PAWC STATEMENT NO. 7
DOCKET NO. R-2010-2166212

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF
PAUL R. HERBERT

ON BEHALF OF PENNSYLVANIA-AMERICAN WATER COMPANY

CONCERNING

COATESVILLE WASTEWATER OPERATIONS
COST OF SERVICE ALLOCATION

AND

CUSTOMER RATE DESIGN

APRIL 2010

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

RE: PENNSYLVANIA-AMERICAN WATER COMPANY
DOCKET R-2010-2166212
DIRECT 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. Please describe your position with Gannett Fleming, Inc., and briefly state your general duties and responsibilities.

A. I am President of the Valuation and Rate Division. My duties and responsibilities include the preparation of accounting and financial data for revenue requirement and cash working capital claims, the allocation of cost of service to customer classifications, and the design of customer rates in support of public utility rate filings.

Q. Have you presented testimony in rate proceedings before a regulatory agency?

A. Yes. I have testified before the Pennsylvania Public Utility Commission, the New Jersey Board of Public Utilities, the Public Utilities Commission of Ohio, the Public Service Commission of West Virginia, the Kentucky Public Service Commission, the Iowa State Utilities Board, the Virginia State Corporation Commission, the Tennessee Regulatory Authority, The California Public Utilities Commission, the New Mexico Public Regulation

Commission, the Illinois Commerce Commission, the Delaware Public Service Commission, the Arizona Corporate Commission and the Missouri Public Service Commission concerning revenue requirements, cost of service allocation, rate design and cash working capital claims. A list of the cases in which I have testified is provided at the end of my direct testimony.

Q. What is your educational background?

A. I have a Bachelor of Science Degree in Finance from the Pennsylvania State University, University Park, Pennsylvania.

Q. Would you please describe your professional affiliations?

A. I am a member of the American Water Works Association and serve as a member of the Management Committee for the Pennsylvania Section. I am also a member of the Pennsylvania Municipal Authorities Association. In 1998, I became a member of the National Association of Water Companies as well as a member of its Rates and Revenue Committee.

Q. Briefly describe your work experience.

A. I joined the Valuation Division of Gannett Fleming Corddry and Carpenter, Inc., predecessor to Gannett Fleming Valuation and Rate Consultants, Inc., in September 1977, as a Junior Rate Analyst. Since then, I advanced through several positions and was assigned the position of Manager of Rate Studies on July 1, 1990. On June 1, 1994, I was promoted to Vice President and on November 1, 2003, I was promoted to Senior Vice President. On July 1, 2007, I was promoted to my current position as President.

While attending Penn State, I was employed during the summers of 1972, 1973 and 1974 by the United Telephone System - Eastern Group in its

accounting department. Upon graduation from college in 1975, I was employed by Herbert Associates, Inc., Consulting Engineers (now Herbert Rowland and Grubic, Inc.), as a field office manager until September 1977.

Q. What is the purpose of your testimony in this proceeding?

A. My testimony is in support of the cost of service allocation and rate design study conducted under my direction and supervision for the Coatesville Wastewater operations ("CWW") of the Pennsylvania-American Water Company (the "Company").

Q. Have you prepared exhibits presenting the results of your study?

A. Yes. Exhibit No. 7-A presents the results of the allocation of pro forma cost of service as of December 31, 2010, the proposed rate design and the proof of revenues under present and proposed rates. Also, responses to Rate Structure and Cost of Service Filing Requirements No. RS1, are found in the Appendix to Exhibit No. 7-A.

COST OF SERVICE ALLOCATION

Q. Briefly describe the purpose of your cost allocation study.

A. The purpose of the study was to allocate the total CWW cost of service, which is the total revenue requirement, to the several customer classifications. In the study, the total costs were allocated to the residential, non-residential, large industrial, and bulk use customer classifications in accordance with generally accepted principles and procedures. For the purposes of cost allocation, one small industrial customer is included in the non-residential class, which also includes commercial and public customers,

and the V.A. Hospital is included with the bulk use class. This leaves Mittal Steel as the only customer in the large industrial class.

The cost of service allocation study results in indications of the relative cost responsibilities of each class of customers. The allocated cost of service is one of several criteria appropriate for consideration in designing customer rates to produce the required revenues.

Q. Have you prepared an exhibit presenting the results of your studies?

A. Yes. The results of my allocation of the pro forma cost of service as of December 31, 2010, and proposed customer rates to produce the pro forma revenue requirement as of that date are presented in Exhibit No. 7-A.

Q. Please describe the method of cost allocation that was used in your study.

A. The method I used for cost allocation incorporates the functional cost allocation methodology and the design-basis cost allocation methodology described in the text "Financing and Charges for Wastewater Systems", Manual of Practice No. 27, published by the Water Environment Federation. This method is recognized for allocating the cost of providing wastewater service to customer classifications in proportion to the classifications' use of the commodity, facilities, and services. It is generally accepted as a sound method for allocating the cost of wastewater service.

Q. Please describe the functional and the design-basis methods.

A. Under the functional cost method, costs are assigned to cost components using predominant operational purposes as cost-causative factors rather

than engineering design criteria. Under the design-basis method, costs are based on the allocation of net plant value using engineering design criteria.

I have used a hybrid of these two methods to allocate costs for CWW. In this approach, the design-basis is used to allocate capital costs, (rate base, depreciation, return and taxes) which reflects the design criteria's significant impact on sizing and construction costs. The functional cost basis is applied to operating expenses that are more influenced by variations in actual or current operating results.

Q. What procedures did you use to apply the cost allocation methodologies for CWW?

A. Each element of the cost of service is allocated to customer classifications according to the functional categories. The cost functions are flow, infiltration and inflow (I&I), customer facilities and customer accounting. The functional costs are allocated to customer classifications based on the amount of flow contributed to the system, the amount of I&I allocated to each class, and the number and relative size of customers.

Q. What is the basis for the volumes used to allocate costs to customer classifications?

A. As a result of the settlement in the last case at Docket No. R-2008-2032689, the Company conducted a comprehensive study to determine the current and future volumes for each classification as well as the volume of I&I in the system as it relates to direct and bulk customers. The study is submitted with the filing and is sponsored in testimony by Mr. Kaufman.

Q. How were the volumes set forth in the I&I study used to allocate costs?

A. The study determined the current average and peak flows attributable to direct and bulk customers as well as the projected average and peak flows for direct and bulk customers based on Act 537 plans.

Factor 1 was based on the current average daily flow which is presented in Schedule Q (average flow) of the I&I study. For direct customers, residential and non-residential (except the small industrial customer), the flows were based on water usage billing determinants multiplied by a factor of 88%, consistent with the study that determined that 88% of the water use was returned to the sewer system. The flow for the small industrial customer and the large industrial customer was based on 100% of the water usage. The flow for the bulk customer class used the measured wastewater flow for each bulk customer.

Flow related to I&I was determined in the study. The I&I associated with the direct customers (other than bulk) was allocated to the classes based on a weighting of one-third flow and two-thirds on the number of customers. The I&I associated with the bulk customers determined in the study was assigned directly to the bulk class. The common I&I volume was allocated to all classes based on the sum of the average daily flow plus the direct I&I referred to above. The sum of the flow and the I&I allocation resulted in the total flow and the basis for Factor 1.

Factor 2 was calculated in a similar manner as Factor 1 except that current peak volumes were used as shown in the I&I study, Schedule Q (peak flow). Factors 1 and 2 were used to allocate operation and maintenance expenses of the collection, transmission and treatment

systems consistent with the functional cost method explained above that such operating expenses are influenced by actual or current flows as set forth in the I&I study.

Q. Please explain the factors used to allocate the capital costs.

A. Factors 3 and 4 are similar to Factors 1 and 2 except that Factors 3 and 4 are based on projected average and peak volumes, respectively. The projected volumes are summarized in the I&I study, Schedule R. Projected volumes were used for capital costs because the projected volumes determined the size of the treatment plant expansion including the trunk lines and interceptor. The use of Factors 3 and 4 for capital costs is consistent with the design-basis methodology explained earlier which reflects the design criteria's impact on sizing and construction costs. The projected volumes used for the factors reflect the required flows set forth in each municipality's Act 537 plan.

Q. Please explain the remaining cost allocation factors.

A. Factors 5 and 6 were used to allocate customer facilities and customer accounting costs. These factors were based on the number and relative size of the customers.

Factor 7 is a composite factor used to allocate employee pension and benefits and payroll taxes. Factor 7 is based on the allocation of direct labor expense.

Factors 8 and 9 are based on the allocation of plant in service and rate base, respectively. Factor 8 allocates other rate base elements and Factor 9 is used to allocate return and taxes.

Factor 10 is based on the total cost of service and is used to allocate regulatory commission expense and other revenues.

Factor 11 is used to allocate administrative and general expenses and is based on the allocation of all other operating expenses exclusive of power, chemicals and waste disposal. Factor 12 allocates cash working capital and is based on the allocation of all operating expenses.

Q. Please explain the procedure for the allocation of costs to the several customer classifications.

A. The items of cost, which include operation and maintenance expenses, depreciation expense, taxes and income available for return, are identified in column 1 of Schedule B. The cost of each item, shown in column 3, is allocated to the several customer classifications based on allocation factors referenced in column 2. The development of the allocation factors is presented in Schedule C of the exhibit.

Q. What was the source of the total cost of service data set forth in column 3 of Schedule B of Exhibit No. 7-A?

A. The pro forma costs of service were furnished by the rate department of Pennsylvania-American Water Company, and are set forth in Exhibit 3-A.

Q. Have you summarized the results of your cost allocation study?

A. Yes. The results are summarized in columns 1, 2 and 3 of Schedule A of Exhibit No. 7-A. Column 2 sets forth the total allocated pro forma cost of service as of December 31, 2010 for each customer classification identified in column 1. Column 3 presents each customer classification's cost responsibility as a percent of the total cost.

Q. Have you compared these cost responsibilities with the proportionate revenue under existing rates for each customer classification?

A. Yes. A comparison of the allocated cost responsibilities and the percentage revenue under existing rates can be made by comparing columns 3 and 5 of Schedule A of Exhibit 7-A. A similar comparison of the percentage cost responsibilities (relative cost of service) and the percentage of pro forma revenues (relative revenues) under proposed rates can be made by comparing columns 3 and 7 of Schedule A of Exhibit No. 7-A.

CUSTOMER RATE DESIGN

Q. What are the appropriate factors to be considered in the design of the rate structure?

A. In preparing a rate structure, one should consider the allocated costs of service, the impact of radical changes from the present rate structure, the understandability and ease of application of the rate structure, community and social influences, and the value of service. General guidelines should be developed with management to determine the extent to which each of these criteria is to be incorporated in the rate structure to be designed, inasmuch as the pricing of a commodity or service is a function of management.

Q. Did management provide rate design guidelines to you?

A. Yes, they did. As described in Ms. Lontz's testimony, the guidelines included (1) increase customer charges to reflect appropriate levels of cost of service for each classification and, (2) design volumetric charges for each

classification to move revenues more in-line with the cost of providing service.

Q. Do the proposed rates comply with these guidelines?

A. Yes, they do.

Q. Please describe the rates proposed in this proceeding.

A. The proposed rates consist of customer charges for each classification plus a single volumetric charge applicable to each class.

Q. Please explain the increases in the customer charges and volumetric rates.

A. The customer charge under existing rates of $4.50 per month is not sufficient to recover the fixed costs associated with providing a service lateral for each customer, the costs associated with customer accounting and a portion of the fixed costs associated with I&I. Under proposed rates, the residential customer charge is set at $20.00 per month, the non-residential rate is set at $40.00 per month and the large industrial and bulk user rate is set at $300.00 per month. These rates will recover the costs associated with customer facilities and customer accounting as well as a portion of the fixed costs associated with I&I.

Volumetric rates were designed to recover the remaining cost of service for each classification so that the proposed revenues by class will approximate the indicated cost of service results.

Q. Why is it appropriate to recover a portion of fixed costs associated with I&I in the customer charge?

A. Fixed costs associated with I&I are primarily a function of the number of customers and generally are not influenced by the volume of flow contributed from each classification. Therefore, a portion of such I&I fixed costs are properly recovered in a fixed charge. The calculation of the customer costs per month are presented in Schedule D of Exhibit No. 7-A.

Q. Have you demonstrated that the proposed revenues are aligned with the cost of service?

A. Yes, Schedule A, column 6, on page 7 of Exhibit No. 7-A shows that the revenues under proposed rates for each customer classification are nearly aligned with the cost of service shown in column 2.

Q. Have you prepared comparisons of present and proposed rates for each classification and each rate zone?

A. Yes. Schedule E, of Exhibit No. 7-A, presents comparisons of present and proposed rates.

Q. Have you prepared proof of revenue schedules under present and proposed rates?

A. Yes. Schedule F and G of Exhibit No. 7-A, set forth the proof of revenues from the application of present and proposed rates to the customer consumption analysis. Schedule E shows a summary of revenues under present and proposed rates. Schedule F sets forth the detailed application of rates to the billing determinants.

Q. Does this complete your testimony at this time?

A. Yes, it does.

LIST OF CASES IN WHICH PAUL R. HERBERT TESTIFIED

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
1.	1983	Pa. PUC	R-832399	T. W. Phillips Gas and Oil Co.	Pro Forma Revenues
2.	1989	Pa. PUC	R-891208	Pennsylvania-American Water Company	Bill Analysis and Rate Application
3.	1991	PSC of W. Va.	91-106-W-MA	Clarksburg Water Board	Revenue Requirements (Rule 42)
4.	1992	Pa. PUC	R-922276	North Penn Gas Company	Cash Working Capital
5.	1992	NJ BPU	WR92050532J	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
6.	1994	Pa. PUC	R-943053	The York Water Company	Cost Allocation and Rate Design
7.	1994	Pa. PUC	R-943124	City of Bethlehem	Revenue Requirements, Cost Allocation, Rate Design and Cash Working Capital
8.	1994	Pa. PUC	R-943177	Roaring Creek Water Company	Cash Working Capital
9.	1994	Pa. PUC	R-943245	North Penn Gas Company	Cash Working Capital
10.	1994	NJ BPU	WR94070325	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
11.	1995	Pa. PUC	R-953300	Citizens Utilities Water Company of Pennsylvania	Cost Allocation and Rate Design
12.	1995	Pa. PUC	R-953378	Apollo Gas Company	Revenue Requirements and Rate Design
13.	1995	Pa. PUC	R-953379	Carnegie Natural Gas Company	Revenue Requirements and Rate Design
14.	1996	Pa. PUC	R-963619	The York Water Company	Cost Allocation and Rate Design
15.	1997	Pa. PUC	R-973972	Consumers Pennsylvania Water Company - Shenango Valley Division	Cash Working Capital
16.	1998	Ohio PUC	98-178-WS-AIR	Citizens Utilities Company of Ohio	Water and Wastewater Cost Allocation and Rate Design
17.	1998	Pa. PUC	R-984375	City of Bethlehem - Bureau of Water	Revenue Requirement, Cost Allocation and Rate Design
18.	1999	Pa. PUC	R-994605	The York Water Company	Cost Allocation and Rate Design
19.	1999	Pa. PUC	R-994868	Philadelphia Suburban Water Company	Cost Allocation and Rate Design
20.	1999	PSC of W.Va.	99-1570-W-MA	Clarksburg Water Board	Revenue Requirements (Rule 42), Cost Allocation and Rate Design
21.	2000	Ky. PSC	2000-120	Kentucky-American Water Company	Cost Allocation and Rate Design
22.	2000	Pa. PUC	R-00005277	PPL Gas Utilities	Cash Working Capital
23.	2000	NJ BPU	WR00080575	Atlantic City Sewerage Company	Cost Allocation and Rate Design
24.	2001	Ia. St Util Bd	RPU-01-4	Iowa-American Water Company	Cost Allocation and Rate Design
25.	2001	Va. St. Corp	PUE010312	Virginia-American Water Company	Cost Allocation and Rate Design
26.	2001	WV PSC	01-0326-W-42T	West-Virginia American Water Company	Cost Allocation And Rate Design
27.	2001	Pa. PUC	R-016114	City of Lancaster	Tapping Fee Study
28.	2001	Pa. PUC	R-016236	The York Water Company	Cost Allocation and Rate Design
29.	2001	Pa. PUC	R-016339	Pennsylvania-American Water Company	Cost Allocation and Rate Design
30.	2001	Pa. PUC	R-016750	Philadelphia Suburban Water Company	Cost Allocation and Rate Design
31.	2002	Va. St. Corp Cm	PUE-2002-00375	Virginia-American Water Company	Cost Allocation and Rate Design
32.	2003	Pa. PUC	R-027975	The York Water Company	Cost Allocation and Rate Design
33.	2003	Tn Reg. Auth	03-	Tennessee-American Water Company	Cost Allocation and Rate Design
34.	2003	Pa. PUC	R-038304	Pennsylvania-American Water Company	Cost Allocation and Rate Design
35.	2003	NJ BPU	WR03070511	New Jersey-American Water Company	Cost Allocation and Rate Design
36.	2003	Mo. PSC	WR-2003-0500	Missouri-American Water Company	Cost Allocation and Rate Design
37.	2004	Va. St. Corp Cm	PUE-200 -	Virginia-American Water Company	Cost Allocation and Rate Design
38.	2004	Pa. PUC	R-038805	Pennsylvania Suburban Water Company	Cost Allocation and Rate Design
39.	2004	Pa. PUC	R-049165	The York Water Company	Cost Allocation and Rate Design
40.	2004	NJ BPU	WRO4091064	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
41.	2005	WV PSC	04-1024-S-MA	Morgantown Utility Board	Cost Allocation and Rate Design
42.	2005	WV PSC	04-1025-W-MA	Morgantown Utility Board	Cost Allocation and Rate Design
43.	2005	Pa. PUC	R-051030	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
44.	2006	Pa. PUC	R-051178	T. W. Phillips Gas and Oil Co.	Cost Allocation and Rate Design
45.	2006	Pa. PUC	R-061322	The York Water Company	Cost Allocation and Rate Design
46.	2006	NJ BPU	WR-06030257	New Jersey American Water Company	Cost Allocation and Rate Design
47.	2006	Pa. PUC	R-061398	PPL Gas Utilities, Inc.	Cost Allocation and Rate Design
48.	2006	NM PRC	06-00208-UT	New Mexico American Water Company	Cost Allocation and Rate Design
49.	2006	Tn Reg Auth	06-00290	Tennessee American Water Company	Cost Allocation and Rate Design

LIST OF CASES IN WHICH PAUL R. HERBERT TESTIFIED

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
50.	2007	Ca. PUC	U-339-W	Suburban Water Systems	Water Conservation Rate Design
51.	2007	Ca. PUC	U-168-W	San Jose Water Company	Water Conservation Rate Design
52.	2007	Pa. PUC	R-00072229	Pennsylvania American Water Company	Cost Allocation and Rate Design
53.	2007	Ky. PSC	2007-00143	Kentucky American Water Company	Cost Allocation and Rate Design
54.	2007	Mo. PSC	WR-2007-0216	Missouri American Water Company	Cost Allocation and Rate Design
55.	2007	Oh. PUC	07-1112-WS-AIR	Ohio American Water Company	Cost Allocation and Rate Design
56.	2007	Il. CC	07-0507	Illinois American Water Company	Customer Class Demand Study
57.	2007	Pa. PUC	R-00072711	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
58.	2007	NJ BPU	WR07110866	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
59.	2007	Pa. PUC	R-00072492	City of Bethlehem – Bureau of Water	Revenue Requirements, Cost Allo
60.	2007	WV PSC	07-0541-W-MA	Clarksburg Water Board	Cost Allocation and Rate Design
61.	2007	WV PSC	07-0998-W-42T	West Virginia American Water Company	Cost Allocation and Rate Design
62.	2008	NJ BPU	WR08010020	New Jersey American Water Company	Cost Allocation and Rate Design
63.	2008	Va St Corp Com		Virginia American Water Company	Cost Allocation and Rate Design
64.	2008	Tn. Reg. Auth.	08-00039	Tennessee American Water Company	Cost Allocation and Rate Design
65.	2008	Mo PSC	WR-2008-0311	Missouri American Water Company	Cost Allocation and Rate Design
66.	2008	De PSC	08-96	Artesian Water Company, Inc.	Cost Allocation and Rate Design
67.	2008	Pa PUC	R-2008-2032689	Penna. American Water Co. – Coatesville Wastewater	Cost Allocation and Rate Design
68.	2008	AZ Corp. Com.	W-01303A-08-0227 SW-01303A-08-0227	Arizona American Water Co. - Water - Wastewater	Cost Allocation and Rate Design
69.	2008	Pa PUC	R-2008-2023067	The York Water Company	Cost Allocation and Rate Design
70.	2008	WV PSC	08-0900-W-42T	West Virginia American Water Company	Cost Allocation and Rate Design
71.	2008	Ky PSC	2008-00250	Frankfort Electric and Water Plant Board	Cost Allocation and Rate Design
72.	2008	Ky PSC	2008-00427	Kentucky American Water Company	Cost Allocation and Rate Design
73.	2009	PaPUC	2008-2079660	UGI – Penn Natural Gas	Cost of Service Allocation
74.	2009	PaPUC	2008-2079675	UGI – Central Penn Gas	Cost of Service Allocation
75.	2009	PaPUC	2009-2097323	Pennsylvania American Water Co.	Cost Allocation and Rate Design
76.	2009	Ia St Util Bd	RPU-09-	Iowa-American Water Company	Cost Allocation and Rate Design
77.	2009	Il CC		Illinois-American Water Company	Cost Allocation and Rate Design
78.	2009	Oh PUC	09-391-WS-AIR	Ohio-American Water Company	Cost Allocation and Rate Design
79.	2009	PaPUC	R-2009-2132019	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
80.	S009	Va St Corp Com	PUC-00059	Aqua Virginia, Inc.	Cost Allocation (only)
81.	2009	Mo PSC	WR-2010-0131	Missouri American Water Company	Cost Allocation and Rate Design
82.	2010	Va St Corp Com	2010-00001	Virginia American Water Company	Cost Allocation and Rate Design
83.	2010	KyPSC	2010-00036	Kentucky American Water Company	Cost Allocation and Rate Design

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

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS

HERSHEY, PENNSYLVANIA

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
COATESVILLE WASTEWATER OPERATIONS
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 Amount (Schedule B)	Cost of Service Percent	Revenues, Present Rates Amount	Revenues, Present Rates Percent	Revenues, Proposed Rates Amount	Revenues, Proposed Rates Percent	Proposed Increase Amount	Proposed Increase Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential*	$ 6,274,096	51.6%	$ 1,915,433	47.3%	$6,275,448	51.6%	$ 4,360,015	227.6%
Non-Residential**	1,091,634	9.0%	376,946	9.3%	1,091,043	9.0%	714,097	189.4%
Large Industrial***	285,768	2.3%	134,418	3.3%	283,872	2.3%	149,454	111.2%
Bulk Users/VA Hospital	4,516,327	37.1%	1,626,786	40.1%	4,516,305	37.1%	2,889,520	177.6%
Total Sales	12,167,825	100.0%	4,053,582	100.0%	12,166,668	100.0%	8,113,086	200.1%
Other Revenues	121,584		79,175		121,584		42,409	53.6%
Total	$ 12,289,409		$ 4,132,757		$ 12,288,252		$ 8,155,495	197.3%

* Includes revenue from Unmetered Sales.
** Non-Residential includes all other Industrial other than Mittal Steel. Includes revenue from unmetered sales.
*** Includes Mittal Steel only.

Schedule A

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

Account		Factor Ref.	Cost of Service	Residential	Non-Residential	Large Industrial	Bulk/VA Hospital
(1)		(2)	(3)	(4)	(5)	(6)	(7)
	OPERATION AND MAINTENANCE EXPENSES						
	COLLECTION						
615.1	Purchased Power	1	64,539	31,889	5,873	2,904	23,873
616.1	Purchased Fuel	1	784	387	71	35	290
633.1	Contract Services - Legal	2	33	18	2	1	12
675.1	Miscellaneous Operating Expense	2	805	434	59	24	288
	TOTAL COLLECTION EXPENSE - OPERATION		66,161	32,728	6,006	2,965	24,462
	SEWAGE TREATMENT						
601.3	Salary and Wages	1	256,612	126,792	23,352	11,548	94,921
601.4	Salary and Wages	1	51,554	25,473	4,691	2,320	19,070
615.3	Purchased Power	1	361,562	178,648	32,902	16,270	133,742
618.3	Chemicals	1	138,727	68,545	12,624	6,243	51,315
620.3	Materials and Supplies - Operation	1	338	167	31	15	125
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	15,868	7,840	1,444	714	5,870
636.3	Contract Services - Operation	1	1,078	533	98	49	399
641.3	Rental of Building	1	0	0	0	0	0
642.3	Rental of Equipment	1	2,797	1,382	255	126	1,035
650.3	Transportation	1	0	0	0	0	0
620.4	Materials and Supplies - Maintenance	1	19,252	9,512	1,752	866	7,121
636.4	Contract Services - Maintenance	1	3,945	1,949	359	178	1,459
675.4	Misc. Maintenance Expense	1	3,258	1,610	296	147	1,205
675.3	Misc. Operating Expense	1	221,153	109,272	20,125	9,952	81,804
	TOTAL SEWAGE TREATMENT EXPENSE		1,076,144	531,723	97,929	48,426	398,066

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

	Account	Factor Ref.	Cost of Service	Residential	Non-Residential	Large Industrial	Bulk/VA Hospital
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	TRANSMISSION						
601.5	Salary and Wages	2	62,534	33,700	4,590	1,895	22,350
601.6	Salary and Wages	2	246,076	132,610	18,062	7,456	87,948
604.5	Employee Pension and Benefits	2	0	0	0	0	0
615.5	Purchased Power	2	0	0	0	0	0
620.5	Materials and Supplies	2	0	0	0	0	0
631.5	Contract Services - Engineering	2	0	0	0	0	0
636.5	Contract Services	2	13,316	7,176	977	403	4,759
641.5	Rental of Building	2	0	0	0	0	0
642.5	Rental of Equipment	2	0	0	0	0	0
650.5	Transportation	2	0	0	0	0	0
675.5	Miscellanous Operating Expenes	2	48,167	25,957	3,535	1,459	17,215
	TOTAL T & D EXPENSE OPERATION		370,093	199,443	27,165	11,214	132,271
620.6	Materials and Supplies	2	2,990	1,611	219	91	1,069
636.6	Contract Services	2	388,293	209,251	28,501	11,765	138,776
675.6	Miscellaneous Maintenance Expense	2	56,708	30,560	4,162	1,718	20,267
675.5	Miscellaneous Operating Expense	2	0	0	0	0	0
	TOTAL T & D EXPENSE - MAINTENANCE		447,991	241,422	32,883	13,574	160,112
	TOTAL T & D EXPENSE		818,084	440,865	60,047	24,788	292,383
	CUSTOMER ACCOUNTS						
601.7	Salary and Wages	6	1,312	1,238	73	0	1
670.7	Bad Debts	6	262,172	247,359	14,551	52	210
675.7	Miscellaneous Expense	6	2,573	2,428	143	1	2
	TOTAL CUSTOMER ACCOUNTING EXPENSE		266,057	251,025	14,766	53	213

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

Account (1)		Factor Ref. (2)	Cost of Service (3)	Residential (4)	Non-Residential (5)	Large Industrial (6)	Bulk/VA Hospital (7)
	ADMINISTRATIVE AND GENERAL EXPENSES						
601.8	Salaries and Wages	11	51,313	30,182	3,931	1,570	15,630
603.8	Salaries of Officiers	11	0	0	0	0	0
604.8	Employee Pension & Benefits	7	159,426	83,364	13,025	5,899	57,138
615.8	Purchased Power	11	0	0	0	0	0
641.8	Rental of Building	11	0	0	0	0	0
642.8	Rental of Equipment	11	157	92	12	5	48
650.8	Transportation	11	99,679	58,631	7,635	3,050	30,362
656.8	Insurance - Vehicles	11	0	0	0	0	0
657.8	Insurance - Vehicles	11	0	0	0	0	0
658.8	Workers Compensation	7	0	0	0	0	0
659.8	Insurance	11	0	0	0	0	0
660.8	Advertising	11	0	0	0	0	0
666.8	Amortization of Rate Case	10	201,578	105,828	17,356	5,584	72,810
667.8	Regulatory Commission	11	0	0	0	0	0
675.8	Miscellaneous Expense	11	167,627	98,598	12,840	5,129	51,059
	TOTAL A & G EXPENSE		679,780	376,696	54,799	21,237	227,047
	Total Operation & Maintenance Expenses		2,906,226	1,633,037	233,548	97,470	942,172

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

Account (1)	Factor Ref. (2)	Cost of Service (3)	Residential (4)	Non-Residential (5)	Large Industrial (6)	Bulk/VA Hospital (7)
DEPRECIATION EXPENSE						
354.20 Structures and Improvements - Collection	4	4,145	2,030	303	90	1,723
354.30 Structures and Improvements -Pumping						
Related to Average Flow	3	90,930	38,427	8,757	1,900	41,846
Related to Peak Flow	4	75,111	36,782	5,483	1,622	31,224
354.40 Structures and Improvements - Treatment						
Related to Average Flow	3	1,069,875	452,129	103,029	22,360	492,357
Related to Peak Flow	4	111,403	54,554	8,132	2,406	46,310
354.70 Structures and Improvements - General	4	28,746	14,077	2,098	621	11,950
355.00 Power Generation Equipment	4	7,908	3,873	577	171	3,287
360.10 Force Mains	4A	76,525	66,592	9,933	0	0
361.10 Gravity Mains						
Collection	4A	94,098	81,885	12,214	0	0
Conveyance	4	200,381	98,127	14,628	4,328	83,299
361.20 Manholes						
Collection	4A	22,401	19,494	2,908	0	0
Conveyance	4	1,932	946	141	42	803
363.00 Service Laterals	5	86,314	65,124	11,160	4,980	5,049
364.00 Flow Measuring Devices	3	2,173	918	209	45	1,000
365.00 Flow Measuring Devices - Installations	3	619	262	60	13	285
370.00 Receiving Wells	4	378	185	28	8	157
371.00 Pumping Equipment						
Related to Average Flow	3	22,639	9,567	2,180	473	10,418
Related to Peak Flow	4	66,493	32,562	4,854	1,436	27,641
380.00 Treatment Equipment						
Related to Average Flow	3	472,474	199,668	45,499	9,875	217,433
Related to Peak Flow	4	193,907	94,956	14,155	4,188	80,607
381.00 Plant Sewers						
Related to Average Flow	3	32,996	13,944	3,178	690	15,185
Related to Peak Flow	4	112,858	55,267	8,239	2,438	46,915
389.10 Other Plant and Misc. Equip. - Intangible	11	1,927	1,133	148	59	587
390.00 Office Furniture and Equipment	11	5,912	3,477	453	181	1,801
392.00 Stores Equipment	11	275	162	21	8	84
393.00 Tools, Shop and Garage Equipment	11	1,398	822	107	43	426
394.00 Laboratory Equipment	3	3,713	1,569	358	78	1,709
395.00 Power Operated Equipment	11	6,029	3,546	462	184	1,836
396.00 Communication Equipment	11	52,557	30,914	4,026	1,608	16,009
397.00 Miscellaneous Equipment	11	18,843	11,083	1,443	577	5,740
Total Depreciation Expense		2,864,962	1,394,075	264,782	60,425	1,145,680

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

Account		Factor Ref.	Cost of Service	Residential	Non-Residential	Large Industrial	Bulk/VA Hospital
(1)		(2)	(3)	(4)	(5)	(6)	(7)
	Amortization Expense	9	(456,503)	(231,721)	(42,363)	(9,084)	(173,334)
	Taxes Other Than Income						
685100	Utility Reg Assessment Fee	10	76,644	40,238	6,599	2,123	27,684
685200	Property Taxes	9	275,590	139,889	25,575	5,484	104,642
685320	Payroll Taxes	7	54,428	28,460	4,447	2,014	19,507
	Total Taxes, Other Than Income		406,662	208,588	36,621	9,621	151,832
	Total Operating Expense		5,721,347	3,003,979	492,587	158,432	2,066,350
4091	**Income Taxes**	9	900,289	456,987	83,547	17,916	341,840
	Utility Income Available for Return	9	5,667,773	2,876,962	525,969	112,789	2,152,053
	Total Cost of Service		12,289,409	6,337,927	1,102,103	289,136	4,560,243
	Less: Other Water Revenues	10	(121,584)	(63,832)	(10,468)	(3,368)	(43,916)
	Total Cost of Service Related to Sales of Wastewater Services		12,167,825	6,274,096	1,091,634	285,768	4,516,327

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS

FACTOR 1. ALLOCATION OF COSTS ASSOCIATED WITH AVERAGE DAILY HISTORIC FLOW INCLUDING INFILTRATION AND INFLOW

Factors are based on the pro forma test year average daily consumption for each customer classification with adjustments. The detail regarding calculation of adjusted flows can be found on the following page.

Classification	Total Adjusted Average Daily Flow 100 gallons (a)	Direct I&I Gallons Per Day 100 gallons (b)	Total Direct I&I And Average Flow	Common I&I 100 Gallons Per Day (c)	Total Gallons Per Day	Allocation Factor
(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)=(4)+(5)	(7)
Residential	7,183	9,390	16,573	358	16,931	0.4941
Non-Residential	1,954	1,096	3,050	66	3,116	0.0910
Large Industrial	1,113	395	1,508	33	1,541	0.0450
Bulk Users/VA Hospital	11,697	707	12,404	268	12,672	0.3699
Total	21,947	11,587	33,535	725	34,260	1.0000

(a) See the following page.
(b) Allocation based on Factor 1A for Residential, Non-Residential and Large Large Industrial.
(c) Allocated based on Column 4.

FACTOR 1A. ALLOCATION OF INFILTRATION AND INFLOW BY CUSTOMER CLASS.

Factors are based on a 1/3-2/3 weighting of flow and number of customers, as follows:

Customer Classification	Total Adjusted Average Daily Flow 100 gallons	Average Daily Flow		Number of Customers	Number of Customers		Allocation Factor
		Factor	Weight		Factor	Weight	
(1)	(2)	(3)	(4)=(3) x 0.3333	(5)	(6)	(7)=(6) x 0.6667	(8)=(4)+(7)
Residential	7,183	0.7007	0.2335	5,879	0.9443	0.6295	0.8630
Non-Residential	1,954	0.1907	0.0636	346	0.0556	0.0371	0.1007
Large Industrial	1,113	0.1086	0.0362	1	0.0002	0.0001	0.0363
Total	10,250	1.0000	0.3333	6,226	1.0001	0.6667	1.0000

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS

FACTOR 1. ALLOCATION OF COSTS ASSOCIATED WITH AVERAGE DAILY FLOW INCLUDING INFILTRATION AND INFLOW (CONT.)

Classification	Annual Flow 100 gallons		Average Daily Flow 100 gallons	Average Daily Unmetered Flow 100 gallons	Total Average Daily Flow 100 gallons	Water Sales Adjustment Per I&I Study	Average Daily Adjusted Water sales 100 gallons	Plus Other Flow 100 gallons	Total Adjusted Average Daily Flow 100 gallons
(1)	(2)		(3)=(2)/365	(4)	(3)+(4)=(5)	(6)	(7)	(8)	(9)
Residential	2,930,981		8,030	133	8,163	0.8800	7,183		7,183
Non-Residential	718,951	**	1,970	1	1,971	0.8800	1,735	219	1,954
Large Industrial	406,191		1,113		1,113	1.0000	1,113		1,113
Bulk Users/VA Hospital	4,269,440		11,697		11,697	1.0000	11,697		11,697
Total	8,325,563		22,810	134	22,944		21,728	219	21,947

** Excludes Quebecor. Quebecor flow added in Column 8.

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS

FACTOR 2. ALLOCATION OF COSTS ASSOCIATED WITH HISTORIC PEAK FLOW INCLUDING INFILTRATION AND INFLOW

Factors are based on peak hourly flow for each customer classification.

Customer Classification	Peak Hourly Flow Consumption, 100 gpd (a)	Direct I&I Gallons Per Day 100 gallons (b)	Total Direct I&I And Average	Common I&I 100 Gallons Per Day (c)	Total Gallons Per Day	Allocation Factor
(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)=(4)+(5)	(7)
Residential	7,183	50,105	57,288	684	57,972	0.5389
Non-Residential	1,954	5,847	7,801	93	7,894	0.0734
Large Industrial	1,113	2,108	3,221	38	3,259	0.0303
Bulk Users/VA Hospital	34,227	3,772	37,999	453	38,452	0.3574
Total	44,478	61,831	106,309	1,268	107,577	1.0000

(a) From I&I Study.
(b) Allocation based on Factor 1A.
(c) Allocated based on Column 4

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS

FACTOR 3. ALLOCATION OF CAPITAL COSTS ASSOCIATED WITH PROJECTED AVERAGE DAILY FLOW INCLUDING INFILTRATION AND INFLOW

Factors are based on the projected average daily consumption for each customer classification projected for 2017.

Classification	Total Average Daily Flow 100 gallons	Direct I&I Gallons Per Day 100 gallons (a)	Total Direct I&I And Average	Common I&I 100 Gallons Per Day (b)	Total Gallons Per Day	Allocation Factor
(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)=(4)+(5)	(7)
Residential	20,969	10,305	31,274	307	31,581	0.4226
Non-Residential	5,925	1,202	7,127	70	7,197	0.0963
Large Industrial	1,113	433	1,546	15	1,562	0.0209
Bulk Users/VA Hospital	33,275	776	34,051	334	34,384	0.4602
Total	61,282	12,717	73,999	725	74,724	1.0000

(a) Allocation based on Factor 1A.
(b) Allocated based on Column 4

FACTOR 4. ALLOCATION OF CAPITAL COSTS ASSOCIATED WITH PROJECTED PEAK FLOW INCLUDING INFILTRATION AND INFLOW

Factors are based on the maximum day extra capacity demand for each customer classification projected for 2017.

Customer Classification	Peak Hourly Flow Consumption, 100 gpd	Direct I&I Gallons Per Day 100 gallons (a)	Total Direct I&I And Average	Common I&I 100 Gallons Per Day (b)	Total Gallons Per Day	Allocation Factor
(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)=(4)+(5)	(7)
Residential	20,969	86,118	107,088	621	107,709	0.4897
Non-Residential	5,925	10,049	15,974	93	16,066	0.0730
Large Industrial	1,113	3,622	4,735	27	4,763	0.0216
Bulk Users/VA Hospital	84,454	6,482	90,936	527	91,463	0.4157
Total	112,461	106,272	218,733	1,268	220,001	1.0000

(a) Allocation based on Factor 1A.
(b) Allocated based on Column 4

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS

FACTOR 4A. ALLOCATION OF COLLECTION SYSTEM CAPITAL COSTS ASSOCIATED WITH PROJECTED PEAK FLOW INCLUDING INFILTRATION AND INFLOW

Factors are based on the maximum day extra capacity demand for each customer classification projected for 2017, excluding Bulk Customers

Customer Classification	Peak Hourly Flw Consumption, 100 gpd	Direct I&I Gallons Per Day 100 gallons (a)	Total Direct I&I And Average	Common I&I 100 Gallons Per Day (b)	Total Gallons Per Day	Allocation Factor
(1)	(2)	(3)	(4)=(2)+(3)	(5)	(6)=(4)+(5)	(7)
Residential	20,969	86,118	107,088	621	107,709	0.8702
Non-Residential	5,925	10,049	15,974	93	16,066	0.1298
Large Industrial	0	-	-	-	-	0.0000
Bulk Users/VA Hospital	0	-	-	-	-	0.0000
Total	26,894	96,167	123,061	714	123,775	1.0000

(a) Allocation based on Factor 1A.
(b) Equal to Factor 4, Column 5.

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS

FACTOR 5. ALLOCATION OF COSTS ASSOCIATED WITH CUSTOMER FACILITIES.

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

Customer Classification (1)	Service Equivalents (2)	Allocation Factor (3)
Residential	5,937	0.7545
Non-Residential	1,017	0.1293
Large Industrial	454	0.0577
Bulk Users/VA Hospital	460	0.0585
Total	7,868	1.0000

FACTOR 6. ALLOCATION OF COSTS ASSOCIATED WITH BILLING AND COLLECTING.

Factors are based on the number of customers.

Customer Classification (1)	Number of Customers (2)	Allocation Factor (3)
Residential (a)	5,879	0.9435
Non-Residential (a)	346	0.0555
Large Industrial	1	0.0002
Bulk Customers	5	0.0008
Total	6,231	1.0000

(a) Includes unmetered customers of 95 residential and 1 commercial.

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

Meter Size	5/8" Equivalent	Residential		Commercial/Public		Large Industrial		Bulk Users/VA Hospital		Total	
		Number of Meters	Weighting	Number of Meters	Weighting	Number of Meters	Weighting	Number of Meters	Weighting	Number of Meters	Weighting
(1)	(2)	(3)	(4)=(2)X(3)	(5)	(6)=(2)X(5)	(7)	(8)=(2)X(7)	(15)	(16)=(2)X(15)	(17)	(18)
5/8	1.0	5,727	5,727	222	222	1	1		0	5,950	5,950
3/4	1.5	9	14	4	6		0		0	13	20
1	2.5	32	80	59	148		0		0	91	228
1-1/2	5.0	4	20	17	85	2	10		0	23	115
2	8.0	12	96	32	256	1	8		0	45	360
3	15.0		0	5	75	2	30	1	15	8	120
4	25.0		0	3	75	5	125		0	8	200
6	50.0		0	3	150	4	200	2	100	9	450
8	80.0		0	0	0	1	80	0	0	1	80
10	115.0		0		0		0	3	345	3	345
Total		5,784	5,937	345	1,017	16	454	6	460	6,151	7,868

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS

FACTOR 7. ALLOCATION OF LABOR RELATED TAXES AND BENEFITS.

Factors are based on the allocation of direct labor expense.

Customer Classification	Direct Labor Expense	Allocation Factor
(1)	(2)	(3)
Residential	$349,995	0.5229
Non-Residential	54,698	0.0817
Large Industrial	24,789	0.0370
Bulk Users/VA Hospital	239,919	0.3584
Total	$669,401	1.0000

FACTOR 8. ALLOCATION OF ORGANIZATION, FRANCHISES AND CONSENTS, MISCELLANEOUS INTANGIBLE PLANT AND OTHER RATE BASE ELEMENTS.

Factors are based on the allocation of the original cost less depreciation other than those items being allocated, as follows:

Customer Classification	Original Cost Less Depreciation	Allocation Factor
(1)	(2)	(3)
Residential	$40,459,687	0.5078
Non-Residential	7,388,298	0.0927
Large Industrial	1,586,286	0.0199
Bulk Users/VA Hospital	30,242,210	0.3796
Total	$79,676,481	1.0000

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS

FACTOR 9. ALLOCATION OF INCOME TAXES AND INCOME AVAILABLE FOR RETURN.

Factors are based on the allocation of the original cost measure of value rate base as shown on the following pages and summarized below.

Customer Classification	Original Cost Measure of Value	Allocation Factor
(1)	(2)	(3)
Residential	$39,407,350	0.5076
Non-Residential	7,201,042	0.0928
Large Industrial	1,542,535	0.0199
Bulk Users/VA Hospital	29,476,508	0.3797
Total	$77,627,436	1.0000

FACTOR 10. ALLOCATION OF REGULATORY COMMISSION EXPENSES, ASSESSMENTS OTHER WATER REVENUES.

The factors are based on the allocation of the total cost of service, excluding

Customer Classification	Total Cost of Service	Allocation Factor
(1)	(2)	(3)
Residential	$2,857,912	0.5250
Non-Residential	468,632	0.0861
Large Industrial	150,725	0.0277
Bulk Users/VA Hospital	1,965,856	0.3612
Total	$5,443,125	1.0000

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

Account	Factor Ref.	Cost of Service	Residential	Non-Residential	Large Industrial	Bulk/VA Hospital
(1)	(2)	(3)	(4)	(5)	(6)	(7)
RATE BASE						
352.00 Franchises	8	150,569	76,459	13,958	2,996	57,156
353.40 Land and Land Rights - Treatment	3	1,047,343	442,607	100,859	21,889	481,987
354.20 Structures and Improvements - Collection	4	134,342	65,787	9,807	2,902	55,846
354.30 Structures and Improvements - Pumping						
Related to Average Flow	3	2,136,866	903,039	205,780	44,660	983,386
Related to Peak Flow	4	1,671,245	818,409	122,001	36,099	694,737
354.40 Structures and Improvements - Treatment						
Related to Average Flow	3	24,494,782	10,351,495	2,358,847	511,941	11,272,499
Related to Peak Flow	4	4,777,972	2,339,773	348,792	103,204	1,986,203
354.70 Structures and Improvements - General	3	489,843	207,008	47,172	10,238	225,426
355.00 Power Generation Equipment	4	108,440	53,103	7,916	2,342	45,079
360.10 Force Mains	4A	4,028,379	3,505,495	522,884	0	0
361.10 Gravity Mains						
Collection	4A	4,397,842	3,827,002	570,840	0	0
Conveyance	4	9,576,117	4,689,424	699,057	206,844	3,980,792
361.20 Manholes						
Collection	4A	614,825	535,020	79,804	0	0
Conveyance	4	53,027	25,968	3,871	1,145	22,044
363.00 Service Laterals	5	2,177,989	1,643,293	281,614	125,670	127,412
364.00 Flow Measuring Devices	3	39,525	16,703	3,806	826	18,189
365.00 Flow Measuring Devices - Installations	3	12,533	5,296	1,207	262	5,768
370.00 Receiving Wells	4	14,097	6,903	1,029	304	5,860
371.00 Pumping Equipment						
Related to Average Flow	3	553,962	234,104	53,347	11,578	254,933
Related to Peak Flow	4	420,928	206,129	30,728	9,092	174,980
380.00 Treatment Equipment						
Related to Average Flow	3	9,810,119	4,145,756	944,714	205,031	4,514,617
Related to Peak Flow	4	5,907,189	2,892,751	431,225	127,595	2,455,619
381.00 Plant Sewers						
Related to Average Flow	3	1,374,443	580,840	132,359	28,726	632,519
Related to Peak Flow	4	4,699,848	2,301,515	343,089	101,517	1,953,727
389.10 Other Plant and Misc. Equip. - Intangible	11	10,595	6,232	812	324	3,227
390.00 Office Furniture and Equipment	11	97,761	57,503	7,488	2,991	29,778
392.00 Stores Equipment	11	4,355	2,562	334	133	1,327
393.00 Tools, Shop and Garage Equipment	11	18,396	10,821	1,409	563	5,603
394.00 Laboratory Equipment	3	31,634	13,369	3,046	661	14,558
395.00 Power Operated Equipment	11	39,756	23,384	3,045	1,217	12,110
396.00 Communication Equipment	11	707,961	416,423	54,230	21,664	215,645
397.00 Miscellaneous Equipment	11	224,367	131,973	17,187	6,866	68,342
TOTAL SEWER UTILITY PLANT IN SERVICE		79,827,049	40,536,146	7,402,256	1,589,282	30,299,366

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

Account (1)	Factor Ref. (2)	Cost of Service (3)	Residential (4)	Non-Residential (5)	Large Industrial (6)	Bulk/VA Hospital (7)
Other Rate Base Items:						
Overheads and AFUCD	8	0	0	0	0	0
Cash Working Capital	12	(218,699)	(122,887)	(17,583)	(7,326)	(70,902)
Materials and Supplies	8	7,510	3,814	696	149	2,851
Unrecovered Reserve	8	395,408	200,788	36,654	7,869	150,097
Deferred, Accrued and Prepaid Taxes	8	(2,383,832)	(1,210,510)	(220,981)	(47,438)	(904,903)
Total Other Rate Base Elements		(2,199,613)	(1,128,795)	(201,214)	(46,747)	(822,857)
Total Original Cost Measure of Value		77,627,436	39,407,350	7,201,042	1,542,535	29,476,508

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS
FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS

FACTOR 11. ALLOCATION OF ADMINISTRATIVE AND GENERAL EXPENSES

Factors are based on the allocation of all other operation and maintenance expenses excluding purchased water, power, chemicals and waste disposal.

Customer Classification	Operation & Maintenance Expenses	Allocation Factor
(1)	(2)	(3)
Residential	$976,872	0.5882
Non-Residential	127,278	0.0766
Large Industrial	50,780	0.0306
Bulk Users/VA Hospital	505,904	0.3046
Total	$1,660,834	1.0000

FACTOR 12. ALLOCATION OF CASH WORKING CAPITAL

Factors are based on the allocation of operation and maintenance expenses including purchased water, power, chemicals and waste disposal.

Customer Classification	Operation & Maintenance Expenses	Allocation Factor
(1)	(2)	(3)
Residential	$1,633,037	0.5619
Commercial	233,548	0.0804
Large Industrial	97,470	0.0335
Other Public Authority	942,172	0.3242
Total	$2,906,226	1.0000

PENNSYLVANIA AMERICAN WATER
COATESVILLE WASTEWATER OPERATIONS

CALCULATION OF CUSTOMER COST PER MONTH

		Per Month
(1) Cost Related to Customer Facilities	$272,597	
(2) Service Equivalents X 12	94,416	
(3) Cost per Bill - Meter related		$2.89
(4) Cost Related to Customer Accounting	356,466	
(5) Number of Bills	74,772	
(6) Cost per Bill		$4.77
(7) Cost Related to I&I	4,326,794	
(8) Percentage of I&I Cost to to be recoverd in Customer Charge	67%	
(9) Net Cost Related to I&I to be recovered in Customer Charge	2,884,674	
(10) Service Equivalents X 12	94,416	
(11) Cost per Bill - I&I Related		$30.55
(12) Total Customer Costs (3)+(6)+(11)		$38.21

PENNSYLVANIA AMERICAN WATER
COATESVILLE WASTEWATER OPERATIONS

SUMMARY OF PRESENT AND PROPOSED RATES

Customer Class	Present Rates		Proposed Rates	
	Monthly Customer Charge	Usage Charge Per 100 Gallons	Monthly Customer Charge	Usage Charge Per 100 Gallons
Residential	$4.50	$0.5392	$20.00	$1.652
Residential - Low Income	4.50	0.5392	7.00	1.652
Non-Residential	8.50	0.4288	40.00	1.161
Bulk Customers	170.00	0.3777	300.00	1.051
Mittal Steel	170.00	0.3259	300.00	0.690
Flat Rate Customers:				
Residential	$27.96		$90.26	
Commercial	27.96		90.26	

PENNSYLVANIA AMERICAN WATER COMPANY
COATESVILLE 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	Percentage Increase
(1)	(2)	(3)	(4)=(2)/(3)	(5)	(6)=(5)x(4)	
Residential	$1,915,433	$1,922,365	0.99639414	$6,298,158	$6,275,448	227.6%
Non-Residential						
Commercial	320,692	320,943	0.99921942	935,831	935,100	191.6%
Public without VA Hospital	21,812	22,851	0.95453879	65,464	62,487	186.5%
Industrial	34,441	34,445	0.99989412	93,464	93,455	171.3%
Total Non-Residential	376,946	378,239		1,094,759	1,091,043	
Large Industrial (Mittal Steel)	134,418	134,418	1.00000000	283,872	283,872	111.2%
Bulk Users	1,505,200	1,501,216	1.00265385	4,169,024	4,180,088	177.7%
VA Hospital	121,586	121,586	1.00000000	336,217	336,217	176.5%
Total Bulk Users/VA Hospital	1,626,786	1,622,802		4,505,241	4,516,305	
Total Sales	$4,053,582	$4,057,823		$12,182,031	$12,166,668	200.1%
Other Operating Revenues	79,175	79,175		121,584	121,584	
Total	$ 4,132,757	$ 4,136,998		$ 12,303,615	$ 12,288,252	

Schedule F

PENNSYLVANIA-AMERICAN WATER COMPANY
COATESVILLE 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	66,991	0	$4.50	$301,462	$20.00	$1,339,830
Low Income	1,920	0	4.50	8,640	7.00	13,440
All Usage	0	2,930,981	0.5392	1,580,385	1.6520	4,841,980
Subtotal	0	2,930,981		1,580,385		4,841,980
Total	66,991	2,930,981		1,890,487		6,195,250
Unmetered Sales	1,140	0	27.96	31,878	90.26	102,908
Total Residential	68,132	2,930,981		1,922,365		6,298,158
		Non-Residential - Commercial - Monthly				
Customer Charge	3,926	0	$8.50	33,372	40.00	157,044
All Usage	0	669,857	0.4288	287,235	1.1610	777,704
Subtotal	0	669,857		287,235		777,704
Total	3,926	669,857		320,607		934,748
Unmetered Sales	12	0	27.96	336	90.26	1,083
Total Commercial	3,938	669,857		320,943		935,831
		Non-Residential - Public - Monthly				
Customer Charge	212	0	8.50	1,799	40.00	8,465
All Usage	0	49,094	0.4288	21,052	1.1610	56,998
Subtotal	0	49,094		21,052		56,998
Total	212	49,094		22,851		65,464
		Non-Residential Quebecor - Monthly				
Customer Charge	12	0	8.50	102.00	40.00	480
All Usage	0	80,090	0.4288	34,343	1.1610	92,984
Subtotal	0	80,090		34,343		92,984
Total	12	80,090		34,445		93,464
Total Non-Residential	4,162	799,041		378,239		1,094,759

PENNSYLVANIA-AMERICAN WATER COMPANY
COATESVILLE 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)
		Large Industrial (Mittal Steel) - Monthly				
Customer Charge	12	0	$170.00	$2,040	$300.00	$3,600
All Usage	0	406,191	0.3259	132,378	0.6900	280,272
Subtotal	0	406,191		132,378		280,272
Total - Large Industrial	12	406,191		134,418		283,872
		Bulk Users				
Customer Charge	48	0	170.00	8,160	300.00	14,400
All Usage	0	3,953,020	0.3777	1,493,056	1.0510	4,154,624
Subtotal	0	3,953,020		1,493,056		4,154,624
Total	48	3,953,020		1,501,216		4,169,024
		VA Hospital - Monthly				
Customer Charge	12	0	170.00	2,074	300.00	3,660
All Usage	0	316,420	0.3777	119,512	1.0510	332,557
Subtotal	0	316,420		119,512		332,557
Total	12	316,420		121,586		336,217
Total Bulk Users/VA Hospital	60	4,269,440		1,622,802		4,505,241
Total System	72,366	8,405,653		$4,057,823		$12,182,031

APPENDIX

RESPONSES TO RATE STRUCTURE
AND
COST OF SERVICE
FILING REQUIREMENTS

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1. Provide a complete (fully allocated) cost of service study if an interval of approximately three years has passed between a previous cost of service study and the historic test year date of the current filing. The cost of service study shall provide the necessary data to determine if the water rate structure is fair and equitable to all classifications of water users (including public and private fire protection customers) and reflects, as nearly as possible, the cost of providing the service. The study shall correspond to the test year proposed revenue requirements (future test year only, if used). Summaries of conclusions and all back-up calculations shall be made part of the submission of the cost of service study, and shall include the following:

a. A description of the allocation methods used. A comparison of the allocated cost of service by class with the present and proposed revenues. A cost of service schedule showing the Rate of Return produced by present and proposed rates by class of service.

RESPONSE

A description of the methods used for the cost of service study is provided in PAWC Statement No. 7. A comparison of the allocated cost of service by class with the present and proposed revenues is provided on Schedule A of Exhibit No. 7-A. The attached schedules show the rate of return produced by present and proposed rates by customer classification.

PENNSYLVANIA-AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS
DEVELOPMENT OF RATE OF RETURN BY CUSTOMER CLASSIFICATION
UNDER PRESENT RATES

ITEM	COST OF SERVICE	RESIDENTIAL	NON-RESIDENTIAL	LARGE INDUSTRIAL	BULK USERS/ VA HOSP
(1)	(2)	(3)	(4)	(5)	(6)
1. REVENUES FROM SALES	4,053,582	1,915,433	376,946	134,418	1,626,786
2. OTHER REVENUES (BASE ON WATER REVENUE)	79,175	37,412	7,363	2,625	31,775
3. TOTAL OPERATING REVENUES	4,132,757	1,952,845	384,308	137,043	1,658,560
4. LESS: OPERATING EXPENSES	5,495,404	2,790,693	479,812	158,738	2,066,161
5. RETURN AND INCOME TAXES	(1,362,647)	(837,848)	(95,504)	(21,695)	(407,601)
6. LESS: TAXABLE EXCLUSIONS - ALLOCATED ON RATE BASE	3,889,194	1,972,429	360,886	77,437	1,478,443
7. TAXABLE INCOME	(5,251,841)	(2,810,276)	(456,390)	(99,131)	(1,886,043)
8. LESS: INCOME TAXES (TAX. INC.)	0	0	0	0	0
9. NET RETURN (Line 5 - Line 8)	(1,362,647)	(837,848)	(95,504)	(21,695)	(407,601)
10. ORIGINAL COSTS MEASURE OF VALUE	77,614,301	39,362,572	7,201,982	1,545,360	29,504,387
11. RATE OF RETURN, PERCENT	(1.76)	(2.13)	(1.33)	(1.40)	(1.38)
12. RELATIVE RATE OF RETURN	1.00	1.21	0.76	0.80	0.79

PENNSYLVANIA-AMERICAN WATER COMPANY
COATESVILLE WASTEWATER OPERATIONS
DEVELOPMENT OF RATE OF RETURN BY CUSTOMER CLASSIFICATION
UNDER PROPOSED RATES

ITEM	COST OF SERVICE	RESIDENTIAL	NON-RESIDENTIAL	LARGE INDUSTRIAL	BULK USERS/ VA HOSP
(1)	(2)	(3)	(4)	(5)	(6)
1. REVENUES FROM SALES	12,166,638	6,275,421	1,091,040	283,872	4,516,305
2. OTHER REVENUES (BASE ON WATER REVENUE)	121,584	62,712	10,903	2,837	45,132
3. TOTAL OPERATING REVENUES	12,288,222	6,338,132	1,101,943	286,709	4,561,438
4. LESS: OPERATING EXPENSES	5,721,347	3,003,979	492,587	158,432	2,066,350
5. RETURN AND INCOME TAXES	6,566,875	3,334,153	609,356	128,277	2,495,088
6. LESS: TAXABLE EXCLUSIONS - ALLOCATED ON RATE BASE	3,889,850	1,974,671	360,839	77,295	1,477,045
7. TAXABLE INCOME	2,677,025	1,359,482	248,518	50,982	1,018,043
8. LESS: INCOME TAXES (TAX. INC.)	900,289	456,987	83,547	17,916	341,840
9. NET RETURN (Line 5 - Line 8)	5,666,586	2,877,167	525,810	110,361	2,153,248
10. ORIGINAL COSTS MEASURE OF VALUE	77,627,436	39,407,350	7,201,042	1,542,535	29,476,508
11. RATE OF RETURN, PERCENT	7.30	7.30	7.30	7.15	7.30
12. RELATIVE RATE OF RETURN	1.00	1.00	1.00	0.98	1.00

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1. Provide a complete (fully allocated) cost of service study if an interval of approximately three years has passed between a previous cost of service study and the historic test year date of the current filing. The cost of service study shall provide the necessary data to determine if the water rate structure is fair and equitable to all classifications of water users (including public and private fire protection customers) and reflects, as nearly as possible, the cost of providing the service. The study shall correspond to the test year proposed revenue requirements (future test year only, if used). Summaries of conclusions and all back-up calculations shall be made part of the submission of the cost of service study, and shall include the following:

b. Indicate if the method used for establishing the allocation factors in the Cost of Service Study deviates from the previous study submitted in the last rate case. If yes, indicate which allocation factors were changed and discuss the reason for the changes.

RESPONSE

See Statement 7 for a detailed description of the changes in the Cost of Service Study.

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1. Provide a complete (fully allocated) cost of service study if an interval of approximately three years has passed between a previous cost of service study and the historic test year date of the current filing. The cost of service study shall provide the necessary data to determine if the water rate structure is fair and equitable to all classifications of water users (including public and private fire protection customers) and reflects, as nearly as possible, the cost of providing the service. The study shall correspond to the test year proposed revenue requirements (future test year only, if used). Summaries of conclusions and all back-up calculations shall be made part of the submission of the cost of service study, and shall include the following:

c. Supply the average day, the maximum day and the maximum hour deliveries to the system adjusted for storage for the test year and two prior years. Also provide workpapers, analyses, comparative data or other documentation supporting the estimated maximum day and peak hour demands by customer class reflected in the Company's cost of service study.

RESPONSE

	2007	2008	2009
Average Daily Flow	3.65	3.47	3.44
Peak Day Flow	8.16	6.55	7.95
Peak Hour Flow	9.20	8.70	10.75
Customer Class Factors	N/A	N/A	N/A

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1. Provide a complete (fully allocated) cost of service study if an interval of approximately three years has passed between a previous cost of service study and the historic test year date of the current filing. The cost of service study shall provide the necessary data to determine if the water rate structure is fair and equitable to all classifications of water users (including public and private fire protection customers) and reflects, as nearly as possible, the cost of providing the service. The study shall correspond to the test year proposed revenue requirements (future test year only, if used). Summaries of conclusions and all back-up calculations shall be made part of the submission of the cost of service study, and shall include the following:

d. Explain thoroughly the methodology employed if the Company distinguishes between transmission and distribution mains in its allocation of costs.

RESPONSE

For the wastewater system, the Company distinguishes mains as trunk and interceptor mains from collecting mains. Trunk and interceptor mains are generally 10-inch and larger and collecting mains are less than 10-inch.

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1. Provide a complete (fully allocated) cost of service study if an interval of approximately three years has passed between a previous cost of service study and the historic test year date of the current filing. The cost of service study shall provide the necessary data to determine if the water rate structure is fair and equitable to all classifications of water users (including public and private fire protection customers) and reflects, as nearly as possible, the cost of providing the service. The study shall correspond to the test year proposed revenue requirements (future test year only, if used). Summaries of conclusions and all back-up calculations shall be made part of the submission of the cost of service study, and shall include the following:

e. Provide a detailed explanation of how storage is utilized to meet base, maximum day and maximum hour demands.

RESPONSE

There is no storage for this system.

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1. Provide a complete (fully allocated) cost of service study if an interval of approximately three years has passed between a previous cost of service study and the historic test year date of the current filing. The cost of service study shall provide the necessary data to determine if the water rate structure is fair and equitable to all classifications of water users (including public and private fire protection customers) and reflects, as nearly as possible, the cost of providing the service. The study shall correspond to the test year proposed revenue requirements (future test year only, if used). Summaries of conclusions and all back-up calculations shall be made part of the submission of the cost of service study, and shall include the following:

f. Provide workpapers, calculations and supporting documentation which develop the equivalent meters and equivalent service weights reflected in the Company's cost of service study.

RESPONSE

The 5/8-inch equivalent was determined by using the recommended standard minimum meter flow capacity ratios per the American Waterworks Association.

Meter Size	5/8-Inch Equivalent
5/8"	1.0
3/4"	1.5
1"	2.5
1-1/2"	5.0
2"	8.0
3"	15.0
4"	25.0
6"	50.0
8"	80.0
10"	115.0

There are no service equivalents calculated for this study.

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1. Provide a complete (fully allocated) cost of service study if an interval of approximately three years has passed between a previous cost of service study and the historic test year date of the current filing. The cost of service study shall provide the necessary data to determine if the water rate structure is fair and equitable to all classifications of water users (including public and private fire protection customers) and reflects, as nearly as possible, the cost of providing the service. The study shall correspond to the test year proposed revenue requirements (future test year only, if used). Summaries of conclusions and all back-up calculations shall be made part of the submission of the cost of service study, and shall include the following:

g. Provide all workpapers and supporting documentation for the fire flow requirement and duration utilized in the cost of service study.

RESPONSE

Because this is a wastewater operation, there is no fire flow requirement.

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1. Provide a complete (fully allocated) cost of service study if an interval of approximately three years has passed between a previous cost of service study and the historic test year date of the current filing. The cost of service study shall provide the necessary data to determine if the water rate structure is fair and equitable to all classifications of water users (including public and private fire protection customers) and reflects, as nearly as possible, the cost of providing the service. The study shall correspond to the test year proposed revenue requirements (future test year only, if used). Summaries of conclusions and all back-up calculations shall be made part of the submission of the cost of service study, and shall include the following:

h. Provide a breakdown of the number and size of private fire services according to the general water service class of customer.

RESPONSE

Because this is a wastewater operation, there are no private fire services.

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1. Provide a complete (fully allocated) cost of service study if an interval of approximately three years has passed between a previous cost of service study and the historic test year date of the current filing. The cost of service study shall provide the necessary data to determine if the water rate structure is fair and equitable to all classifications of water users (including public and private fire protection customers) and reflects, as nearly as possible, the cost of providing the service. The study shall correspond to the test year proposed revenue requirements (future test year only, if used). Summaries of conclusions and all back-up calculations shall be made part of the submission of the cost of service study, and shall include the following:

i. Provide a calculation of the Company's base cost of water per unit of consumption.

RESPONSE

The calculation of the average flow cost per hundred gallons is as follows:

Total Flow Cost	$7,211,968
Pro Forma Usage (Hundred Gallons) (Includes Estimated Unmetered)	8,454,653
Flow Cost per Hundred Gallons	$0.85

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1. Provide a complete (fully allocated) cost of service study if an interval of approximately three years has passed between a previous cost of service study and the historic test year date of the current filing. The cost of service study shall provide the necessary data to determine if the water rate structure is fair and equitable to all classifications of water users (including public and private fire protection customers) and reflects, as nearly as possible, the cost of providing the service. The study shall correspond to the test year proposed revenue requirements (future test year only, if used). Summaries of conclusions and all back-up calculations shall be made part of the submission of the cost of service study, and shall include the following:

j. Provide a detailed cost analysis that supports the Company's customer charges, by meter size, showing all direct and indirect costs included.

RESPONSE

Please refer to the attached schedules.

PENNSYLVANIA AMERICAN WATER
COATESVILLE WASTEWATER OPERATIONS

CALCULATION OF CUSTOMER COST PER MONTH

		Per Month
(1) Cost Related to Customer Facilities	$272,597	
(2) Service Equivalents X 12	94,416	
(3) Cost per Bill - Meter related		$2.89
(4) Cost Related to Customer Accounting	356,466	
(5) Number of Bills	74,772	
(6) Cost per Bill		$4.77
(7) Cost Related to I&I	4,326,794	
(8) Percentage of I&I Cost to to be recoverd in Customer Charge	67%	
(9) Net Cost Related to I&I to be recovered in Customer Charge	2,884,674	
(10) Service Equivalents X 12	94,416	
(11) Cost per Bill - I&I Related		$30.55
(12) Total Customer Costs (3)+(6)+(11)		$38.21

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

	Account	Factor Ref.	Cost of Service	Flow	I&I	Customer Facilities	Customer Accounting
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	OPERATION AND MAINTENANCE EXPENSES						
	COLLECTION						
615.1	Purchased Power	1	64,539	41,344	23,195	0	0
616.1	Purchased Fuel	1	784	502	282	0	0
633.1	Contract Services - Legal	2	33	14	19	0	0
675.1	Miscellaneous Operating Expense	2	805	333	472	0	0
	TOTAL COLLECTION EXPENSE - OPERATION		66,161	42,192	23,969	0	0
	SEWAGE TREATMENT						
601.3	Salary and Wages	1	256,612	164,386	92,226	0	0
601.4	Salary and Wages	1	51,554	33,025	18,529	0	0
615.3	Purchased Water	1	361,562	231,617	129,945	0	0
618.3	Chemicals	1	138,727	88,869	49,858	0	0
620.3	Materials and Supplies - Operation	1	338	217	121	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	15,868	10,165	5,703	0	0
636.3	Contract Services - Operation	1	1,078	691	387	0	0
641.3	Rental of Building	1	0	0	0	0	0
642.3	Rental of Equipment	1	2,797	1,792	1,005	0	0
650.3	Transportation	1	0	0	0	0	0
620.4	Materials and Supplies - Maintenance	1	19,252	12,333	6,919	0	0
636.4	Contract Services - Maintenance	1	3,945	2,527	1,418	0	0
675.4	Misc. Maintenance Expense	1	3,258	2,087	1,171	0	0
675.3	Misc. Operating Expense	1	221,153	141,671	79,482	0	0
	TOTAL SEWAGE TREATMENT EXPENSE		1,076,144	689,378	386,766	0	0

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

Account		Factor Ref.	Cost of Service	Flow	I&I	Customer Facilities	Customer Accounting
(1)		(2)	(3)	(4)	(5)	(6)	(7)
	TRANSMISSION						
601.5	Salary and Wages	2	62,534	25,852	36,682	0	0
601.6	Salary and Wages	2	246,076	101,728	144,348	0	0
604.5	Employee Pension and Benefits	2	0	0	0	0	0
615.5	Purchased Power	2	0	0	0	0	0
620.5	Materials and Supplies	2	0	0	0	0	0
631.5	Contract Services - Engineering	2	0	0	0	0	0
636.5	Contract Services	2	13,316	5,505	7,811	0	0
641.5	Rental of Building	2	0	0	0	0	0
642.5	Rental of Equipment	2	0	0	0	0	0
650.5	Transportation	2	0	0	0	0	0
	Miscellanous Operating Expenes	2	48,167	19,912	28,255	0	0
	TOTAL T & D EXPENSE OPERATION		370,093	152,996	217,097	0	0
620.6	Materials and Supplies	2	2,990	1,236	1,754	0	0
636.6	Contract Services	2	388,293	160,520	227,773	0	0
675.6	Miscellaneous Maintenance Expense	2	56,708	23,443	33,265	0	0
675.5	Miscellaneous Operating Expense	2	0	0	0	0	0
	TOTAL T & D EXPENSE - MAINTENANCE		447,991	185,199	262,792	0	0
	TOTAL T & D EXPENSE		818,084	338,196	479,888	0	0
	CUSTOMER ACCOUNTS						
601.7	Salary and Wages	6	1,312	0	0	0	1,312
670.7	Bad Debts	6	262,172	0	0	0	262,172
675.7	Miscellaneous Expense	6	2,573	0	0	0	2,573

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

Account		Factor Ref.	Cost of Service	Flow	I&I	Customer Facilities	Customer Accounting
(1)		(2)	(3)	(4)	(5)	(6)	(7)
	TOTAL CUSTOMER ACCOUNTING EXPENSE		266,057	0	0	0	266,057
	ADMINISTRATIVE AND GENERAL EXPENSES						
601.8	Salaries and Wages	11	51,313	21,854	21,238	0	8,220
603.8	Salaries of Officiers	11	0	0	0	0	0
604.8	Employee Pension & Benefits	7	159,426	82,615	74,548	0	2,264
615.8	Purchased Power	11	0	0	0	0	0
641.8	Rental of Building	11	0	0	0	0	0
642.8	Rental of Equipment	11	157	67	65	0	25
650.8	TransporTation	11	99,679	42,453	41,257	0	15,969
656.8	Insurance - Vehicles	11	0	0	0	0	0
657.8	Insurance - Vehicles	11	0	0	0	0	0
658.8	Workers Compensation	7	0	0	0	0	0
659.8	Insurance	11	0	0	0	0	0
660.8	Advertising	11	0	0	0	0	0
666.8	Amortization of Rate Case	10	201,578	114,254	71,963	3,004	12,357
667.8	Regulatory Commission	11	0	0	0	0	0
675.8	Miscellaneous Expense	11	167,627	71,392	69,381	0	26,854
	TOTAL A & G EXPENSE		679,780	332,636	278,452	3,004	65,688
	Total Operation & Maintenance Expenses		2,906,226	1,402,402	1,169,075	3,004	331,745

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

	Account	Factor Ref.	Cost of Service	Flow	I&I	Customer Facilities	Customer Accounting
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	DEPRECIATION EXPENSE						
354.20	Structures and Improvements - Collection	4	4,145	2,119	2,026	0	0
354.30	Structures and Improvements -Pumping						
	Related to Average Flow	3	90,930	74,572	16,358	0	0
	Related to Peak Flow	4	75,111	38,397	36,714	0	0
354.40	Structures and Improvements - Treatment						
	Related to Average Flow	3	1,069,875	877,405	192,471	0	0
	Related to Peak Flow	4	111,403	56,949	54,454	0	0
354.70	Structures and Improvements - General	4	28,746	14,695	14,051	0	0
355.00	Power Generation Equipment	4	7,908	4,043	3,865	0	0
360.10	Force Mains	4A	76,525	16,629	59,896	0	0
361.10	Gravity Mains						
	Collection	4A	94,098	20,448	73,651	0	0
	Conveyance	4	200,381	102,435	97,946	0	0
361.20	Manholes						
	Collection	4A	22,401	4,868	17,534	0	0
	Conveyance	4	1,932	988	944	0	0
363.00	Service Laterals	5	86,314	0	0	86,314	0
364.00	Flow Measuring Devices	3	2,173	1,782	391	0	0
365.00	Flow Measuring Devices - Installations	3	619	508	111	0	0
370.00	Receiving Wells	4	378	193	185	0	0
371.00	Pumping Equipment						
	Related to Average Flow	3	22,639	18,566	4,073	0	0
	Related to Peak Flow	4	66,493	33,991	32,502	0	0
380.00	Treatment Equipment						
	Related to Average Flow	3	472,474	387,476	84,998	0	0
	Related to Peak Flow	4	193,907	99,125	94,782	0	0
381.00	Plant Sewers						
	Related to Average Flow	3	32,996	27,060	5,936	0	0
	Related to Peak Flow	4	112,858	57,693	55,165	0	0
389.10	Other Plant and Misc. Equip. - Intangible	11	1,927	821	798	0	309
390.00	Office Furniture and Equipment	11	5,912	2,518	2,447	0	947
392.00	Stores Equipment	11	275	117	114	0	44
393.00	Tools, Shop and Garage Equipment	11	1,398	595	579	0	224
394.00	Laboratory Equipment	3	3,713	3,045	668	0	0
395.00	Power Operated Equipment	11	6,029	2,568	2,495	0	966
396.00	Communication Equipment	11	52,557	22,384	21,753	0	8,420
397.00	Miscellaneous Equipment	11	18,843	8,025	7,799	0	3,019
	Total Depreciation Expense		2,864,962	1,880,014	884,706	86,314	13,928

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

Account		Factor Ref.	Cost of Service	Flow	I&I	Customer Facilities	Customer Accounting
(1)		(2)	(3)	(4)	(5)	(6)	(7)
	Amortization Expense	9	(456,503)	(280,658)	(161,785)	(13,147)	(913)
	Taxes Other Than Income						
685100	Utility Reg Assessment Fee	10	76,644	43,442	27,362	1,142	4,698
685200	Property Taxes	9	275,590	169,433	97,669	7,937	551
685320	Payroll Taxes	7	54,428	28,205	25,451	0	773
	Total Taxes, Other Than Income		406,662	241,079	150,482	9,079	6,022
	Total Operating Expense		5,721,347	3,242,837	2,042,478	85,249	350,783
4091	**Income Taxes**	9	900,289	553,498	319,062	25,928	1,801
	Utility Income Available for Return	9	5,667,773	3,484,547	2,008,659	163,232	11,336
	Total Cost of Service		12,289,409	7,280,881	4,370,200	274,409	363,919
	Less: Other Water Revenues	10	(121,584)	(68,914)	(43,405)	(1,812)	(7,453)
	Total Cost of Service Related to Sales of Wastewater Services		12,167,825	7,211,968	4,326,794	272,597	356,466

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

Account	Factor Ref.	Cost of Service	Flow	I&I	Customer Facilities	Customer Accounting
(1)	(2)	(3)	(4)	(5)	(6)	(7)
RATE BASE						
352.00 Franchises	8	150,569	92,585	53,362	4,336	286
353.40 Land and Land Rights - Treatment	3	1,047,343	858,926	188,417	0	0
354.20 Structures and Improvements - Collection	4	134,342	68,676	65,666	0	0
354.30 Structures and Improvements - Pumping						
Related to Average Flow	3					
Related to Peak Flow	4					
354.40 Structures and Improvements - Treatment						
Related to Average Flow	3	24,494,782	20,088,170	4,406,611	0	0
Related to Peak Flow	4	4,777,972	2,442,499	2,335,473	0	0
354.70 Structures and Improvements - General	3	489,843	401,720	88,123	0	0
355.00 Power Generation Equipment	4	108,440	55,435	53,005	0	0
360.10 Force Mains	4A	4,028,379	875,367	3,153,012	0	0
361.10 Gravity Mains						
Collection	4A	4,397,842	955,651	3,442,191	0	0
Conveyance	4	9,576,117	4,895,311	4,680,806	0	0
361.20 Manholes						
Collection	4A	614,825	133,601	481,223	0	0
Conveyance	4	53,027	27,108	25,920	0	0
363.00 Service Laterals	5	2,177,989	0	0	2,177,989	0
364.00 Flow Measuring Devices	3	39,525	32,414	7,111	0	0
365.00 Flow Measuring Devices - Installations	3	12,533	10,278	2,255	0	0
370.00 Receiving Wells	4	14,097	7,206	6,891	0	0
371.00 Pumping Equipment						
Related to Average Flow	3	553,962	454,304	99,658	0	0
Related to Peak Flow	4	420,928	215,178	205,750	0	0
380.00 Treatment Equipment						
Related to Average Flow	3	9,810,119	8,045,278	1,764,840	0	0
Related to Peak Flow	4	5,907,189	3,019,755	2,887,434	0	0
381.00 Plant Sewers						
Related to Average Flow	3	1,374,443	1,127,181	247,262	0	0
Related to Peak Flow	4	4,699,848	2,402,562	2,297,285	0	0
389.10 Other Plant and Misc. Equip. - Intangible	11	10,595	4,512	4,385	0	1,697
390.00 Office Furniture and Equipment	11	97,761	41,636	40,463	0	15,661
392.00 Stores Equipment	11	4,355	1,855	1,803	0	698
393.00 Tools, Shop and Garage Equipment	11	18,396	7,835	7,614	0	2,947
394.00 Laboratory Equipment	3	31,634	25,943	5,691	0	0
395.00 Power Operated Equipment	11	39,756	16,932	16,455	0	6,369
396.00 Communication Equipment	11	707,961	301,521	293,025	0	113,415
397.00 Miscellaneous Equipment	11	224,367	95,558	92,866	0	35,944
TOTAL SEWER UTILITY PLANT IN SERVICE		76,018,938	46,704,999	26,954,597	2,182,325	177,017

PENNSYLVANIA AMERICAN WATER COMPANY

COATESVILLE WASTEWATER OPERATIONS

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

Account	Factor Ref.	Cost of Service	Flow	I&I	Customer Facilities	Customer Accounting
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Other Rate Base Items:						
Overheads and AFUCD	8	0	0	0	0	0
Cash Working Capital	12	(218,699)	(105,544)	(87,983)	(219)	(24,954)
Materials and Supplies	8	7,510	4,618	2,662	216	14
Unrecovered Reserve	8	395,408	243,136	140,133	11,388	751
Deferred, Accrued and Prepaid Taxes	8	(2,383,832)	(1,465,818)	(844,830)	(68,654)	(4,529)
Total Other Rate Base Elements		(2,199,613)	(1,323,608)	(790,019)	(57,269)	(28,717)
Total Original Cost Measure of Value		73,819,325	45,381,391	26,164,578	2,125,056	148,300

PENNSYLVANIA-AMERICAN WATER COMPANY

RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS2. Provide a listing of negotiated special rate contracts which includes a comparison of revenues under special rate contracts and under tariff rates. Provide the cost of service treatment of any deficiency in revenues resulting from the negotiated special rate contracts.

RESPONSE

There are no negotiated special rate contracts that are not under a tariff rate.