU	$ 270.00	$ 90.00 ✓

Consumption Charges:

Wastewater will be charged for at the following rates:

For all water used ✓ $1.50 / 1,000 gallons

Note that all Residential customers will be charged the customer charge based on one (1) EDU. When the service to the clubhouse is made, billing for the clubhouse will be based on five (5) EDUs. There are no other non-Residential customers served in this rate division. Should there be occasion in the future to serve other non-Residential customers, an equivalent EDU factor will be required to be determined.

SCHEDULE OF RATES

Meter Service

Customer Charge - for all metered customers.

	Minimum Charge	
	Quarterly	Monthly
Per EDU	$ 270.00	$ 90.00

Consumption Charges:

Wastewater will be charged for at the following rates:

For all water used $1.50 / 1,000 gallons

Note that all Residential customers will be charged the customer charge based on one (1) EDU. There are no non-Residential customers served in this rate division at the present time. Should there be occasion in the future to serve other non-Residential customers, an equivalent EDU factor will be required to be determined.

SCHEDULE OF RATES

Metered Service (C)(I)

All Residential metered customers.

	Customer Charge Monthly
Residential	$47.00 per month per EDU
Consumption Charge	$1.20 per thousand gallons
Unmetered Residential	*$47.00 per month per EDU*

Commercial:

Woodloch Springs Clubhouse Facilities	$282.21 per month
Other Commercial Charge	$47.00 per month per EDU
Unmetered Residential	*$47.00 per month per EDU*
Consumption Charge	$1.20 per thousand gallons

Note: The number of equivalent dwelling units (EDUs) to be billed for Non-Residential connections is determined by dividing the peak daily usage, based on measurements or reasonable estimates, by 230 gallons.

(C) Indicates Change
(I) Indicates Increase

RATES

Rule 12. The charge to each customer shall be a flat rate of Fifteen ($15.00) Dollars per month. (I)

No customer's sewer service will be shut off for non-payment of bills or violation of any rules without the company's first complying with the shut-off procedure prescribed by Public Utility Commission rules and regulations.

(I) Indicates increase

Supplement No. 11
To Tariff Sewer – Pa. P.U.C. No. 1
Fifth Revised page No. 3
Canceling Fourth Revised page No. 3

MANWALAMINK SEWER COMPANY

SCHEDULE OF RATES

Flat Rates

Non Metered Rates

Customer Category	Monthly Rates
1. Residential Users	$ 26.50
2. Commercial Users	
(a) Small Commercial Users	$ 35.30
(b) Large Commercial Users	
1. Ridgetop Recreational Area Pool	$ 73.50
2. River Village Recreational Area Pool	$ 73.50
3. Sun Mountain Recreational Area Pool	$ 73.50
4. Shawnee Mountain Ski Area	$ 252.00

Application

This schedule is available to all customers.

Terms of Payment:

Bills for sewer service shall be due and payable monthly.

Issued: July 10, 2000

Effective: October 1, 2000

MANWALAMINK SEWER COMPANY

SCHEDULE OF RATES (continued)

Metered Rates (C)

Service Charge:
$10.00 Charge Per Month

Volume Charge:
In addition to a monthly service charge presented above, a volume charge based on metered water usage will be charged as follows:

	Rate Per 1,000 Gallons
For the First 10,000 gallons per month	$3.98
For All Over 10,000 gallons per month	$1.34

Multiple Unit Billing:
In cases where service is provided to several customers through a single meter, the bill is computed as follows:

Service Charge: Based on the actual number of units served through such meter

Plus: Volume charge computed by dividing the metered volume by the number of units. The dollar amount for a unit is calculated on the above rates and multiplied by the number of units.

Terms of Payment:
Bill for sewer service shall be due and payable monthly.

(C) Indicates Change

SCHEDULE OF FLAT RATES

This Schedule is available to all Domestic and Commercial Customers. All Customers served under this Schedule shall be subject to a monthly charge of $30.75. There are no industrial customers served by the Company.

SCHEDULE OF FLAT RATES (I)

Domestic and Commercial Service

Domestic Service

The following flat rate for domestic service shall apply to single family dwellings having their own unmetered water supply. Should a second facility (apartment, mobile home, etc.) be added to an existing service, same shall be billed as an individual domestic unit.

Domestic Service	Net Rate Per Quarter	
Each Domestic Unit	$82.70	(I)

Commercial Service

The quarterly rate for Commercial Service customers having their own source of unmetered water shall be as follows:

Basic commercial customer with no more than two (2) individual (men and women) rest rooms, one (1) floor drain, one (1) supply sink, one (1) utility sink and one (1) drinking fountain shall be classed as single commercial.

Each additional connection (stack tap or floor drain) shall be added at the rate indicated below.

Known heavy users, such as laundromats, car washes, or other water-intensive customers shall be billed at the same rates as metered customers with such quantities estimated on a monthly basis by a representative of Reynolds Disposal Company.

If such estimates are questioned by the customer, it shall be the responsibility of the customer to furnish metering devices with prior approval of such device by the Company.

Commercial Service	Per Quarter	
Each Commercial Unit	$82.70	(I)

(I) Indicates Increase

8) Wastewater Service Charge per EDU: For EDU's actually allocated to and used by an improved property to discharge domestic sanitary wastewater during any portion of any billing period the annual wastewater service charge per EDU shall consist of a fixed charge of fifteen dollars ($15.00) and an operating and maintenance charge of thirty dollars ($30.00), for a total wastewater service charge of forty five dollars ($45.00). total per EDU

5. Wastewater Service Charge by Owner of Multiple Use Improved Property: In the case of multiple use improved property sharing a common connection to the wastewater system or a common structure, each such classification of improved property shall pay a separate wastewater service charge, as though it were housed in a separate structure and had a direct and separate connection to the wastewater system, computed in accordance with the provisions of this Part I, Section A, Sub-Section 4, a), 1).

6. Owner and/or Customer to Provide Information to Company:

a) The owner of any improved property and/or customer discharging wastewater into the wastewater system shall furnish to the Company all information deemed essential or appropriate by the Company for the determination of all applicable wastewater service charges and surcharges. The costs of obtaining such information shall be borne by such owner of the improved property and/or customer. The Company reserves the right to review the disposition of customer wastewaters at any time service is in force.

b) In the event of the failure of the owner and/or customer to provide adequate information, the Company shall estimate the applicable wastewater service charge and surcharge based upon available information or until such time as adequate information is received. There shall be no rebate of past payment if the owner and/or customer refusal to provide such information results in overpayment.

BACK

BOROUGH OF SCHUYLKILL HAVEN
SCHUYLKILL COUNTY, PENNSYLVANIA

ORDINANCE NO. 1120

AN ORDINANCE AMENDING ORDINANCE NO. 1012 SETTING FORTH AND REDUCING SEWER CHARGES FOR ALL CUSTOMERS OF THE PUBLIC SEWER COLLECTION, CONVEYANCE, AND TREATMENT SYSTEM.

BE IT ENACTED and ORDAINED by the Council of the Borough of Schuylkill Haven, Schuylkill County, Pennsylvania, and it is hereby enacted and ordained by the authority of the same as follows:

SECTION 1. Section 8(a), entitled Computation of Sewer Rentals or Charges, the fourth paragraph shall be amended to read as follows:

(a) Metered Services...

In either of the foregoing cases, such sewer rentals or charges shall be computed in accordance with the following metered rate schedules; subject, however, to the minimum sewer rentals or charges provided in this Ordinance:

Metered Rate Schedule

Water Consumption	Monthly Sewer Rates
Gallons as charged- Schuylkill Haven Borough Residents	$6.6542/1,000 gallons
Gallons as charged- Schuylkill Haven Borough Large Commercial & Industrial Users (water consumption in excess of 250,000 gal./mo.)	$5.9404/1,000 gallons
Gallons as charged- North Manheim Sewer Authority	$6.6542/1,000 gallons

The above shown Sewer Rate shall become effective commencing January 1, 2005.

PART I: SCHEDULE OF RATES AND CHARGES

Section A - Rates for Service: Phase I (I)

Residential (Metered Rate):

Customer Charge	
Eagle Village (Quarterly)	$56.83/3 = $18.94 monthly
Eagle Village – Office (Quarterly)	$56.83
The Glen at Tamiment (Quarterly)	$56.83
Eagle Point (Quarterly)	$56.83
Consumption Charge	
All Consumption	$10.62 per thousand gallons
Availability Charge for Unoccupied Lots	$20.66 per quarter

Commercial (Metered Rate):

Customer Charge (Monthly)	$126.30
Consumption Charge	$10.62 per thousand gallons

Schedule of Rates

Application:

This schedule applies to all service throughout the entire territory served.

Rates For Sewerage Service:

Sewerage service rate is a flat rate per service for both residential and commercial customers.

Commercial customers is service territory are multi-unit residential buildings.

The rate is $35.65 per month billed monthly.

PAWC Statement No. 8-R

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

REBUTTAL TESTIMONY OF
JOHN J. SPANOS

ON BEHALF OF
PENNSYLVANIA-AMERICAN WATER COMPANY

CONCERNING
DEPRECIATION

DOCKET NO. R-2010-2166214
NORTHEAST WASTEWATER OPERATIONS

August 26, 2010

PENNSYLVANIA-AMERICAN WATER COMPANY (PAWC)

REBUTTAL TESTIMONY OF JOHN J. SPANOS

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is John J. Spanos. My business address is 207 Senate Avenue, Camp Hill, Pennsylvania.

Q. Have you previously submitted testimony in this proceeding?

A. Yes. My pre-filed testimony was submitted in April 2010 and marked PAWC Statement No. 8. My qualifications are set forth in that statement.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of this testimony is two-fold. First, I will explain a revision the Company will make to its claim for recovery of net salvage. Second, I will respond to the pre-filed direct testimony of the Office of Consumer Advocate's (OCA) witness, Ralph C. Smith.

Q. What is the subject of your rebuttal testimony?

A. The subject of my rebuttal testimony is depreciation expense and accumulated depreciation including changes to the Company's depreciation claims the OCA's witness has proposed.

II. Revision Of The Company's Claim For Net Salvage

Q. How is the Company revising its claim for net salvage?

A. In developing the Company's claim for depreciation, I followed standard Pennsylvania practice with respect to the net salvage amortization period. Specifically, net salvage (positive salvage less cost of removal) associated with the retirement and removal of wastewater treatment plant assets were amortized

over five years. However, the Company has determined that based on the specific facts and circumstances presented here it is willing to increase the amortization period to ten years. Given the size and the nature of the assets that were retired and the cost to remove the structures and other components of the old treatment plant assets, the Company believes that an exception to the Commission's standard procedure would be justified in this case.

III. The OCA Witness' Proposal

Q. Please summarize OCA Witness Smith's depreciation proposal?

A. Mr. Smith proposes to use the remaining life accrual method for the net salvage component instead of adhering to standard Pennsylvania practice of amortizing net salvage.

Q. Has Mr. Smith offered any support for deviating from standard depreciation procedures employed in Pennsylvania?

A. No, he has not. It appears that his recommendations have been made as a means of reducing depreciation expense and, therefore, revenue requirement by shifting a larger portion of cost recover to later in the lives of existing assets.

Q. Please discuss Mr. Smith's proposal to employ the remaining life method to recover net salvage?

A. At the outset, it should be emphasized that in virtually all jurisdictions other than Pennsylvania, net salvage is recovered prospectively.[1] This means that in other jurisdictions, there is an element of the annual accrual for depreciation that

[1] Net salvage is the sum of positive salvage and cost of removal. Given the nature of utility property, net salvage for utilities is generally negative. In other words, cost of removal exceeds positive salvage. For that reason, I focus on the recovery of net negative salvage even though it may be possible that net salvage could be positive, in which case the amortization would flow positive salvage back to customers over the amortization period.

recovers the estimated cost to dismantle and remove plant over the period that such plant is actually in service. That element of the annual accrual is booked to, and increases, accrued depreciation. Thus, by the time the plant is retired, the cost of removal (except for any variation between estimated and actual costs) will have been recovered and appropriately recorded in accrued depreciation. In contrast to procedures employed elsewhere, the Superior Court of Pennsylvania in Penn Sheraton Hotel v. Pennsylvania Public Utility Commission, 198 Pa. Super. 618, 184 A.2d 324 (1962) has held that prospective recovery of net salvage is not permitted under Pennsylvania law and, instead, such costs, when they have actually been incurred at the end of the service life of a property, must be "capitalized and amortized":

> If the utility retires and removes a property without replacing it or replaces it after removal and incurs actual negative salvage in doing so, the expenditure should be capitalized and amortized by some reasonable method and for and over a reasonable length of time.

The Commission has implemented the Superior Court's directive by having utilities (1) deduct the amount of actual net salvage from accrued depreciation when such net salvage is first incurred; (2) amortizing actual net salvage over five years; and (3) each year, adding to accrued depreciation the annual amount of the amortization. This procedure was explained in a 2004 decision for the Company, where the Commission once again affirmed this procedure. Pennsylvania Public Utility Commission v. Pennsylvania-American Water Company, 231 P.U.R.4th 277 (2004):

> Additionally, the ALJ averred that PAWC's capitalizing net salvage is directed by the most recent Uniform System of Accounts for Class A Water Utilities prescribed by the National Association of

> Regulatory Utility Commissioners (NARUC). The ALJ also noted that PAWC is required, by Commission regulation, to keep its accounts in conformity with this NARUC prescript. 52 Pa. Code § 65.16(a). The ALJ concluded that a Pennsylvania appellate court and the Commission itself, repeatedly, have determined that PAWC's treatment of net negative salvage is proper. Consequently, the ALJ recommended that the OTS' proposed adjustment should be rejected. (R.D. at 16). . . .
>
> No Party excepts to the ALJ's recommendation on this issue. Finding the ALJ's recommendation to be reasonable, appropriate and otherwise in accord with the record evidence, it is adopted.

Mr. Smith proposed employing the remaining life concept to recover the removal costs of the old treatment plant over the (prospective) life of the new treatment plant. This recovery method is a marked departure from Commission-approved practice and raises a material issue of intergenerational equity as between today's and future customers because, under Mr. Smith's proposal, a significant portion for the cost of removal would not be recovered until even further in the future than under current Commission practice.

Q. Please address Mr. Smith's contention that your study produces "double recovery" of net salvage?

A. This claim is inaccurate and is based on Mr. Smith's misunderstanding of how depreciation rates are developed in a future test year calculation. As shown on Tables 1 and 2 of Exhibit 8-B, the future test year "bring-forward" of the book reserve is calculated based on procedures consistently approved by this Commission, which is clear from Pennsylvania Public Utility Commission v. Pennsylvania-American Water Company, 231 P.U.R.4th 277 (2004). I used the same procedure here. Mr. Smith's concern arises from the large cost of removal incurred for the removal of the old treatment plant. However, the offset of this

amount that occurs from amortizing the cost of removal (in the manner I explained previously) does not begin until 2011. Thus, the combination of the remaining life method, to recover the original cost of utility plant, and the amortization of net salvage, to recover net salvage, that I have proposed will recover the service value of the Company's property, neither more nor less.

Additionally, although the two components of cost recovery, capital investment and net salvage, are set forth in one book reserve amount for each account, the recoveries are booked individually.

IV. CONCLUSION

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

PAWC STATEMENT NO. 9-R

PENNSYLVANIA-AMERICAN WATER COMPANY
NORTHEAST WASTEWATER DIVISION

DOCKET NO. R-2010-2166214

REBUTTAL TESTIMONY

OF

PAUL R. MOUL, MANAGING CONSULTANT
P. MOUL & ASSOCIATES

CONCERNING

CAPITAL STRUCTURE RATIOS AND THE COST OF EQUITY

DATE: AUGUST 26, 2010

REBUTTAL TESTIMONY
OF
PAUL R. MOUL

Q. Please state your name, occupation and business address.

A. My name is Paul R. Moul and I am Managing Consultant at the firm P. Moul & Associates. My business address is 251 Hopkins Road, Haddonfield, NJ 08033-3062.

Q. Mr. Moul, have you previously submitted direct testimony in this proceeding?

A. Yes. My direct testimony, pre-marked as PAWC Statement No. 9, was submitted on April 30, 2010.

SCOPE OF TESTIMONY AND SUMMARY

Q. What is the purpose of your rebuttal testimony?

A. Pennsylvania-American Water Company ("PAWC" or the "Company") has requested that I respond to the testimony presented by Dr. J. Randall Woolridge, a witness appearing on behalf of the Office of Consumer Advocate ("OCA"), and Mr. Andrew R. O'Donnell, a witness appearing on behalf of the Office Trial Staff ("OTS"). My silence on any *particular* matter discussed by Dr. Woolridge or Mr. O'Donnell regarding my direct testimony should not be interpreted as my agreement with any of their assertions.

Q. Please identify the principal areas of controversy concerning the rate of return issue in this proceeding.

A. Although I disagree with Dr. Woolridge on many points, my rebuttal testimony will address two principal recommendations put forth by Dr. Woolridge. First, Dr. Woolridge has proposed an inappropriate capital structure that includes short-term debt, which is conceptually flawed and contrary to Commission practice for water companies. Second, Dr. Woolridge has proposed an inadequate rate of return on the

Company's common equity, which does not come close to the level of return that investors expect.

Mr. O'Donnell adopts much of the Company's proposed rate of return, including capital structure and the embedded costs of long-term debt and preferred stock. He also adopts the barometer group of water companies that I propose in this case. In fact, the only element that Mr. O'Donnell disputes is the Company's proposed cost of equity.

CAPITAL STRUCTURE RATIOS

Q. How do the Company's actual capital structure ratios differ from those advocated by Dr. Woolridge?

A. The Company's proposed capital structure ratios were calculated using the Company's actual capital structure for the future test-year ending December 31, 2010, computed without short-term debt. Dr. Woolridge, in contrast, has recommended that the Company's ratemaking capital structure include a short-term debt component.

Q. Dr. Woolridge notes that the Company has used short-term debt consistently in the past three years. Does this justify the inclusion of short-term debt in PAWC's capital structure in this proceeding?

A. No. While it is true that the Company has employed short-term debt historically, these borrowings have been used primarily to finance construction-work-in-progress ("CWIP"), *to support plant in service until it is reflected in rates, and to acquire other* water companies. Indeed, the procedure used to calculate the Company's allowance for funds used during construction ("AFUDC") rate attributes the borrowing cost for short-term debt to CWIP. If the Commission were to adopt Dr. Woolridge's short-term *debt proposal, then a different method would be required to calculate the Company's* AFUDC rate. Moreover, even after a project is completed and no longer accrues AFUDC, there is usually a lag between the time such plant is placed in service and

included in the Company's base rates. In the interim, the Company may continue to finance the plant with short-term debt.

COST OF EQUITY

Q. What are the principal deficiencies in the cost of equity analyses presented by Dr. Woolridge and Mr. O'Donnell?

A. Dr. Woolridge and Mr. O'Donnell have proposed considerably lower rates of return on common equity than my analysis has indicated is necessary. The major differences between our cost of equity findings involve: (i) the return level that will be acceptable to the financial community, (ii) the selection of proxy group companies to measure the cost of equity, (iii) the determination of a reasonable Discounted Cash Flow (DCF) growth rate, (iv) whether a leverage adjustment to the DCF is necessary, (v) the extent to which other methods of determining the cost of equity provide a reasonable measure of the appropriate cost of common equity, and (vi) whether adjustments are necessary to the Company's cost of equity due to its rate design proposal.

Q. How would the financial community react if the Commission were to accept either Dr. Woolridge's or Mr. O'Donnell's equity cost rate proposals?

A. The financial community would be extremely concerned, if not shocked, if the Commission set the Company's cost of equity at either 9% (Dr. Woolridge), or 9.5% (Mr. O'Donnell). Either level of return is not sufficient to sustain utility operations or to attract capital at a reasonable cost. In its July 31, 2008 Order at Docket No. R-00072711, the Commission provided Aqua Pennsylvania, Inc. with an 11.00% return on equity. Since then, and as described in my direct testimony, the financial markets have experienced the worst financial crisis since the Great Depression. While capital markets have stabilized, the volatility of the stock market continues to exceed that which existed prior to the crisis, thereby indicating that the return for the Company should not be lower.

Q. Are the 9% equity return proposed by Dr. Woolridge and the 9.5% figure recommend by Mr. O'Donnell compatible with the current risk of common stocks?

A. No. They are much too low. This is particularly true today given the wide swings in share values and the overall financial market uncertainty that currently exists. The behavior of the Chicago Board Options Exchange ("CBOE") Volatility Index (i.e., "VIX") indicates that the risk of common stocks is relatively high at this time. The VIX is based on real-time prices of options on the *S&P 500 Index*, and is designed to reflect investors' consensus view of future (30-day) expected stock market volatility.

Q. What has been the recent performance of the VIX?

A. It is well-established that greater volatility indicates higher risk, which, all else being equal, translates into a higher cost of equity. As shown in the following table, the VIX for the first half of 2010 has averaged 23.23, while the average VIX prior to the financial crisis was less than 13.00.

Year	VIX	Month	VIX
2005	12.81	January-10	20.77
2006	12.81	February-10	22.54
2007	17.54	March-10	17.77
2008	32.69	April-10	17.42
2009	31.48	May-10	31.93
		June-10	29.92

Q. Are there other objective indications of the level of returns expected by investors which show that the opposing parties' proposed cost of equity is much too low?

A. Yes. According to the data provided by Dr. Woolridge, water utilities are forecast to earn 11.8% as the average and 11.0% as the median (see page 5 of Exhibit JRW-10).

COMPARABLE COMPANIES

Q. Have proxy groups of companies been employed in this case to determine the Company's cost of equity?

A. Yes. Mr. O'Donnell and I have used exactly the same companies in our respective proxy groups. Dr. Woolridge also uses my barometer group companies but has erroneously added Artesian Resources to his proxy group. Artesian Resources is not in the Value Line publication. Also, Artesian Resources is the only company considered by Dr. Woolridge that has two classes of common stock, one of which does not have voting rights. This is a highly unusual situation for a water company.

Q. Dr. Woolridge also considers data for a group of natural gas distribution utilities in his cost of equity analysis. Please comment.

A. The Commission disfavors the use of natural gas distribution company data as a basis to determine the cost of equity for water utilities. Indeed, such a proposal was specifically rejected in a rate proceeding involving Pennsylvania-American Water Company (see Recommended Decision of Administrative Law Judge Wayne L. Weismandel dated November 26, 2003 at Docket No. R-00038304). Moreover, Dr. Woolridge has not compared the business risk characteristics of his natural gas group companies to PAWC's wastewater operations. Notably in this regard, most of the natural gas distribution companies considered by Dr. Woolridge have some form of Revenue Decoupling Mechanism ("RDM"), which makes their recovery of fixed costs very different than PAWC.

DCF DIVIDEND YIELD

Q. Do you have any comments regarding Dr. Woolridge's criticism of your dividend yield calculation?

A. Yes. Dr. Woolridge complains that my dividend yield is overstated due to some unexplained failure to properly annualize the quarterly dividend amount and the

compounding associated with the quarterly payment of dividends. But here, Dr. Woolridge has created a straw-man. As shown on pages E-4, E-5, and E-6 of Appendix E of Statement No. 9, my proposed 3.67% dividend yield derived from the formula D_0/P_0 (1 +.5g), which is embraced by Dr. Woolridge (see page 29 of Dr. Woolridge's direct testimony), produces virtually the same dividend yield (i.e., 3.68%) that I derived using the other methods. As such, Dr. Woolridge's criticism is a "tempest in a teapot" and should be ignored.

DCF GROWTH RATE

Q. As to the DCF growth component, what financial variables should be given greatest weight when assessing investor expectations?

A. The theory of the DCF holds that (1) the value of a firm's equity (i.e., share price) will grow at the same rate as earnings per share and (2) dividend growth will equal earnings growth with a constant payout ratio. Therefore, to properly reflect investor expectations within the limitations of the DCF model, earnings per share growth, which is the basis for the capital gains yield and the source of dividend payments, must be emphasized. The reason that earnings per share growth is the primary determinant of investor expectations rests with the fact that the capital gains yield (i.e., price appreciation) will track earnings growth with a constant price earnings multiple (another key assumption of the DCF model). It is also important to recognize that analysts' forecasts significantly influence investor growth expectations (see pages E-6 through E-10 of Appendix E that accompanies my direct testimony). Lastly, it is instructive to note that Professor Myron Gordon, the foremost proponent of the DCF model in public utility rate cases, has established that the best measure of growth for use in the DCF model is forecasts of earnings per share growth. For these reasons, earnings per share forecasts must be given primary weight.

Q. Dr. Woolridge has questioned the reliability of analysts' forecasts of earnings per share growth used in the DCF model. Do you agree?

A. No, I do not. Indeed, Dr. Woolridge uses analysts' forecasts extensively in his own DCF analysis. Moreover, Dr. Woolridge says that it is necessary to adjust downward the growth rate for his perceived bias in analysts' forecasts, but he makes no mention of any upward adjustment to the dividend yield. If investors are placing reliance on an analysts' forecast of growth, the prices of stocks will be overstated according to Dr. Woolridge's reasoning. So if Dr. Woolridge is correct in his assessment that analysts' growth forecasts are overstated, stock prices would have to be adjusted downward and thus dividend yields adjusted upwards to accompany the downward adjustment that he proposes for the growth rate. Failure to make both adjustments would result in a mis-specified cost of equity.

Q. Do you agree with Dr. Woolridge's view that analysts' forecasts of earnings per share contain some form of bias?

A. I find inadequate support for this assertion. With entry of the final judgment in the Global Research Analyst Settlement ("GRAS"), which resolved the equity research analysts practices at major investment banks that had been accused of conflicts of interest, Wall Street firms have separated their research and investment banking services. However, thirteen (13) of the studies that Dr. Woolridge lists under the category "Ex Ante Model (Puzzle Research)" on page 5 of Exhibit JRW-11 pre-date 2003. Hence, the criticisms offered by Dr. Woolridge are out-of-date. I also find Dr. Woolridge's criticism of analysts' forecasts somewhat perplexing because he provides extensive evidence of analysts' forecasts (see pages 5 and 6 of Exhibit JRW-10) in his DCF analysis. More importantly, it matters not what Dr. Woolridge may think about the analysts' forecasts. Rather, what is important is what investors actually use in their decisions regarding the purchase, sale or holding of stocks. The bottom line is that the

growth rate must be synchronized with the price that investors establish when valuing a stock.

Q. Is there any reason to believe that analysts' forecasts may understate actual earnings growth?

A. Yes. In an article entitled "Wall Street's Missed Expectations," dated April 26, 2010, The Wall Street Journal reported that 64% of companies have beaten the analysts' forecasts since the start of 1999. This means that over the past decade analysts were actually too conservative in their forecasts.

Q. Dr. Woolridge also appears to have considered, and perhaps to have given some weight to, historical growth rates in earnings, dividends, and book value. Please comment.

A. History cannot be ignored. However, in developing a forecast of future earnings growth, an analyst would first apprise himself/herself of the historical performance of a company. Hence, there is no need to count historical growth rates a second time, because historical performance is already reflected in analysts' forecasts which reflect an assessment of how the future will diverge from the past.

Q. Did Dr. Woolridge also consider retention growth?

A. Yes. However, the retention growth formula was misapplied on page 5 of his Exhibit JRW-10. In particular, Dr. Woolridge relied upon the Value Line forecasts of year-end, *rather than annual average, book values to calculate his return on book value. This creates a downward bias in the results because, assuming some retention growth, the* average book value for the year will be less than the year-end book value. In fact, when the FERC employs these data, it adjusts the year-end returns to derive the average yearly return. Generally speaking, this adjustment would increase the retention growth rate.

Q. Has Dr. Woolridge included external financing growth in his growth rate analyses?

A. No. This omission results in a further downward bias. Forecasts by Value Line indicate that future growth from external stock financing will add to the growth in equity, which, if recognized, would result in a higher internal/external growth rate.

Q. As part of his DCF analysis, Dr. Woolridge used dividends per share growth rates published by Value Line. Are these growth rates useful in the DCF?

A. No. The Value Line forecast growth rates in dividends per share shown on page 5 of Exhibit JRW-10 are the lowest of all growth rate indicators (earnings per share, book value per share, and earnings retention from Value Line, Yahoo First Call, Zacks, and Reuters -- when corrected for negative growth rates). As I explain in my direct testimony, under the constant growth assumption of the DCF model, dividends per share are presumed to grow in the long-run at the same rate as earnings per share with a constant dividend payout ratio, and stock price is presumed to grow in the long-run at the same rate as earnings per share with a constant price-earnings multiple. Hence, earnings per share growth is the correct growth rate to be used in the DCF model.

Q. Dr. Woolridge also provides forecasts of book value per share growth. Please comment.

A. *Book value per share growth, as shown on pages 4 and 5 of Exhibit JRW-10, should* not be used in DCF analyses because stocks do not trade at constant market-to-book ratios.

Q. Do you believe that the growth rates in dividends per share and book value per share, as reported by Dr. Woolridge, are reasonable for DCF purposes?

A. No. The average analyst's forecast of earnings growth for Dr. Woolridge's water proxy group is 5.58%, while the average of the dividend and book value growth rates is just

3.45% (3.2% + 3.7% = 6.9% ÷ 2). For his gas group, the forecasted earnings growth of 4.6% exceeds the 3.50% (4.0% + 3.0% = 7.0% ÷ 2) average of the dividends and book value growth. This clearly shows that the dividends and book values play no useful role in the DCF analysis.

Q. Should the forecast negative growth rates for Middlesex Water and SJW Corporation, as reported by Dr. Woolridge using the Reuters source, be considered?

A. No. Negative growth rates provide no reliable guide to gauge investor expected growth for the future. Investor expectations encompass long-term positive growth rates and, as such, could not be represented by sustainable negative rates of change. Therefore, statistics that include negative growth rates should not be given any weight when formulating a composite growth rate expectation. Although investors have knowledge that negative growth and losses can occur, their expectations are for positive growth -- otherwise they would hold cash rather than invest with the expectation of a loss. After removing the negative growth rates, the Reuters average growth rate forecast is 6.4%, which provides an overall group average growth rate of 6.4% (7.8% + 5.1% + 6.4% = 19.3% ÷ 3). I should note that there is also a conflict in the Zacks growth rate reported by Dr. Woolridge. On page 6 of Exhibit JRW-10, Dr. Woolridge reports a 4% Zacks growth rate for California Water Service Group; Mr. O'Donnell, on the other hand, shows a higher 6% growth rate for California Water Service Group.

Q. How would the use of these data impact the DCF employed by Dr. Woolridge?

A. The DCF result using the six-month average dividend yield, the 6.4% growth rate developed above, and the leverage adjustment associated with using the book value capitalization, is as follows:

Discounted Cash Flow (DCF)	D_0/P_0	x	*(1+0.5g)*	+	*g*	+	*lev.*	=	*k*
Woolridge Water Group	3.5%	x	1.03200	+	6.40%	+	1.03%	=	11.04%

Q. Please comment on Mr. O'Donnell's growth rate proposal.

A. The growth rate proposed by Mr. O'Donnell is 6.00%. Unfortunately, this growth rate contains a downward bias because he erroneously factored historical growth rates into his analysis. His approach is incorrect for the reasons previously given, namely (i) historical performance is already considered by analysts when making their forecasts and (ii) the negative historical growth rates should not be given weight. If the negative historical growth rates from Yahoo Finance are removed from Mr. O'Donnell's analysis, the average analysts' growth rate is 7.08%. Hence, his growth rate must be increased from 6% to 7% to reasonably represent investors' expectations for the water companies.

Q. What would be the DCF result using the forecasts of earnings per share growth?

A. As shown on page 1 of Schedule 2 of OTS Exhibit No. 1, that result would be:

	D/P	+	*g*	+	*lev.*	=	*k*
Water Group	3.57%	+	7.00%	+	1.03%	=	11.60%

Q. Mr. O'Donnell asserts that your DCF growth rate is overstated. Please respond.

A. As shown by the data presented on Schedule 5 of OTS Exhibit No. 1, the average of growth rate indicators, excluding dividend per share and book value per share values, is 7.42% (8.19% + 6.18% + 8.92% + 7.83% + 6.00% = 37.12% ÷ 5), which amply supports the 7% growth rate that I used in my testimony.

Leverage Adjustment

Q. Please respond to the Dr. Woolridge's criticism of your leverage adjustment.

A. As in many (but not all) prior cases, I have proposed an adjustment to reflect the

difference in risk attributed to changes in leverage that occur when the book value capital structure, rather than the market value capital structure, is used to compute the weighted average cost of capital. This modification to the DCF model must be recognized in order to make the DCF results relevant to the book value capital structure.

Q. Is Dr. Woolridge's challenge to your leverage adjustment well founded?

A. No. I am somewhat surprised by Dr. Woolridge's challenge to my leverage adjustment. In a book that he co-authored, Dr. Woolridge noted:

> Market professionals always use the market value of common stock when they examine the capitalization of the corporation. As we will see in valuation examples, the market value of common stock sometimes bears little relationship to its book value. Stock prices are readily available.[1]

Q. Dr. Woolridge contends that in a recent Aqua Pennsylvania rate case the Commission denied the leverage adjustment. Please respond.

A. The fact that the PPUC declined to make a leverage adjustment in the Aqua Pennsylvania case does not invalidate its use. Rather, the PPUC merely indicated that the adjustment was optional. The PPUC did not repudiate the leverage adjustment, but instead arrived at an 11.00% return on equity for Aqua Pennsylvania by providing a separate return increment for management performance. Just like an increment for management performance is not adopted in all rate case decisions, the PPUC seems to be taking a similar approach to the leverage adjustment.

Q. Do you have any additional comments regarding Dr. Woolridge's comments on the leverage adjustment?

A. Yes. Dr. Woolridge has not disputed the fact that there is less financial risk associated

[1] Gray, Gary, Cusatis, Patrick J., Woolridge, Randall J. Streetsmart Guide to Valuing a Stock: The Savvy Investor's Key to Beating the Market, Second Edition. New York: McGraw-Hill Companies (2004)

with a 64.91% (market price-based) equity ratio than there is with a 50.98% (book value-based) equity ratio for my Water Group (see page E-11 of Appendix E that accompanies my direct testimony). Moreover, and as noted previously, Dr. Woolridge has acknowledged in his book that the market value of common equity is the most relevant item for professional investors. Because financial risk increases when the common equity ratio is lower, the cost of equity must likewise increase when used in the ratesetting process.

Q. Dr. Woolridge also claims that the leverage adjustment will serve to increase the return for companies with high market-to-book ratios and decrease the returns for companies with low market-to-book ratios. Please respond.

A. In making this assertion, Dr. Woolridge neglects to mention that, all else being equal, a company with a higher market-to-book ratio will have a lower dividend yield. The reverse is also true, i.e., lower market-to-book ratios, serve to increase the DCF return. Essentially, the leverage adjustment adds stability since it provides an offset to the relative level of DCF returns.

Further, there are many factors that impact the leverage adjustment, including changes in the market capitalization and book capitalization, the components of the yield and growth (noted above), and the overall level of capital costs as revealed by the marginal cost of debt and preferred stock. Although rare, the formulas that I use to compute the leverage adjustment could actually produce a lower adjustment with a higher differential between the market capitalization and book capitalization.

Q. Mr. O'Donnell also questions your leverage adjustment by reference to an old Blue Mountain case in which you testified. Please comment.

A. The Commission has consistently recognized that the Blue Mountain decision, which is now 30 years old, and the environment in which it was issued, are distinguishable in a number of important respects.

First, that case was not decided using the DCF method. Rather, the Commission relied heavily on earnings/prices ratios to set the return on equity in the context of a fair value rate base. Second, in its decision on remand, the Commission noted that over a period of years it was relatively easy to discern the trends in market-to-book ratios which, when compared to performance as measured by other financial ratios, can indicate the return levels the Commission must award to assure reasonable access by public utilities to the capital markets. Notably, the trends in market-to-book ratios during that period were substantially different from today. At the time that case was litigated, market-to-book ratios for the broader market generally approximated 1:1. That is to say, market prices in the late 1970s were about equal to book value.

Since that time, share prices have moved much higher vis-à-vis their underlying book values. So, while the market-to-book ratio of the DJI approximated 1:1 in the late 1970s, today the DJI trades at 4.52:1 of book value. In short, the capital markets today are markedly different than those that existed at the time of the Blue Mountain case. I should also note that, since that time, the Commission has adopted my leverage adjustment to the DCF model on numerous occasions.

CAPITAL ASSET PRICING MODEL

Q. Do you have concerns regarding the application of the CAPM by Dr. Woolridge?

A. As a preliminary matter, Dr. Woolridge produced a 7.5% CAPM result for his Water Proxy Group and 7.0% for his Gas Proxy Group. These results are not credible. This is especially true in the circumstance where the average yield on A-rated public utility bonds was 5.71% for the six-months through June, 2010. The opportunity cost of equity must be higher than the cost of debt by a meaningful margin, which is not the case with Dr. Woolridge's CAPM. Dr. Woolridge's CAPM analysis understates the cost of equity for a number of reasons: (i) his use of a wholly unrealistic market premium, (ii)

his failure to use leveraged adjusted betas, and (iii) his failure to make a size adjustment.

Q. What is your primary objection to the CAPM as applied by Dr. Woolridge?

A. It appears to me that Dr. Woolridge has substantially misstated the total return for the market as a whole from which he calculates his market premium (i.e., Rm-Rf). The market returns he uses, such as 7.05% (see page 7 of Exhibit JRW-11), cannot possibly be correct. What Dr. Woolridge appears to show on his bar graph on page 7 of Exhibit JRW-11 is that the S&P 500 has a DCF return that is comprised of a 1.9% dividend yield and 5.15% (2.5% + 2.65%) growth rate.

Q. Is the 7.05% total market return developed by Dr. Woolridge reasonable?

A. No. Any forecast market return below 12% is unreasonable at this time. Current market evidence produces total market returns of:

Value Line	Dividend Yield		Appreciation Potential		Total Return
As of June 25, 2010	2.0%	+	13.34% [(2)]	=	15.34%

DCF Result for the S&P 500 Composite

D/P	(	1+.5g	)	+	g	=	k
2.12%	(	1.0501	)	+	10.02%	=	12.25%

where:	Price (P)	at	30-Jun-2010	=	1030.71
	Dividend (D)	for	1st Qtr. '10	=	5.46
	Dividend (D)		annualized	=	21.84
	Growth (g)		First Call EpS	=	10.02%

[2]The estimated median appreciation potential is forecast to be 65% for 3 to 5 years hence. The annual capital gains yield at the midpoint of the forecast period is 13.34% (i.e., $1.65^{.25}$ - 1).

The average of the market returns is 13.80% (15.34% + 12.25% = 27.59% ÷ 2). The resulting market premium would be 9.80% using Dr. Woolridge risk-free rate of return of 4.00%, which indicates that his 4.68% market premium is much too low.

Q. Are there other reasons to believe that the 7.05% market return determined by Dr. Woolridge is unrealistic?

A. Yes. A 7.05% overall return for the market as a whole is less than the DCF return that Dr. Woolridge calculates for his purportedly less risky water and gas groups (see page 1 of Exhibit JRW-10). It is simply inconceivable that the return on the stock market as a whole is only 7.05% if the return is 9.1% for his Water Proxy Group and 8.9% for his Gas Proxy Group. It is apparent that his total market return is flawed.

Q. Dr. Woolridge and Mr. O'Donnell have also criticized your leverage-adjusted betas. Please respond.

A. The betas that I have used are calculated strictly from market values, using a firm's stock price as the dependent variable and the market index as the independent variable. There is no reference to book values in the calculation of betas. Yet, as I have previously explained, the regulatory-determined cost of equity must be adjusted for the difference between the risks implicit in the market-based ROE models versus the financial risk associated with book value capital structure used in ratesetting. The Hamada formula that I utilized to adjust the betas is merely an extension of the Modigliani and Miller formula that I used in connection with my DCF calculations. And, of course, Mr. O'Donnell is off the mark by suggesting that Value Line should publish market-to-book adjusted betas. Contrary to Mr. O'Donnell's apparent suggestion, betas only measure systematic risk, not total investment risk. It is for this very reason that the betas should reflect a leverage adjustment as circumstances warrant.

Q. Do you have additional concerns regarding Mr. O'Donnell's application of the CAPM?

A. Yes. Mr. O'Donnell has incorrectly used the geometric mean to measure historical returns. The theoretical foundation of the CAPM requires that the arithmetic mean be used because it conforms to the single period specification of the model, provides a representation of all probable outcomes and has a measurable variance. The geometric mean, which Mr. O'Donnell employs, consists merely of a rate of return taken from two data points and cannot provide a reasonable representation of the market risk premium in the context of the CAPM. As stated by Ibbotson:

> *Arithmetic Versus Geometric Differences*
> For use as the expected equity risk premium in the CAPM, the arithmetic or simple difference of the arithmetic means of stock market returns and riskless rates is the relevant number. This is because the CAPM is an additive model where the cost of capital is the sum of its parts. Therefore, the CAPM expected equity risk premium must be derived by arithmetic, not geometric, subtraction.
>
> *Arithmetic Versus Geometric Means*
> The expected equity risk premium should always be calculated using the arithmetic mean. The arithmetic mean is the rate of return which, when compounded over multiple periods, gives the mean of the probability distribution of ending wealth values....This makes the arithmetic mean return appropriate for computing the cost of capital. The discount rate that equates expected (mean) future values with the present value of an investment is that investment's cost of capital. The logic of using the discount rate as the cost of capital is reinforced by noting that investors will discount their (mean) ending wealth values from an investment back to the present using the arithmetic mean, for the reason given above. They will therefore require such an expected (mean) return prospectively (that is, in the present looking toward the future) in order to commit their capital to the investment. (*Stocks, Bonds, Bills and* Inflation - 1996 Yearbook, pages 153-154

Q. If historical market returns are to be considered, how should the S&P Composite Index data be employed?

A. A 9.60% historical market return considered by Mr. O'Donnell using geometric means for the S&P 500 cannot possibly be correct given that the expected returns he measured were 12.92% using Value Line data. The historic return using the correct arithmetic mean is 11.7%, which is more realistic given the forecasts noted above. The resulting market return would be 12.31% (12.92% + 11.7% = 24.62% ÷ 2). With this market return, the market premium is 8.41% (12.31% - 3.90%) using Mr. O'Donnell's *risk-free rate of return.*

Q. Dr. Woolridge and Mr. O'Donnell also question the need to further adjust the CAPM results for size differences. Please comment.

A. Both Dr. Woolridge and Mr. O'Donnell have relied upon the Wong article to support their positions. But, the Wong article employed data going back into the 1960s. Enormous changes have occurred in the industry since the 1960s that have fundamentally changed the utility business. The Wong article also noted that betas for the non-regulated companies were larger than the betas of the utilities. This, however, is not a revelation, because history shows that utilities generally have lower betas than many other companies. This fact does not invalidate the additional risk associated with small size.

The Wong article further concludes that the risk impacts of size cannot be explained in terms of beta. Again, this should not be a surprise. Beta is not the tool that should be employed to make that determination. Indeed, beta is a measure of systematic risk and it does not provide the means to identify the return necessary to compensate for the additional risk of small size. In contrast, the famous Fama/French study (see "The Cross-Section of Expected Stock Returns," The Journal of Finance, June 1992) identified size as a separate factor that helps explain returns. Further, the

article by Dr. Thomas Zepp[3] presented research on water utilities that supports a small firm effect in the utility industry.

Q. Have you restated Mr. O'Donnell's CAPM?

A. Yes. I have restated his CAPM results as indicated below by correcting his market premium, by reflecting the size adjustment, and by employing the leverage adjusted betas for the Water Group.

	Rf	+	*β*	(*Rm-Rf*)	+	*size*	=	*K*
Water Group	3.90%	+	0.93	(8.41%)	+	0.94%	=	12.66%

Risk Premium Method

Q. Do you have any comments concerning Dr. Woolridge's criticism of the risk premium approach?

A. Yes. Concerning his point on pages 73-74 of his direct testimony, Dr. Woolridge seems to imply that use of the base yield in my risk premium analysis that includes A-rated public utility bonds is not correct. He attributes this in part to interest rate risk and default risk that are reflected in the yields on A-rated public utility bonds. These are invalid criticisms because common stock investors are faced with these same risks. Moreover, if the compensation for these risks were removed from the yield on A-rated public utility bonds, then the resulting risk premium would be larger when computed from a smaller base yield.

Dr. Woolridge's other criticisms of the historical relationship between stock and bond returns are invalid because: (1) common stock investors are subject to the risk of changing levels of interest rates since a primary determinant of the cost of equity is the

[3] Zepp, Thomas M. (2002) "Utility stocks and the size effect: revisited". Economics and Finance Quarterly, 43, 578-582.

level of interest rates (especially for utility stocks), and (2) the credit risk associated with a company's bonds is also a major concern for common stock investors (e.g., default on a company's bonds would adversely affect the common stockholders).

Q. Please address the alphabetic medley of criticisms listed by Dr. Woolridge on pages 76 to 82 of his direct testimony.

A. Most of these require only a brief response. As to item (A), (biased historical returns) the capital losses concerning historical bond returns were non-existent for long-term government bonds (used by Dr. Woolridge as a proxy for bond yields). Over the period 1926-2008, capital appreciations (rather than capital losses) were: 0.3% as the geometric mean and 0.6% as the arithmetic mean. Hence, his claim of losses is not correct. Dr. Woolridge also does not identify the magnitude of any difference between the published yield and investor expected returns on bonds. With bond portfolio immunization strategies, a desired rate of return can be achieved over a fixed investment horizon when the duration of a bond portfolio equals the investment horizon. Because of strategies such as these, the probability of realizing expected returns on public utility bonds from issuance to maturity is extremely high. Consequently, Dr. Woolridge's reasoning provides no basis to reject my risk premium approach.

As to item (B) (arithmetic vs. geometric mean returns), Dr. Woolridge criticizes my use of arithmetic means in applying the risk premium method. However, as stated in the 2003 Yearbook published by Ibbotson Associates:

> The arithmetic mean is the rate of return which, when compounded over multiple periods, gives the mean of the probability distribution of ending wealth values....This makes the arithmetic mean *return appropriate for forecasting, discounting, and* computing the cost of capital. The discount rate that equates expected (mean) future values with the present value of an investment is that investment's cost of capital. The logic of using the

> discount rate as the cost of capital is reinforced by noting that investors will discount his expected (mean) ending wealth values from an investment back to the present using the arithmetic mean, for the reason given above. They will, therefore, require such an expected (mean) return prospectively (that is, in the present looking toward the future) to commit his capital to the investment.

In the 2006 Yearbook, Ibbotson added:

> A simple example illustrates the difference between geometric and arithmetic means. Suppose $1.00 was invested in a large company stock portfolio that experiences successive annual returns of +50 percent and -50 percent. At the end of the first year, the portfolio is worth $1.50. At the end of the second year, the portfolio is worth $0.75. The annual arithmetic mean is 0.0 percent, whereas the annual geometric mean is -13.4 percent. Both are calculated as follows:
>
> $$r_A = \frac{1}{2}(0.50 - 0.50) = 0.0, \textit{ and}$$
>
> $$r_G = \left[\frac{0.75}{1.00}\right]^{\frac{1}{2}} - 1 = -0.134$$
>
> The geometric mean is backward-looking, measuring the change in wealth over more than one period. On the other hand, the arithmetic mean better represents a typical performance over single periods.
>
> In general, the geometric mean for any time period is less than or equal to the arithmetic mean. The two means are equal only for a return series that is constant (i.e., the same return in every period). For a non-constant series, the difference between the two is positively related to the variability or standard deviation of the returns. For example, in Table 6-7, the difference between the arithmetic and geometric mean is much larger for risky large company stocks than it is for nearly riskless Treasury bills.

As to item (C), Dr. Woolridge points to the relatively high standard deviation of the historically measured risk premium as an indication of possible forecasting error.

But, this is an incorrect criticism. Since common stocks are more risky than bonds or other low risk investments, the standard deviation should be relatively high. If, as Dr. Woolridge asserts, the common equity risk premium is unreliable because the standard deviation is relatively high, then he is repudiating the basic riskiness of common stocks.

As to item (D) (unattainable and allegedly biased historical stock returns), with the proliferation of stock-index mutual funds and exchange-traded funds ("ETF") that are designed to replicate the returns on major indexes, the overall market returns are attainable. Transaction costs associated with both stock-index mutual funds are minimal for low cost managers, such as The Vanguard Group and ETFs can be purchased and sold through discount on-line brokerage accounts. Therefore, Dr. Woolridge's criticisms are misplaced.

As to item (E) (company survivorship bias), the survivorship issue is not a valid criticism because the historical returns contain the results of the companies that comprised the index in each year. That is to say, as companies entered and exited the index, the market performance in each year reflected the companies in the index each year. Obviously, Microsoft Corporation had no impact on the S&P 500 return in 1960, nor does Nash-Kelvinator Corporation impact the returns of the S&P 500 in 2010. But, these companies did provide returns to investors in the years that they were included in the index.

Finally, to item (F) (The "Peso Problem" – U.S. stock market survivorship bias), Dr. Woolridge provides no quantification of the impact of the "peso problem" on the historical return. Just as higher than expected returns may have been experienced in the past, so too lower than expected returns also were experienced. Further, the possibility of "highly improbable returns" (e.g., positive or negative) is the reason that long-time series are used in the risk premium analysis in order to normalize the influence of unusually high or low returns.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.