

# AQUA PENNSYLVANIA, INC.

BRYN MAWR, PENNSYLVANIA

## COST OF SERVICE ALLOCATION STUDY AS OF JUNE 30, 2012

AQUA PENNSYLVANIA, INC.  
Bryn Mawr, Pennsylvania

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COST OF SERVICE ALLOCATION STUDY  
AS OF JUNE 30, 2012

GANNETT FLEMING, INC. - VALUATION AND RATE DIVISION

Harrisburg, Pennsylvania



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November 14, 2011

Aqua Pennsylvania, Inc.  
762 Lancaster Avenue  
Bryn Mawr, PA 19010

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Attention Mr. David P. Smeltzer  
Chief Financial Officer

Gentlemen:

Pursuant to your request, we have conducted a cost of service allocation study based on pro forma revenue requirements estimated for the test year ended June 30, 2012, and have prepared proposed rate schedules designed to provide the pro forma revenue requirements.

The attached report presents the results of the allocation study, as well as supporting schedules which set forth the detailed cost allocation calculations. Schedule A on page 7 presents a comparison of the cost of service by customer classification with the pro forma revenues produced by each classification under present and proposed rates.

Respectfully submitted,

GANNETT FLEMING, INC.  
Valuation and Rate Division

PAUL R. HERBERT  
President

CONSTANCE E. HEPPENSTALL  
Rate Analyst

PRH:krm

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PART I. INTRODUCTION

AQUA PENNSYLVANIA, INC.  
COST OF SERVICE ALLOCATION STUDY  
AS OF JUNE 30, 2012

PART I. INTRODUCTION

PLAN OF REPORT

The report sets forth the results of the cost of service allocation study based on pro forma costs as of June 30, 2012, for Aqua Pennsylvania, Inc. Part I, Introduction, contains statements with respect to the basis of the study, the procedures employed, the customer class demand study, and a summary of the results of the studies. Part II, Cost of Service by Customer Classification, presents detailed schedules of the allocation of costs to customer classifications, as well as the bases for the allocations. Schedule A in Part II summarizes the cost allocation and the revenues produced under present and proposed rates. Responses to rate structure and cost of service filing requirements are provided in the Appendix.

BASIS OF STUDY

The purpose of the cost allocation study was to determine the relative cost of service responsibilities of the several customer classifications based on considerations of quantity of water consumed, variability of rate of consumption, and costs associated with customer metering, billing and accounting. The allocation study incorporated generally-accepted principles and procedures for allocating the several categories of cost to customer classifications in proportion to each classification's use of facilities, commodities and services required in providing water service.

## ALLOCATION PROCEDURES

The allocation study was based on the Base-Extra Capacity Method for allocating costs to customer classifications. The method is described in the 2000 and prior editions of the Water Rates Manual, published by the American Water Works Association. The four basic categories of cost responsibility are base, extra capacity, customer, and fire protection costs. The following discussion presents a brief description of these costs and the manner in which they were allocated.

Base Costs are costs that tend to vary with the quantity of water used, plus costs associated with supplying, treating, pumping, and distributing water to customers under average load conditions, without the elements necessary to meet peak demands. Base costs were allocated to customer classifications on the basis of average daily usage.

Extra Capacity Costs are costs associated with meeting usage requirements in excess of the average. They include operating and capital costs for additional plant and system capacity beyond that required for average use. The extra capacity costs in this study are subdivided into costs necessary to meet maximum day extra demand and costs to meet maximum hour extra demand. The extra capacity costs were allocated to customer classifications on the bases of each classification's maximum day and hour usage in excess of average usage.

Customer Costs are costs associated with serving customers regardless of their usage or demand characteristics. Customer costs include the operating and capital costs related to meters and services, meter reading costs, and billing and collecting costs. The customer costs were allocated on the bases of capital cost of meters and services and the number of customer bills.



Fire Protection Costs are costs associated with providing the facilities to meet the potential peak demand of fire protection service. Fire Protection costs are subdivided into costs to meet Public Fire Protection and Private Fire Protection demands. The extra capacity costs assigned to fire protection service were allocated to Public and Private Fire Protection and Residential General Service on the basis of the total relative demands of the hydrants, fire service lines, and residential service lines sized to provide fire protection, as well as general service.

## RESULTS OF STUDIES

The results of the cost of service allocation study are set forth in Part II. The data summarized in Schedule A, "Comparison of Pro Forma Cost of Service with Revenues Under Present and Proposed Rates for the Twelve Months Ending June 30, 2012", constitute the principal results of the cost allocation study and subsequent rate design.

The cost of service by customer classification shown in column 2 of Schedule A is developed in Schedule D, "Allocation of Cost of Service to Customer Classifications for the Twelve Months Ended June 30, 2012". The allocation of the total cost of service to the several customer classifications was performed by applying the allocation factors referenced in column 3 of Schedule D to the cost of service set forth in column 3. The bases for the allocation factors are presented in Schedule E.

Schedule F, "Summary of Average Daily Send Out, Maximum Daily Use, and Maximum Hourly Use for the Years 1962-2010", presents the determination of the maximum day and hour ratios for the overall system. Schedule G, "Basis for Allocating Demand Related Costs of Fire Service to Residential and Private and Public Fire

Protection Customer Classifications", presents the calculation of the total relative demand of fire hydrants and fire service lines.

Schedule H sets forth the calculation of the firm and interruptible standby rates based on the functional allocation provided in the Appendix. Also provided in the Appendix are responses to Rate Structure and Cost of Service Filing Requirements RS1a through RS1j and RS2.

PART II. COST OF SERVICE BY CUSTOMER CLASSIFICATION

## AQUA PENNSYLVANIA, INC.

COMPARISON OF PRO FORMA COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES  
FOR THE TWELVE MONTHS ENDED JUNE 30, 2012

Customer Classification (1)	Pro Forma Cost of Service, as of June 30, 2010		Pro Forma Revenues Under Present Rates		Pro Forma Revenues Under Proposed Rates		Proposed Increase	
	Amount (2)	Percent of Total (3)	Amount (4)	Percent of Total (5)	Amount (6)	Percent of Total (7)	Amount (8)	Percent Increase (9)
Residential	\$294,158,617	67.0%	\$269,872,815	67.3%	\$296,723,009	67.5%	\$26,850,194	9.9%
Commercial	101,664,051	23.1%	91,197,396	22.7%	100,511,260	22.9%	9,313,864	10.2%
Industrial	16,912,179 *	3.9%	14,247,725	3.6%	15,795,863	3.6%	1,548,138	10.9%
Public	8,357,029 *	1.9%	7,383,686	1.8%	8,136,823	1.9%	753,137	10.2%
Other Water Utilities	753,888 *	0.2%	675,154	0.2%	785,500	0.2%	110,346	16.3%
Private Fire Protection	11,523,598	2.6%	12,069,260	3.0%	11,416,977	2.6%	(652,283)	-5.4%
Public Fire Protection	5,832,440	1.3%	5,559,321	1.4%	5,832,440	1.3%	273,119	4.9%
Total Tariff Sales of Water	439,201,802	100.0%	401,005,357	100.0%	439,201,872	100.0%	38,196,515	9.5%
Contract Sales - Industrial	2,895,721		2,827,752		2,895,721		67,969	2.4%
Contract Sales - Public	1,034,384		908,835		1,034,384		125,549	13.8%
Contract Sales - OWU	2,181,435		2,120,647		2,181,435		60,788	2.9%
Total Sales of Water	445,313,342		406,862,591		445,313,412		38,450,821	
Other Water Revenues	2,206,960		2,057,709		2,206,960		149,251	7.3%
Total	\$447,520,302		\$408,920,300		\$447,520,372		\$38,600,072	9.4%

\* Contract Sales Excluded.

## AQUA PENNSYLVANIA, INC.

DEVELOPMENT OF RATE OF RETURN BY CUSTOMER CLASSIFICATION  
UNDER PRESENT RATES

(1) ITEM	(2) COST OF SERVICE	(3) RESIDENTIAL	(4) COMMERCIAL	(5) INDUSTRIAL	(6) PUBLIC	(7) OTHER WATER UTILITIES		(8) FIRE PROTECTION	
						(9) PRIVATE	(9) PUBLIC	(8) PRIVATE	(9) PUBLIC
1. REVENUES FROM SALES	401,005,357	269,872,815	91,197,396	14,247,725	7,383,666	675,154	12,069,260	5,559,321	
2. OTHER REVENUES	7,914,943	5,311,719	1,822,811	303,142	149,592	13,455	204,206	110,018	
3. TOTAL OPERATING REVENUES	408,920,300	275,184,534	93,020,207	14,550,867	7,533,278	688,609	12,273,466	5,669,339	
4. LESS: OPERATING EXPENSES (INCLUDES REALLOCATION OF FIRE)	201,444,441	148,088,354	44,264,478	7,338,751	3,673,942	325,528	4,117,649	(6,364,261)	
5. RETURN AND INCOME TAXES	207,475,860	127,096,179	48,755,729	7,212,116	3,859,337	363,081	8,155,817	12,033,600	
6. LESS: TAXABLE EXCLUSIONS (FACTOR 18)	47,268,985	28,777,358	11,372,918	1,900,213	926,472	85,084	1,465,339	2,741,601	
7. TAXABLE INCOME	160,206,875	98,318,821	37,382,812	5,311,903	2,932,865	277,997	6,690,478	9,291,999	
8. LESS: INCOME TAXES (TAX. INC.)	66,798,999	40,994,488	15,586,937	2,214,823	1,222,872	115,912	2,769,626	3,874,342	
9. NET RETURN (Line 5 - Line 8)	140,676,861	86,101,691	33,168,793	4,997,294	2,636,465	247,169	5,366,191	8,159,258	
10. ORIGINAL COSTS MEASURE OF VALUE	1,858,216,828	1,131,111,336	447,122,650	74,743,029	36,493,781	3,351,385	57,641,656	107,752,982	
11. RATE OF RETURN, PERCENT	7.57	7.61	7.42	6.69	7.22	7.38	9.31	7.57	
12. RELATIVE RATE OF RETURN	1.00	1.01	0.98	0.88	0.95	0.97	1.23	1.00	

## AQUA PENNSYLVANIA, INC.

DEVELOPMENT OF RATE OF RETURN BY CUSTOMER CLASSIFICATION  
UNDER PROPOSED RATES

(1) ITEM	(2) COST OF SERVICE	(3) RESIDENTIAL	(4) COMMERCIAL	(5) INDUSTRIAL	(6) PUBLIC	(7) OTHER WATER UTILITIES		(8) FIRE PROTECTION	
						PRIVATE	PUBLIC	PRIVATE	PUBLIC
1. REVENUES FROM SALES	439,201,872	296,723,009	100,511,260	15,795,863	8,136,823	785,500	11,416,977	5,832,440	
2. OTHER REVENUES	8,318,500	5,571,731	1,925,733	320,262	158,052	14,141	217,945	110,636	
3. TOTAL OPERATING REVENUES	447,520,372	302,294,740	102,436,993	16,116,125	8,294,875	799,641	11,634,922	5,943,076	
4. LESS: OPERATING EXPENSES (INCLUDES REALLOCATION OF FIRE)	201,917,641	150,207,448	44,497,783	7,359,215	3,701,269	325,944	4,127,860	(8,301,878)	
5. RETURN AND INCOME TAXES	245,602,731	152,087,292	57,939,210	8,756,911	4,593,606	473,697	7,507,061	14,244,954	
6. LESS: TAXABLE EXCLUSIONS (FACTOR 18)	47,268,985	28,777,358	11,372,918	1,900,213	926,472	85,084	1,465,339	2,741,601	
7. TAXABLE INCOME	198,333,746	123,309,934	46,566,292	6,856,697	3,667,134	388,613	6,041,723	11,503,353	
8. LESS: INCOME TAXES (TAX. INC.)	82,619,099	51,366,728	19,397,935	2,856,267	1,527,603	161,883	2,516,776	4,791,906	
9. NET RETURN (Line 5 - Line 8)	162,983,632	100,720,564	38,541,275	5,900,643	3,066,002	311,814	4,990,285	9,453,048	
10. ORIGINAL COSTS MEASURE OF VALUE	1,858,216,828	1,131,169,055	447,078,589	74,732,894	36,493,781	3,351,385	57,641,656	107,749,473	
11. RATE OF RETURN, PERCENT	8.77	8.90	8.62	7.90	8.40	9.30	8.66	8.77	
12. RELATIVE RATE OF RETURN	1.00	1.02	0.98	0.90	0.96	1.06	0.99	1.00	

AQUA PENNSYLVANIA, INC.

ALLOCATION OF COST OF SERVICE TO CUSTOMER CLASSIFICATIONS  
FOR THE TWELVE MONTHS ENDED JUNE 30, 2012

Account Number (1)	Account Description (2)	Factor Ref. (3)	Cost of Service (4)	Source of Supply					Other Public Authority (8)	Other Water Utilities (9)	Private Fire Protection (10)	Public Fire Protection (11)
				Residential (5)	Commercial (6)	Industrial (7)	Public Authority (8)	Other Water Utilities (9)				
<b>OPERATION AND MAINTENANCE EXPENSES</b>												
<b>Source of Supply</b>												
<b>----Operation----</b>												
601.1	Operation Labor											
	Treatment Plants & Wells	2	310,130	191,071	92,233	17,088	7,443	775	310	1,210		
	Booster Stations	3	17,528	10,161	4,892	906	393	42	359	775		
620.1	Materials and Supplies											
	Treatment Plants & Wells	2	135,977	83,776	40,440	7,492	3,263	340	136	530		
	Booster Stations	3	7,685	4,455	2,145	397	172	18	158	340		
631.1	Contract Services - Engineering	2	2,036	1,254	605	112	49	5	2	8		
636.1	Contract Services Other	2	34,103	21,011	10,142	1,879	818	85	34	133		
641.1	Building Rental											
	Treatment Plants & Wells	2	385,267	237,363	114,578	21,228	9,246	963	385	1,503		
	Booster Stations	3	21,775	12,623	6,077	1,126	488	52	446	962		
650.1	Transportation											
	Treatment Plants & Wells	2	0	0	0	0	0	0	0	0		
	Booster Stations	3	0	0	0	0	0	0	0	0		
675.1	Miscellaneous											
	Treatment Plants & Wells	2	7,917	4,878	2,355	436	190	20	8	31		
	Booster Stations	3	453	263	127	23	10	1	9	20		
	<b>Total Operation</b>		<b>922,872</b>	<b>566,855</b>	<b>273,594</b>	<b>50,689</b>	<b>22,073</b>	<b>2,302</b>	<b>1,848</b>	<b>5,511</b>		
<b>----Maintenance----</b>												
601.2	Maintenance Labor											
	Treatment Plants & Wells	2	412,278	254,004	122,611	22,717	9,895	1,031	412	1,608		
	Booster Stations	3	153,262	88,846	42,775	7,924	3,433	368	3,142	6,774		
620.2	Materials and Supplies											
	Treatment Plants & Wells	2	-430	-265	-128	-24	-10	-1	0	-2		
	Booster Stations	3	-160	-93	-45	-8	-4	0	-3	-7		
631.2	Contractor Services											
	Treatment Plants & Wells	2	1,426	879	424	79	34	4	1	6		
	Booster Stations	3	530	307	148	27	12	1	11	23		
636.2	Contractor Services - other	2	85,286	52,545	25,364	4,699	2,047	213	85	333		
642.2	Equipment Rental											
	Treatment Plants & Wells	2	0	0	0	0	0	0	0	0		
	Booster Stations	3	0	0	0	0	0	0	0	0		
650.2	Transportation											

AQUA PENNSYLVANIA, INC.

ALLOCATION OF COST OF SERVICE TO CUSTOMER CLASSIFICATIONS  
FOR THE TWELVE MONTHS ENDED JUNE 30, 2012

Account Number	Account Description	Factor Ref.	Cost of Service	Residential	Commercial	Industrial	Other Public Authority	Other Water Utilities	Private Fire Protection	Public Fire Protection
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
675.2	Treatment Plants & Wells Booster Stations Miscellaneous	2 3	304 113	187 65	90 32	17 6	7 3	1 0	0 2	1 5
	Treatment Plants & Wells Booster Stations	2 3	1,432 533	882 309	426 149	79 28	34 12	4 1	1 11	6 24
	<b>Total Maintenance</b>		654,574	397,667	191,847	35,542	15,463	1,621	3,663	8,770
	<b>Miscellaneous----</b>									
610.1	Water Purchased for Resale	1	12,497,001	7,561,935	3,752,849	758,568	302,427	34,992	17,496	68,734
615.1	Power Purchased	1	12,367,311	7,483,460	3,713,904	750,696	299,289	34,628	17,314	68,020
	<b>Total Miscellaneous</b>		24,864,312	15,045,395	7,466,753	1,509,264	601,716	69,620	34,810	136,754
	<b>Total Source of Supply Expenses</b>		26,441,758	16,009,917	7,932,194	1,595,495	639,252	73,544	40,321	151,035
	<b>Water Treatment Expenses</b>									
	<b>Operation----</b>									
601.3	Operating Labor	2	9,320,615	5,742,431	2,771,951	513,566	223,695	23,302	9,321	36,350
618.3	Chemicals	1	4,933,140	2,985,043	1,481,422	299,442	119,382	13,813	6,906	27,132
620.3	Materials and Supplies	2	395,731	243,810	117,691	21,805	9,498	989	396	1,543
631.3	Contractor Services	2	2,637	1,625	784	145	63	7	3	10
635.3	Contractor Services - testing	2	136,646	84,187	40,638	7,529	3,279	342	137	533
636.3	Contractor Services - other	2	692,438	426,611	205,931	38,153	16,619	1,731	692	2,701
642.3	Equipment Rental	2	2,818	1,736	838	155	68	7	3	11
650.3	Transportation	2	0	0	0	0	0	0	0	0
675.3	Miscellaneous	2	37,730	23,245	11,221	2,079	906	94	38	147
	<b>Total Operation</b>		15,521,755	9,508,689	4,630,476	882,874	373,509	40,284	17,495	68,428
	<b>Maintenance----</b>									
601.4	Maintenance Labor	2	1,289,585	794,513	383,523	71,056	30,950	3,224	1,290	5,029
620.4	Materials and Supplies	2	28,019	17,263	8,333	1,544	672	70	28	109
631.4	Contractor Services - Eng	2	1,532	944	456	84	37	4	2	6
636.4	Contractor Services - Other	2	518,636	319,531	154,242	28,577	12,447	1,297	519	2,023
642.4	Equipment Rental	2	0	0	0	0	0	0	0	0
650.4	Transportation	2	0	0	0	0	0	0	0	0
675.4	Miscellaneous	2	1,399	862	416	77	34	3	1	5
	<b>Total Maintenance</b>		1,839,170	1,133,113	546,969	101,338	44,140	4,598	1,839	7,173
	<b>Total Water Treatment Expenses</b>		17,360,925	10,641,801	5,177,445	984,213	417,649	44,882	19,334	75,601



AQUA PENNSYLVANIA, INC.

ALLOCATION OF COST OF SERVICE TO CUSTOMER CLASSIFICATIONS  
FOR THE TWELVE MONTHS ENDED JUNE 30, 2012

Account Number (1)	Account Description (2)	Factor Ref. (3)	Cost of Service (4)	Residential (5)	Commercial (6)	Industrial (7)	Other Public Authority (8)	Other Water Utilities (9)	Private Fire Protection (10)	Public Fire Protection (11)
<b>Transmission &amp; Distribution Expenses</b>										
<b>----Operation----</b>										
601.5	Operating Labor	13	339,427	251,855	49,251	6,076	4,650	272	9,775	17,548
	Supervision & Engineering	13	651,776	483,618	94,573	11,667	8,929	521	18,771	33,697
	Maps & Records	5	442,900	269,017	119,096	19,620	9,567	842	7,928	16,830
	Storage Facilities	3	107,824	62,505	30,094	5,574	2,415	259	2,210	4,766
	12 inch and Over Mains	4	583,117	337,800	149,278	24,549	12,012	1,108	18,835	39,535
	Under 12 inch Mains	7	148,922	0	0	0	0	0	11,244	137,679
	Hydrants	8	2,231,899	1,920,326	224,529	16,962	24,997	670	44,415	0
	Removing and Resetting Meters	8	103,955	89,443	10,458	790	1,164	31	2,069	0
	Miscellaneous Meter Expense	9	225,317	173,314	24,177	1,465	2,366	23	23,974	0
	Services on Customer's Premises	13	1,135,321	842,408	164,735	20,322	15,554	908	32,697	58,696
620.5	Materials and Supplies	13	0	0	0	0	0	0	0	0
631.5	Contractor Services - Eng	13	497,001	368,775	72,115	8,896	6,809	398	14,314	25,695
636.5	Contractor Services - Other	13	16,404	12,172	2,380	294	225	13	472	848
641.5	Property Rental	13	3,243	2,406	471	58	44	3	93	168
642.5	Property & Equipment Rental	13	592,281	439,472	85,940	10,602	8,114	474	17,058	30,621
650.5	Transportation - Labor	13	1,284,514	953,110	186,383	22,993	17,598	1,028	36,994	66,409
675.5	Miscellaneous	13	13,002	9,647	1,887	233	178	10	374	672
	<b>Total Operation</b>		<b>8,376,902</b>	<b>6,215,867</b>	<b>1,215,364</b>	<b>150,101</b>	<b>114,623</b>	<b>6,558</b>	<b>241,223</b>	<b>433,165</b>
<b>----Maintenance----</b>										
601.6	Maintenance Labor	14	316,570	179,147	56,951	8,484	4,780	380	17,221	49,606
	Supervision & Engineering	5	79,264	48,145	21,314	3,511	1,712	151	1,419	3,012
	Structures & Improvements	3	363,251	210,577	101,383	18,780	8,137	872	7,447	16,056
	12 inch and Over Mains	4	2,152,277	1,246,814	550,983	90,611	44,337	4,089	69,519	145,924
	Under 12 inch Mains	9	1,124,279	864,796	120,635	7,308	11,805	112	119,623	0
	Services	8	234,874	202,086	23,628	1,785	2,631	70	4,674	0
	Meters	7	592,290	0	0	0	0	0	44,718	547,572
	Hydrants	14	588,154	332,836	105,809	15,763	8,881	706	31,996	92,164
620.6	Materials and Supplies	14	2,016	1,141	363	54	30	2	110	316
631.6	Contractor Services - Eng	14	3,341,689	1,891,062	601,170	89,557	50,460	4,010	181,788	523,643
636.6	Contractor Services - Other	14	0	0	0	0	0	0	0	0
641.6	Equipment Rental	14	0	0	0	0	0	0	0	0
650.6	Transportation	14	19,796	11,202	3,561	531	299	24	1,077	3,102
675.6	Miscellaneous	14	8,814,459	4,987,805	1,585,797	236,384	133,072	10,416	479,591	1,381,395
	<b>Total Maintenance</b>		<b>8,814,459</b>	<b>4,987,805</b>	<b>1,585,797</b>	<b>236,384</b>	<b>133,072</b>	<b>10,416</b>	<b>479,591</b>	<b>1,381,395</b>
	<b>Total Transmission and Distribution Expenses</b>		<b>17,191,362</b>	<b>11,203,672</b>	<b>2,801,162</b>	<b>386,485</b>	<b>247,695</b>	<b>16,974</b>	<b>720,814</b>	<b>1,814,560</b>

AQUA PENNSYLVANIA, INC.

ALLOCATION OF COST OF SERVICE TO CUSTOMER CLASSIFICATIONS  
FOR THE TWELVE MONTHS ENDED JUNE 30, 2012

Account Number (1)	Account Description (2)	Factor Ref. (3)	Cost of Service (4)	Residential (5)	Commercial (6)	Industrial (7)	Other Public Authority (8)	Other Water Utilities (9)	Private Fire Protection (10)	Public Fire Protection (11)
<b>Customer Accounting and Collecting Expenses</b>										
601.7	Labor	12	1,090,367	1,016,222	54,736	2,181	3,271	109	13,521	327
620.7	Materials and Supplies	10	17,329	16,149	870	35	52	2	215	7
636.7	Contractor Services - Billing	10	6,351,798	5,919,241	318,860	12,704	19,055	635	78,762	2,541
636.7	Contractor Services - Meter Reading	11	2,766,254	2,578,978	138,866	5,533	8,299	277	34,302	0
650.7	Transportation	10	305	284	15	1	1	0	4	0
670.7	Bad Debt Expense	10	2,815,434	2,623,703	141,335	5,631	8,446	282	34,911	1,126
675.7	Miscellaneous	10	0	0	0	0	0	0	0	0
	Total Customer Accounting and Collecting Expenses		13,041,487	12,154,577	654,683	26,083	39,124	1,304	161,714	4,001
<b>Administrative and General Expenses</b>										
601.8	Labor	15	5,295,191	3,827,364	911,832	141,911	74,662	6,354	108,022	225,046
603.8	Officers Labor	15	1,322,620	955,990	227,755	35,446	18,649	1,587	26,981	56,211
604.8	Employee Health Plans	16	15,976,213	10,646,548	3,398,140	563,960	281,181	25,562	316,329	744,492
620.8	Materials and Supplies	15	151,965	109,840	26,168	4,073	2,143	182	3,100	6,459
631.8	Contractor Services - Engineering	15	132,489	95,763	22,815	3,551	1,868	159	2,703	5,631
632.8	Contractor Services - Accounting	15	496,875	359,141	85,562	13,316	7,006	596	10,136	21,117
633.8	Contractor Services - Legal	15	393,098	284,131	67,691	10,535	5,543	472	8,019	16,707
634.8	Contractor Services - Mgmt Fee	15	14,987,119	10,832,690	2,580,782	401,655	211,318	17,985	305,737	636,953
635.8	Contractor Services - Testing	15	0	0	0	0	0	0	0	0
636.8	Contractor Services - Other	15	848,377	613,207	146,091	22,737	11,962	1,018	17,307	36,056
641.8	Rent - Building	15	32,979	23,837	5,679	884	465	40	673	1,402
642.8	Rent - Equipment	15	83,053	60,031	14,302	2,226	1,171	100	1,694	3,530
650.8	Transportation	15	-3,601	-2,603	-620	-97	-51	-4	-73	-153
656.8	Vehicle Insurance	15	185,146	133,824	31,882	4,962	2,611	222	3,777	7,869
657.8	General Liability Insurance	15	1,978,997	1,430,419	340,783	53,037	27,904	2,375	40,372	84,107
658.8	A&G Workers Comp Insurance	16	980,215	653,215	208,492	34,602	17,252	1,568	19,408	45,678
659.8	A&G General Liability Insurance	15	1,465,003	1,058,905	252,274	39,262	20,657	1,758	29,886	62,263
660.8	Advertising	15	167,528	121,090	28,848	4,490	2,362	201	3,418	7,120
666.8	Rate Case Amortization	19	471,954	316,114	109,257	18,170	8,967	802	12,365	6,277
666.8	Merger amortization	15	0	0	0	0	0	0	0	0
666.8	Miscellaneous Amortization	15	33,913	24,512	5,840	909	478	41	692	1,441

AQUA PENNSYLVANIA, INC.

ALLOCATION OF COST OF SERVICE TO CUSTOMER CLASSIFICATIONS  
FOR THE TWELVE MONTHS ENDED JUNE 30, 2012

Account Number	Account Description	Factor Ref.	Cost of Service	Residential	Commercial	Industrial	Other Public Authority	Other Water Utilities	Private Fire Protection	Public Fire Protection
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
675.8	A & G Miscellaneous	15	3,163,366	2,286,481	544,732	84,778	44,603	3,796	64,533	134,443
	Subtotal Administrative and General		48,162,500	33,830,499	9,008,305	1,440,406	740,751	64,814	975,078	2,102,647
	Utility Plant Acquisition Adj. Amort.	17	-337,938	-205,771	-81,308	-13,585	-6,624	-608	-10,476	-19,567
	<b>Total Operation &amp; Maintenance Expenses</b>		<b>121,860,093</b>	<b>83,634,696</b>	<b>25,492,480</b>	<b>4,419,097</b>	<b>2,077,848</b>	<b>200,910</b>	<b>1,906,786</b>	<b>4,128,276</b>
<b>DEPRECIATION EXPENSE</b>										
503.00	Power and Pumping Structures									
304.20	Major Treatment Plants	2	127,791	78,732	38,005	7,041	3,067	319	128	498
	Other Structures	3	607,588	352,219	169,578	31,412	13,610	1,458	12,456	26,855
304.30	Purification Buildings									
	Major Treatment Plants	2	3,262,375	2,009,949	970,230	179,757	78,297	8,156	3,262	12,723
	Other Structures	2	476,208	293,392	141,624	26,239	11,429	1,191	476	1,857
304.61	Office Buildings	15	1,225,434	885,744	211,020	32,842	17,279	1,471	24,999	52,081
304.62	Stores, Shop and Garage Bldgs.	15	215,116	155,486	37,043	5,765	3,033	258	4,388	9,142
304.63	Misc. Structures and Impr.	15	772,920	558,667	133,097	20,714	10,898	928	15,768	32,849
305.00	Collecting & Impounding Res.	1	658,101	398,217	197,628	39,947	15,926	1,843	921	3,620
306.00	Lake, River and Other Intakes	2	436,819	269,124	129,910	24,069	10,484	1,092	437	1,704
307.00	Wells and Springs	2	1,010,334	622,467	300,473	55,669	24,248	2,526	1,010	3,940
310.40	Other Power Producing Equipment	6	800,225	487,417	233,186	42,732	18,805	1,921	4,881	11,283
310.70	Oil Engine Pumping Equipment	6	0	0	0	0	0	0	0	0
311.00	Electric Pumping Equipment	6	2,256,432	1,374,393	657,524	120,493	53,026	5,415	13,764	31,816
320.00	Purification System									
	Structures	2	2,017,672	1,243,088	600,056	111,174	48,424	5,044	2,018	7,869
	Wells and Boosters	2	176,678	108,851	52,544	9,735	4,240	442	177	689
	Equipment	2	2,645,824	1,630,092	786,868	145,785	63,500	6,615	2,646	10,319
	Computers	2	1,106,399	681,652	329,043	60,963	26,554	2,766	1,106	4,315
	Painting	2	0	0	0	0	0	0	0	0
	Filter Media	2	69,574	42,865	20,691	3,834	1,670	174	70	271
330.00	Distr. Reservoirs & Standpipes									
	Tanks	5	1,249,908	759,194	336,100	55,371	26,998	2,375	22,373	47,497
	Tank Painting	5	1,881,579	1,142,871	505,957	83,354	40,642	3,575	33,680	71,500
331.00	Mains and Accessories									
	12 inch and Over	3	3,055,291	1,771,152	852,732	157,959	68,439	7,333	62,633	135,044
	Under 12 inch	4	17,197,388	9,962,447	4,402,531	724,010	354,266	32,675	555,476	1,165,983
333.00	Services	9	6,612,598	5,086,410	709,532	42,982	69,432	661	703,580	0

AQUA PENNSYLVANIA, INC.

ALLOCATION OF COST OF SERVICE TO CUSTOMER CLASSIFICATIONS  
FOR THE TWELVE MONTHS ENDED JUNE 30, 2012

Account Number	Account Description	Factor Ref.	Cost of Service	Residential	Commercial	Industrial	Other Public Authority	Other Water Utilities	Private Fire Protection	Public Fire Protection
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
334.00	Meters									
	Remote	8	4,991,260	4,294,480	502,121	37,934	55,902	1,497	99,326	0
	ERTS	8A	2,302,283	2,021,117	236,372	17,956	26,222	616	0	0
335.00	Fire Hydrants	7	1,392,318	0	0	0	0	0	105,120	1,287,198
339.00	Other Plant and Miscellaneous	15	0	0	0	0	0	0	0	0
340.00	Office Furniture and Equipment									
	Furniture	15	267,578	193,405	46,077	7,171	3,773	321	5,459	11,372
	Mechanical Equipment	15	348,281	251,738	59,974	9,334	4,911	418	7,105	14,802
	Computers	15	8,357,593	6,040,868	1,438,178	223,983	117,842	10,029	170,495	355,198
341.00	Transportation Equipment									
	Vehicles	15	1,806,758	1,305,925	311,124	48,421	25,475	2,168	36,858	76,787
	Other	15	95,796	69,241	16,496	2,567	1,351	115	1,954	4,071
342.00	Stores Equipment	15	38,296	27,680	6,595	1,026	540	46	781	1,628
343.10	Shop Equipment	15	46,843	33,858	8,066	1,255	660	56	956	1,991
343.20	Tools & Work Equipment - General	15	521,760	377,128	89,847	13,983	7,357	626	10,644	22,175
344.00	Laboratory Equipment									
	Conventional	2	39,324	24,228	11,695	2,167	944	98	39	153
	Electronic	2	104,540	64,407	31,090	5,760	2,509	261	105	408
346.00	Communication Equipment									
	Communication Equipment	15	261,356	188,908	45,006	7,004	3,685	314	5,332	11,108
	SCADA Equipment	6	267,540	162,959	77,961	14,287	6,287	642	1,632	3,772
347	Miscellaneous Equipment	15	99,151	71,666	17,074	2,657	1,398	119	2,023	4,214
348	Other Tangible Plant	15	2,582	1,866	445	69	36	3	53	110
	<b>Total Depreciation Expense</b>		68,805,513	45,043,903	14,714,490	2,377,422	1,223,159	105,567	1,914,130	3,426,841

AQUA PENNSYLVANIA, INC.

ALLOCATION OF COST OF SERVICE TO CUSTOMER CLASSIFICATIONS  
FOR THE TWELVE MONTHS ENDED JUNE 30, 2012

Account Number (1)	Account Description (2)	Factor Ref. (3)	Cost of Service (4)	Residential (5)	Commercial (6)	Industrial (7)	Other Public Authority (8)	Other Water Utilities (9)	Private Fire Protection (10)	Public Fire Protection (11)
<b>TAXES OTHER THAN INCOME TAXES</b>										
16	Federal and State Payroll Taxes		2,593,876	1,728,559	551,718	91,564	45,652	4,150	51,359	120,875
18	State Capital Stock Tax		1,655,164	1,007,664	398,232	66,538	32,441	2,979	51,310	96,000
19	PUC Assessment		2,055,158	1,376,545	475,769	79,124	39,048	3,494	53,845	27,334
19	OCA and SEA Assessments		615,151	412,028	142,407	23,683	11,688	1,046	16,117	8,182
18	Local Property Taxes		723,056	440,196	173,967	29,067	14,172	1,302	22,415	41,937
18	Public Utility Realty Taxes		3,609,629	2,197,542	868,477	145,107	70,749	6,497	111,898	209,358
	<b>Total Taxes Other Than Income Taxes</b>		<b>11,252,034</b>	<b>7,162,535</b>	<b>2,610,570</b>	<b>435,082</b>	<b>213,750</b>	<b>19,468</b>	<b>306,944</b>	<b>503,685</b>
<b>INCOME TAXES</b>										
18	Federal Income Taxes		22,877,300	13,927,700	5,504,278	919,667	448,395	41,179	709,196	1,326,883
18	State Income Taxes		18,581,500	11,312,417	4,470,709	746,976	364,197	33,447	576,027	1,077,727
18	Deferred Taxes		41,357,034	25,178,162	9,950,502	1,662,553	810,598	74,443	1,282,068	2,398,708
18	ITC-Amortized		-196,735	-119,772	-47,334	-7,909	-3,856	-354	-6,099	-11,411
	<b>Total Income Taxes</b>		<b>82,619,099</b>	<b>50,298,507</b>	<b>19,878,155</b>	<b>3,321,288</b>	<b>1,619,334</b>	<b>148,714</b>	<b>2,561,192</b>	<b>4,791,908</b>
18	<b>UTILITY OPERATING INCOME</b>		<b>162,983,563</b>	<b>99,224,393</b>	<b>39,213,845</b>	<b>6,551,939</b>	<b>3,194,478</b>	<b>293,370</b>	<b>5,052,490</b>	<b>9,453,047</b>
	<b>Total Cost of Service</b>		<b>447,520,302</b>	<b>285,364,034</b>	<b>101,909,541</b>	<b>17,104,828</b>	<b>8,328,569</b>	<b>768,029</b>	<b>11,741,543</b>	<b>22,303,757</b>
<b>Less:</b>										
19	Other Water Revenues		-2,206,960	-1,478,222	-510,911	-84,968	-41,932	-3,752	-57,822	-29,353
19	Revenues from Contract Sales		-6,111,540	-4,093,509	-1,414,822	-235,294	-116,119	-10,390	-160,122	-81,283
20	Unrecovered Public Fire		-16,360,681	0	0	0	0	0	0	-16,360,681
21	Reallocate Unrecovered Public Fire		16,360,681	14,366,314	1,680,242	127,613	186,512	0	0	0
	<b>Total Cost of Service Related to Sales</b>		<b>439,201,802</b>	<b>294,158,617</b>	<b>101,684,051</b>	<b>16,912,179</b>	<b>8,357,029</b>	<b>753,888</b>	<b>11,523,598</b>	<b>5,832,440</b>

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS

FACTOR 1. ALLOCATION OF COSTS WHICH VARY WITH THE AMOUNT OF WATER CONSUMED.

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

Customer Classification	Average Daily Consumption, 100 Gallons	Allocation Factor
(1)	(2)	(3)
Residential	574,492	0.6051
Commercial	285,001	0.3003
Industrial	57,622	0.0607
Public	22,929	0.0242
Other Water Utilities	2,627	0.0028
Private Fire Protection	1,317	0.0014
Public Fire Protection	5,213	0.0055
<b>Total</b>	<b><u>949,201</u></b>	<b><u>1.0000</u></b>

FACTOR 2. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE AND MAXIMUM DAY EXTRA CAPACITY FUNCTIONS.

Factors are based on the weighting of the factors for average daily consumption (Factor 1) and the factors derived from maximum day extra capacity demand for each customer classification , as follows:

Customer Classification	Average Daily Consumption		Maximum Day Extra Capacity		Allocation Factor
	Allocation Factor 1	Weighted Factor	Allocation Factor	Weighted Factor	
(1)	(2)	(3)=(2)x 0.7143	(4)	(5)=(4)x 0.2857	(6)=(3)+(5)
Residential	0.6051	0.4322	0.6435	0.1839	0.6161
Commercial	0.3003	0.2145	0.2902	0.0829	0.2974
Industrial	0.0607	0.0434	0.0411	0.0117	0.0551
Public	0.0242	0.0173	0.0233	0.0067	0.0240
Other Water Utilities	0.0028	0.0020	0.0019	0.0005	0.0025
Private Fire Protection	0.0014	0.0010			0.0010
Public Fire Protection	0.0055	0.0039			0.0039
<b>Total</b>	<b><u>1.0000</u></b>	<b><u>0.7143</u></b>	<b><u>1.0000</u></b>	<b><u>0.2857</u></b>	<b><u>1.0000</u></b>

The derivation of the maximum day extra capacity factors in column 4 and the basis for the column 3 and 5 weightings are presented on the following page.

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 2. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE AND  
MAXIMUM DAY EXTRA CAPACITY FUNCTIONS, cont.

Customer Classification	Average Daily Consumption, 100 Gallons	Maximum Day Extra Capacity		
		Factor*	Rate of Flow, 100 Gallons Per Day	Allocation Factor
(1)	(2)	(3)	(4)=(2)x(3)	(5)
Residential	574,492	1.1	631,941.2	0.6435
Commercial	285,001	1.0	285,001.0	0.2902
Industrial	57,622	0.7	40,335.4	0.0411
Public	22,929	1.0	22,929.0	0.0233
Other Water Utilities	2,627	0.7	1,838.9	0.0019
Total	942,671		982,045.5	1.0000

The weightings of the factors is based on the maximum day ratio of 1.40, based on a review of maximum day ratios experienced during the period 1966 through 2008 (see Schedule F)

	Maximum Day Ratio	Weight
Average Day	1.00	0.7143
Maximum Day Extra Capacity	0.40	0.2857
Total	1.40	1.0000

\* Ratio of maximum day to average day minus 1.0.

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 3. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE, MAXIMUM DAY EXTRA CAPACITY AND FIRE PROTECTION FUNCTIONS.

Factors are based on the weighting of the average daily consumption, the maximum day extra capacity demand, and the fire protection demand for each customer classification.

Customer Classification	Average Daily Consumption		Maximum Day Extra Capacity		Fire Protection		Allocation Factor (8)=(3)+(5)+(7)
	Allocation Factor (2)	Weighted Factor (3)=(2) X 0.6703	Allocation Factor (4)	Weighted Factor (5)=(4) X 0.2681	Allocation Factor (6)	Weighted Factor (7)=(6) X 0.0616	
Residential	0.6051	0.4056	0.6435	0.1726	0.0237	0.0015	0.5797
Commercial	0.3003	0.2013	0.2902	0.0778			0.2791
Industrial	0.0607	0.0407	0.0411	0.0110			0.0517
Public	0.0242	0.0162	0.0233	0.0062			0.0224
Other Water Utilities	0.0028	0.0019	0.0019	0.0005			0.0024
Private Fire Protection	0.0014	0.0009			0.3185	0.0196	0.0205
Public Fire Protection	0.0055	0.0037			0.6578	0.0405	0.0442
Total	<u>1.0000</u>	<u>0.6703</u>	<u>1.0000</u>	<u>0.2681</u>	<u>1.0000</u>	<u>0.0616</u>	<u>1.0000</u>



AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 3. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE, MAXIMUM DAY EXTRA CAPACITY AND FIRE PROTECTION FUNCTIONS, cont.

The weightings of the factors is based on the potential demand of general and fire protection service. The bases for the potential demand of general service are the maximum day ratio of 1.40 and the total system sendout for the test year of 131 mgd. The ratio is based on a review of the experienced maximum day ratios during the period 1966 through 2010 (see Schedule F). The system demand for fire protection is 20,000 gpm for 10 hours.

	<u>Ratio</u>	<u>Rate of Flow, (GPD)</u>	<u>Weight</u>
Average Hour	1.00	130,600,721	0.6703
Maximum Hour Extra Capacity	<u>0.40</u>	<u>52,240,288</u>	<u>0.2681</u>
Subtotal	<u>1.40</u>	182,841,009	0.9384
Fire Protection		<u>12,000,000</u>	<u>0.0616</u>
Total		<u>194,841,009</u>	<u>1.0000</u>

The public and private fire protection allocation factors in column 6 on the previous page are based on the relative potential demands (see Schedule G).

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 4. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE AND MAXIMUM HOUR EXTRA CAPACITY FUNCTIONS.

Factors are based on the weighting of the average daily consumption, the maximum day extra capacity demand, and the fire protection demand for each customer classification.

Customer Classification	Average Hourly Consumption		Maximum Hour Extra Capacity		Fire Protection		Allocation Factor (9)=(4)+(6)+(8)
	100 Gals. (2)	Allocation Factor (3)	Allocation Factor (5)	Weighted Factor (4)=(3) X 0.4503	Allocation Factor (7)	Weighted Factor (8)=(7) X 0.0994	
Residential	23,937.2	0.6052	0.6759	0.2725	0.0237	0.0024	0.5793
Commercial	11,875.0	0.3003	0.2683	0.1352			0.2560
Industrial	2,400.9	0.0607	0.0329	0.0273			0.0421
Public	955.4	0.0242	0.0216	0.0109			0.0206
Other Water Utilities	109.5	0.0028	0.0013	0.0013			0.0019
Private Fire Protection	54.9	0.0014	0.0006	0.0006	0.3185	0.0317	0.0323
Public Fire Protection	217.2	0.0055		0.0025	0.6578	0.0653	0.0678
<b>Total</b>	<b>39,550.1</b>	<b>1.0001</b>	<b>1.0000</b>	<b>0.4503</b>	<b>1.0000</b>	<b>0.0994</b>	<b>1.0000</b>

The maximum hour extra capacity factors in column 5 are determined as follows:

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 4. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE AND MAXIMUM HOUR EXTRA CAPACITY FUNCTIONS, cont.

The weightings of the factors is based on the potential demand of general and fire protection service. The bases for the potential demand of general service are the maximum hour ratio of 2.0 and the total system sendout for the test year of 131 mgd. The ratio is based on a review of the experienced maximum hour ratios during the period 1966 through 2010 (see Schedule F) The system demand for fire protection is 20,000 gpm.

	Ratio	Rate of Flow, (GPM)	Weight
Average Hour	1.00	90,695	0.4503
Maximum Hour Extra Capacity	<u>1.00</u>	<u>90,695</u>	<u>0.4503</u>
Subtotal	<u>2.00</u>	181,390	0.9006
Fire Protection		<u>20,000</u>	<u>0.0994</u>
Total		<u>201,390</u>	<u>1.0000</u>

The maximum hour extra capacity factors in column 5 of the previous page are determined as follows:

Customer Classification	Average Hourly Consumption 100 Gals.	Maximum Hour Extra Capacity		
		Factor*	100 Gals. Per Hour	Allocation Factor
(1)	(2)	(3)	(4)=(2)x(3)	(5)
Residential	23,937.2	3.5	83,780.2	0.6759
Commercial	11,875.0	2.8	33,250.0	0.2683
Industrial	2,400.9	1.7	4,081.5	0.0329
Public	955.4	2.8	2,675.1	0.0216
Other Water Utilities	<u>109.5</u>	1.5	<u>164.3</u>	<u>0.0013</u>
Total	<u>39,278.0</u>		<u>123,951.1</u>	<u>1.0000</u>

\* Ratio of Maximum Hour To Average Hour Minus 1.0.

The public and private fire protection allocation factors in column 7 on the previous page are based on the relative potential demands (see Schedule G).

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 5. ALLOCATION OF COSTS ASSOCIATED WITH STORAGE FACILITIES.

Factors are based on the weightings of the average hourly consumption, the maximum hour extra capacity demand, and the fire protection demand for each customer classification.

Customer Classification	Average Hourly Consumption		Maximum Hour Extra Capacity		Fire Protection		Allocation Factor (9)=(4)+(6)+(8)
	100 Gals. (2)	Allocation Factor (3)	Allocation Factor (5)	Weighted Factor (4)=(3) X 0.4730	Allocation Factor (7)	Weighted Factor (8)=(7) X 0.0539	
Residential	23,937.2	0.6051	0.6759	0.3198	0.0237	0.0013	0.6074
Commercial	11,875.0	0.3003	0.2683	0.1269			0.2689
Industrial	2,400.9	0.0607	0.0329	0.0156			0.0443
Public	955.4	0.0242	0.0216	0.0102			0.0216
Other Water Utilities	109.5	0.0028	0.0013	0.0006			0.0019
Private Fire Protection	54.9	0.0014	0.0007	0.0007	0.3185	0.0172	0.0179
Public Fire Protection	217.2	0.0055	0.0026	0.0026	0.6578	0.0354	0.0380
<b>Total</b>	<b>39,550.1</b>	<b>1.0000</b>	<b>1.0000</b>	<b>0.4730</b>	<b>1.0000</b>	<b>0.0539</b>	<b>1.0000</b>

The weighting of the factors is based on the ratio of the capacity required for a 10-hour demand of fire flow, as related to total storage capacity. The calculation is shown on the following page.

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 5. ALLOCATION OF COSTS ASSOCIATED WITH STORAGE FACILITIES, cont.

The weighting of the factors is based on the ratio of the capacity required for a 10-hour demand of fire flow, as related to total storage capacity.

$$\text{Fire Protection Weight} = \frac{20,000 \text{ GPM} \times 60 \text{ Min.} \times 10 \text{ Hours}}{222,575,900 \text{ Gallons}} = 0.0539$$

$$\text{General Service Weight} = 1.0000 - 0.0539 = 0.9461$$

The weighting of the average hourly consumption and maximum hour extra demand for general service is based on the maximum hour ratio, as follows:

	<u>Maximum Hour Ratio</u>	<u>Percent</u>	<u>Weight</u>
Average Hour	1.00	50.00	0.4730
Extra Capacity Maximum Hour	<u>1.00</u>	<u>50.00</u>	<u>0.4731</u>
Total	<u><u>2.00</u></u>	<u><u>100.00</u></u>	<u><u>0.9461</u></u>

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 6. ALLOCATION OF COSTS ASSOCIATED WITH POWER AND PUMPING FACILITIES.

Factors are used on the weighting of the maximum daily consumption, Factor 2, the maximum daily consumption with fire, Factor 3, and the maximum hour consumption, Factor 4, for each customer classification, as follows:

Customer Classification	Maximum Daily Consumption		Maximum Daily Consumption		Maximum Hourly Consumption		Allocation Factor
	Allocation Factor 2	Weighted Factor (3)=(2)X 0.8093	Allocation Factor 3	Weighted Factor (5)=(4)X 0.0806	Allocation Factor 4	Weighted Factor (7)=(6)X 0.1101	
(1)	(2)	(3)=(2)X	(4)	(5)=(4)X	(6)	(7)=(6)X	(8)=(3)+(5)+(7)
Residential	0.6161	0.4987	0.5797	0.0467	0.5793	0.0637	0.6091
Commercial	0.2974	0.2407	0.2791	0.0225	0.2560	0.0282	0.2914
Industrial	0.0551	0.0446	0.0517	0.0042	0.0421	0.0046	0.0534
Public	0.0240	0.0194	0.0224	0.0018	0.0206	0.0023	0.0235
Other Water Utilities	0.0025	0.0020	0.0024	0.0002	0.0019	0.0002	0.0024
Private Fire Protection	0.0010	0.0008	0.0205	0.0017	0.0323	0.0036	0.0061
Public Fire Protection	0.0039	0.0031	0.0442	0.0035	0.0678	0.0075	0.0141
<b>Total</b>	<b>1.0000</b>	<b>0.8093</b>	<b>1.0000</b>	<b>0.0806</b>	<b>1.0000</b>	<b>0.1101</b>	<b>1.0000</b>

The weighting of the factors is based on the horsepower of pumps associated with maximum day facilities, maximum day and fire facilities, and maximum hour facilities as follows:

	Horsepower of Pumps	Weight
Associated with Maximum Day	41,930	0.8093
Associated with Maximum Day and Fire	4,175	0.0806
Associated with Maximum Hour	5,703	0.1101
<b>Total</b>	<b>51,808</b>	<b>1.0000</b>

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 7. ALLOCATION OF COSTS ASSOCIATED WITH FIRE HYDRANTS.

Factors are based on the number of hydrants, as follows:

<u>Customer Classification</u> (1)	<u>Number of Hydrants</u> (2)	<u>Allocation Factor</u> (3)
Private Fire Protection	1,648	0.0755
Public Fire Protection	<u>20,173</u>	<u>0.9245</u>
Total	<u><u>21,820</u></u>	<u><u>1.0000</u></u>

FACTOR 8 AND 8A. ALLOCATION OF COSTS ASSOCIATED WITH METERS.

Factors are based on the relative cost of meters by size and customer classification, as developed on the following page and summarized below:

<u>Customer Classification</u> (1)	<u>5/8" Dollar Equivalents</u> (2)	<u>Factor 8 Allocation Factor</u> (3)	<u>Factor 8A Allocation Factor</u> (3)
Residential	377,064	0.8604	0.8779
Commercial	44,098	0.1006	0.1027
Industrial	3,350	0.0076	0.0078
Public	4,892	0.0112	0.0114
Other Water Utilities	115	0.0003	0.0003
Private Fire Protection	<u>8,737</u>	<u>0.0199</u>	
Total	<u><u>438,256</u></u>	<u><u>1.0000</u></u>	<u><u>1.0000</u></u>

AQUA PENNSYLVANIA, INC.

BASIS FOR ALLOCATING METER COSTS TO CUSTOMER CLASSIFICATIONS

Meter Size (1)	5/8" Dollar Equivalent (2)	Residential		Commercial		Industrial		Public		Other Water Utilities		Private Fire Protection		Total	
		Number of Meters (3)	Weighting (4)=(2)X(3)	Number of Meters (5)	Weighting (6)=(2)X(5)	Number of Meters (7)	Weighting (8)=(2)X(7)	Number of Meters (9)	Weighting (10)=(2)X(9)	Number of Meters (11)	Weighting (12)=(2)X(11)	Number of Meters (13)	Weighting (14)=(2)X(13)	Number of Meters (15)	Weighting (16)
5/8	1.00	356,705	356,705	9,888	9,888	227	227	344	344	0	0	4,773	4,773	371,937	371,937
3/4	1.15	10,637	12,233	1,754	2,017	56	64	100	115	0	0	0	0	12,547	14,429
1	1.32	5,552	7,329	2,918	3,852	178	235	214	282	0	0	0	0	8,862	11,698
1-1/2	2.84	158	449	2,100	5,964	69	196	104	295	0	0	0	0	2,431	6,904
2	3.14	76	239	2,406	7,555	150	471	210	659	0	0	6	19	2,848	8,943
3	10.24	4	41	525	5,376	36	369	120	1,229	0	0	43	440	728	7,455
4	14.58	3	44	332	4,841	53	773	88	1,283	2	29	69	1,006	547	7,976
6	24.39	1	24	127	3,098	24	585	14	341	0	0	53	1,293	219	5,341
8	43.06	0	0	31	1,335	7	301	8	344	1	43	26	1,120	73	3,143
10	42.92	0	0	4	172	3	129	0	0	1	43	2	86	10	430
Total		373,136	377,064	20,085	44,098	803	3,350	1,202	4,892	4	115	4,972	8,737	400,202	438,256



AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 9. ALLOCATION OF COSTS ASSOCIATED WITH SERVICES.

Factors are based on the relative cost of services by size and customer classification, as developed on the following page and summarized below:

<u>Customer Classification</u> (1)	<u>3/4" Dollar Equivalents</u> (2)	<u>Allocation Factor</u> (3)
Residential	378,956	0.7692
Commercial	52,859	0.1073
Industrial	3,215	0.0065
Public	5,159	0.0105
Other Water Utilities	44	0.0001
Private Fire Protection	<u>52,430</u>	<u>0.1064</u>
 Total	 <u><u>492,663</u></u>	 <u><u>1.0000</u></u>

AQUA PENNSYLVANIA, INC.

BASIS FOR ALLOCATING SERVICE COSTS TO CUSTOMER CLASSIFICATIONS

Service Size	3/4" Dollar Equivalent (2)	Residential		Commercial		Industrial		Public		Other Water Utilities		Private Fire Protection		Total	
		Number of Services (3)	Weighting (4)=(2)X(3)	Number of Services (5)	Weighting (6)=(2)X(5)	Number of Services (7)	Weighting (8)=(2)X(7)	Number of Services (9)	Weighting (10)=(2)X(9)	Number of Services (11)	Weighting (12)=(2)X(11)	Number of Services (13)	Weighting (14)=(2)X(13)	Number of Services (15)	Weighting (16)
3/4	1.00	367,342	367,342	11,642	11,642	283	283	444	444	0	0	0	0	379,711	379,711
1	1.86	5,552	10,327	2,918	5,427	178	331	214	398	0	0	60	112	8,922	16,595
1-1/2	4.63	158	732	2,100	9,723	69	319	104	482	0	0	149	690	2,580	11,946
2	6.15	76	467	2,406	14,797	150	923	210	1,292	0	0	214	1,316	3,066	18,795
4	11.06	7	77	857	9,478	89	984	208	2,300	2	22	1,582	17,497	2,745	30,358
6	11.06	1	11	127	1,405	24	265	14	155	0	0	2,101	23,237	2,267	25,073
8	11.06	0	0	31	343	7	77	8	88	1	11	822	9,091	869	9,610
10	11.06	0	0	4	44	3	33	0	0	1	11	42	465	50	553
12	11.06											2	22	2	22
Total		373,136	378,956	20,085	52,859	803	3,215	1,202	5,159	4	44	4,972	52,430	400,202	492,663

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 10. ALLOCATION OF BILLING AND COLLECTING COSTS.

Factors are based on number of bills

<u>Customer Classification</u> (1)	<u>Total Bills</u> (2)	<u>Allocation Factor</u> (3)
Residential	4,477,626	0.9319
Commercial	241,021	0.0502
Industrial	9,626	0.0020
Public	14,412	0.0030
Other Water Utilities	54	0.0001
Private Fire Protection	59,664	0.0124
Public Fire Protection	<u>2,180</u>	<u>0.0004</u>
 Total	 <u><u>4,804,583</u></u>	 <u><u>1.0000</u></u>

FACTOR 11. ALLOCATION OF METER READING COSTS.

Factors are based on number of bills for metered customers

<u>Customer Classification</u> (1)	<u>Total Bills</u> (2)	<u>Allocation Factor</u> (3)
Residential	4,477,626	0.9323
Commercial	241,021	0.0502
Industrial	9,626	0.0020
Public	14,412	0.0030
Other Water Utilities	54	0.0001
Private Fire Protection	<u>59,664</u>	<u>0.0124</u>
 Total	 <u><u>4,802,403</u></u>	 <u><u>1.0000</u></u>

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 12. ALLOCATION OF CUSTOMERS' ACCOUNTING AND COLLECTING EXPENSES, MATERIAL AND SUPPLIES.

Factors are based on customers' accounting and collecting expenses, meter reading and billing and collecting expenses as follows:

Customer Classification <u>(1)</u>	Operating Expenses <u>(2)</u>	Allocation Factor <u>(3)</u>
Residential	\$11,138,356	0.9320
Commercial	599,946	0.0502
Industrial	23,902	0.0020
Public	35,853	0.0030
Other Water Utilities	1,195	0.0001
Private Fire Protection	148,194	0.0124
Public Fire Protection	<u>3,674</u>	<u>0.0003</u>
Total	<u>\$11,951,120</u>	<u>1.0000</u>

FACTOR 13. ALLOCATION OF TRANSMISSION AND DISTRIBUTION OPERATION AND MAINTENANCE SUPERVISION AND ENGINEERING, MAPS AND RECORDS AND OTHER DEPARTMENTAL EXPENSES.

Factors are based on transmission and distribution operation expenses other than those being allocated, as follows:

Customer Classification <u>(1)</u>	Transmission and Distribution Operating Expenses <u>(2)</u>	Allocation Factor <u>(3)</u>
Residential	\$2,852,405	0.7420
Commercial	557,631	0.1451
Industrial	68,961	0.0179
Public	52,521	0.0137
Other Water Utilities	2,931	0.0008
Private Fire Protection	110,674	0.0288
Public Fire Protection	<u>198,810</u>	<u>0.0517</u>
Total	<u>\$3,843,934</u>	<u>1.0000</u>

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 14. ALLOCATION OF TRANSMISSION AND DISTRIBUTION MAINTENANCE EXPENSES.

Factors are based on transmission and distribution maintenance expenses other than those being allocated, as follows:

<u>Customer Classification</u> (1)	<u>Transmission &amp; Distribution Maintenance Labor</u> (2)	<u>Allocation Factor</u> (3)
Residential	\$2,572,417	0.5659
Commercial	817,944	0.1799
Industrial	121,995	0.0268
Public	68,621	0.0151
Other Water Utilities	5,295	0.0012
Private Fire Protection	247,399	0.0544
Public Fire Protection	712,564	0.1567
Total	<u>\$4,546,235</u>	<u>1.0000</u>

FACTOR 15. ALLOCATION OF ADMINISTRATIVE AND GENERAL EXPENSES

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

<u>Customer Classification</u> (1)	<u>Operation &amp; Maintenance Expenses</u> (2)	<u>Allocation Factor</u> (3)
Residential	\$31,979,529	0.7228
Commercial	7,617,308	0.1722
Industrial	1,183,570	0.0268
Public	622,622	0.0141
Other Water Utilities	53,271	0.0012
Private Fire Protection	900,467	0.0204
Public Fire Protection	1,881,311	0.0425
Total	<u>\$44,238,079</u>	<u>1.0000</u>

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 15A. ALLOCATION OF CASH WORKING - EXPENSES

Factors are based on the allocation of total operation and maintenance expenses.

<u>Customer Classification</u> (1)	<u>Operation &amp; Maintenance Expenses</u> (2)	<u>Allocation Factor</u> (3)
Residential	\$83,634,696	0.6863
Commercial	25,492,480	0.2092
Industrial	4,419,097	0.0363
Public	2,077,848	0.0171
Other Water Utilities	200,910	0.0016
Private Fire Protection	1,906,786	0.0156
Public Fire Protection	<u>4,128,276</u>	<u>0.0339</u>
 Total	 <u><u>\$121,860,093</u></u>	 <u><u>1.0000</u></u>

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 16. ALLOCATION OF LABOR RELATED TAXES AND BENEFITS.

Factors are based on the allocation of direct labor expense.

Customer Classification <u>(1)</u>	Direct Labor Expense <u>(2)</u>	Allocation Factor <u>(3)</u>
Residential	\$19,659,515	0.6664
Commercial	6,274,597	0.2127
Industrial	1,040,579	0.0353
Public	520,007	0.0176
Other Water Utilities	46,665	0.0016
Private Fire Protection	584,256	0.0198
Public Fire Protection	1,376,177	0.0466
<b>Total</b>	<b><u>\$29,501,797</u></b>	<b><u>1.0000</u></b>

FACTOR 17. 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 depreciaton other than those items being allocated, as follows:

Customer Classification <u>(1)</u>	Original Cost Less Depreciation <u>(2)</u>	Allocation Factor <u>(3)</u>
Residential	\$1,295,615,892	0.6089
Commercial	512,113,577	0.2406
Industrial	85,604,670	0.0402
Public	41,791,493	0.0196
Other Water Utilities	3,838,214	0.0018
Private Fire Protection	65,982,559	0.0310
Public Fire Protection	123,330,223	0.0579
<b>Total</b>	<b><u>\$2,128,276,628</u></b>	<b><u>1.0000</u></b>

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 18. ALLOCATION OF INCOME TAXES AND INCOME AVAILABLE FOR RETURN.

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

Customer Classification <u>(1)</u>	Original Cost Measure of Value <u>(2)</u>	Allocation Factor <u>(3)</u>
Residential	\$1,131,169,055	0.6088
Commercial	447,078,589	0.2406
Industrial	74,732,894	0.0402
Public	36,493,781	0.0196
Other Water Utilities	3,351,385	0.0018
Private Fire Protection	57,641,656	0.0310
Public Fire Protection	107,749,473	0.0580
Total	<u>\$1,858,216,833</u>	<u>1.0000</u>

FACTOR 19. ALLOCATION OF REGULATORY COMMISSION EXPENSES, ASSESSMENTS AND OTHER WATER REVENUES.

The factors are based on the allocation of the total cost of service, excluding those items being allocated.

Customer Classification <u>(1)</u>	Total Cost of Service <u>(2)</u>	Allocation Factor <u>(3)</u>
Residential	\$299,730,348	0.6698
Commercial	103,589,783	0.2315
Industrial	17,232,442	0.0385
Public	8,515,081	0.0190
Other Water Utilities	768,029	0.0017
Private Fire Protection	11,741,543	0.0262
Public Fire Protection	5,943,076	0.0133
Total	<u>\$447,520,302</u>	<u>1.0000</u>



AQUA PENNSYLVANIA, INC.

RESIDENTIAL, COMMERCIAL, INDUSTRIAL, PUBLIC, SALES TO OTHER WATER UTILITIES AND FIRE PROTECTION CUSTOMER CLASSIFICATIONS  
FACTOR 18. ORIGINAL COST MEASURE OF VALUE RATE BASE ALLOCATED TO

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Account	Factor Ref.	Measure of Value	Residential	Commercial	Industrial	Other Public Authority	Other Water Utilities	Private Fire Protection	Public Fire Protection
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>NONDEPRECIABLE PLANT</b>										
301	Organization	17	5,751,926	3,502,349	1,383,913	231,227	112,738	10,353	178,310	333,037
302	Franchise and Consents	17	1,797,470	1,094,480	432,471	72,258	35,230	3,235	55,722	104,074
303	Miscellaneous Intangible Plant	17	1,552,577	945,365	373,550	62,414	30,431	2,795	48,130	89,894
303.1	Water Rights	1	1,703,879	1,031,016	511,675	103,425	41,234	4,771	2,385	9,371
303.1	Reservoir Land	1	2,984,536	1,805,942	896,256	181,161	72,226	8,357	4,178	16,415
303.1	Other Sources of Supply Land	2	6,548,232	4,034,366	1,947,444	360,808	157,158	16,371	6,548	25,538
303.2	Power and Pumping Land	6	1,073,656	653,964	312,863	57,333	25,231	2,577	6,549	15,139
303.3	Purification Land	2	1,420,928	875,432	422,584	78,293	34,102	3,552	1,421	5,542
303.4	Land and Rights of Way	2	1,192,948	734,975	354,783	65,731	28,631	2,982	1,193	4,652
303.5	Distr. Reservoir & Standpipe Land	5	1,352,029	821,222	363,560	59,895	29,204	2,569	24,201	51,377
303.6	Office Land	15	3,128,180	2,261,049	538,673	83,835	44,107	3,754	63,815	132,948
303.6	Stores, Shop and Garage Land	15	1,002,955	724,935	172,709	26,879	14,142	1,204	20,460	42,626
303.6	Miscellaneous Land	15	1,005,737	726,946	173,188	26,954	14,181	1,207	20,517	42,744
	Total Nondepreciable Plant		30,515,053	19,212,041	7,883,669	1,410,213	638,615	63,727	433,429	873,357
<b>DEPRECIABLE PLANT</b>										
304.2	Power and Pumping Structures	2	4,979,810	3,068,061	1,480,995	274,388	119,515	12,450	4,980	19,421
	Major Treatment Plants	3	18,745,301	10,866,651	5,231,814	969,132	419,895	44,989	384,279	828,542
	Other Structures									
304.3	Purification Buildings	2	114,552,486	70,575,787	34,067,909	6,311,842	2,749,260	286,381	114,552	446,755
	Major Treatment Plants	2	12,411,759	7,646,885	3,691,257	683,888	297,882	31,029	12,412	48,406
	Other Structures	15	25,133,825	18,166,729	4,328,045	673,587	354,387	30,161	512,730	1,068,188
	Office Buildings									

AQUA PENNSYLVANIA, INC.

RESIDENTIAL, COMMERCIAL, INDUSTRIAL, PUBLIC, SALES TO OTHER WATER UTILITIES AND FIRE PROTECTION CUSTOMER CLASSIFICATIONS

FACTOR 18. ORIGINAL COST MEASURE OF VALUE RATE BASE ALLOCATED TO

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Account	Factor Ref.	Measure of Value	Residential	Commercial	Industrial	Other Public Authority	Other Water Utilities	Private Fire Protection	Public Fire Protection
304.3	Stores, Shop and Garage Bldgs.	15	4,628,791	3,345,690	797,078	124,052	65,266	5,555	94,427	196,724
304.3	Misc Structures and Impr.	15	16,337,346	11,808,634	2,813,291	437,841	230,357	19,605	333,282	694,337
305	Collecting & Impounding Res.	1	25,832,735	15,631,388	7,757,570	1,568,047	625,152	72,332	36,166	142,080
306	Lake, River and Other Intakes	2	11,713,194	7,216,499	3,483,504	645,397	281,117	29,283	11,713	45,681
307	Wells and Springs	2	34,528,969	21,273,298	10,268,915	1,902,546	828,695	86,322	34,529	134,663
310.4	Other Power Producing Equipment	6	17,549,384	10,689,330	5,113,890	937,137	412,411	42,119	107,051	247,446
310.7	Oil Engine Pumping Equipment	6	0	-	-	-	-	-	-	-
311	Electric Pumping Equipment	6	41,477,154	25,263,735	12,086,443	2,214,880	974,713	99,545	253,011	584,828
320	Purification System									
	Structures	2	56,292,007	34,661,506	16,741,243	3,101,690	1,351,008	140,730	56,292	219,539
	Wells & Boosters	2	5,992,026	3,691,687	1,782,029	330,161	143,809	14,980	5,992	23,369
	Equipment	2	69,628,429	42,898,075	20,707,495	3,636,526	1,671,082	174,071	69,628	271,551
	Computers	2	8,988,564	5,537,854	2,673,199	495,270	215,726	22,471	8,989	35,055
	Painting	2	0	-	-	-	-	-	-	-
	Filter Media	2	233,394	143,794	69,411	12,860	5,601	583	233	910
330	Distr. Reservoirs & Standpipes									
	Tanks	5	44,841,756	27,236,883	12,057,948	1,986,490	968,582	85,199	802,667	1,703,987
	Tank Painting	5	13,608,909	8,266,051	3,659,436	602,875	293,952	25,857	243,599	517,139
331	Mains & Accessories									
	12 Inch and Over	3	245,086,533	142,076,663	68,403,651	12,670,974	5,489,938	588,208	5,024,274	10,832,825
	Under 12 Inch	4	985,707,069	571,020,105	252,341,010	41,498,268	20,305,566	1,872,843	31,838,338	66,830,939
333	Services	9	198,365,561	152,582,790	21,284,625	1,289,376	2,082,838	19,837	21,106,096	-
334	Meters									
	Remote	8	40,484,867	34,833,180	4,072,778	307,685	453,431	12,145	805,649	-
	ERTS	8A	16,868,469	14,808,408	1,731,858	131,564	192,123	4,516	-	-
335	Fire Hydrants	7	38,859,830	-	-	-	-	-	2,933,917	35,925,913
340	Office Furniture & Equipment									
	Furniture	15	4,461,718	3,224,930	766,308	119,574	62,910	5,354	91,019	189,623
	Mechanical Equipment	15	1,669,719	1,206,873	287,526	44,748	23,543	2,004	34,062	70,963
341	Computers	15	22,785,740	16,469,533	3,923,704	610,658	321,279	27,343	464,829	968,394
	Transportation Equipment									
	Vehicles	15	7,773,957	5,619,016	1,338,675	208,342	109,613	9,329	158,589	330,393
	Other	15	1,716,891	1,240,969	295,649	46,013	24,208	2,060	35,025	72,968
342	Stores Equipment	15	724,085	523,369	124,687	19,405	10,210	869	14,771	30,774
343.1	Shop Equipment	15	892,212	644,891	153,639	23,911	12,580	1,071	18,201	37,919
343.2	Tools & Work Equipment - General	15	6,606,967	4,775,516	1,137,720	177,067	93,158	7,928	134,782	280,796
344	Laboratory Equipment									
	Conventional	2	836,482	515,357	248,770	46,090	20,076	2,091	836	3,262

AQUA PENNSYLVANIA, INC.

RESIDENTIAL, COMMERCIAL, INDUSTRIAL, PUBLIC, SALES TO OTHER WATER UTILITIES AND FIRE PROTECTION CUSTOMER CLASSIFICATIONS

FACTOR 18. ORIGINAL COST MEASURE OF VALUE RATE BASE ALLOCATED TO

Account (1)	Factor Ref. (2)	Measure of Value (3)	Residential (4)	Commercial (5)	Industrial (6)	Other Public Authority (7)	Other Water Utilities (8)	Private Fire Protection (9)	Public Fire Protection (10)
346	2	1,145,735	705,887	340,742	63,130	27,498	2,864	1,146	4,468
	15	1,839,911	1,329,887	316,833	49,310	25,943	2,208	37,534	78,196
	6	1,886,117	1,148,834	549,614	100,719	44,324	4,527	11,505	26,594
347	15	1,615,184	1,167,455	278,135	43,287	22,774	1,938	32,950	68,645
348	15	60,660	43,845	10,446	1,626	855	73	1,237	2,578
		2,106,863,546	1,281,946,045	506,419,842	84,560,356	41,331,277	3,790,870	65,831,292	122,983,871
		2,137,378,599	1,301,158,086	514,303,511	85,970,569	41,969,892	3,854,597	66,264,721	123,857,228

OTHER RATE BASE ELEMENTS

Materials and Supplies	17	5,081,559	3,094,161	1,222,623	204,279	99,599	9,147	157,528	294,222
Cash Working Capital - Expenses	15A	-	-	-	-	-	-	-	-
Cash Working Capital - Taxes	17	-	-	-	-	-	-	-	-
Cash Working Capital - P/R Tax	16	-	-	-	-	-	-	-	-
Acquisition Adjustments	17	1,501,397	914,201	361,236	60,356	29,427	2,703	46,543	86,931
Previously Approved Rate Base Item	17	2,372,116	1,444,382	570,731	95,359	46,493	4,270	73,536	137,346
Hubbard Contract Adjustment	2	(1,031,693)	(635,627)	(306,825)	(56,846)	(24,761)	(2,579)	(1,032)	(4,024)
Deferred Income Taxes	17	(287,085,151)	(174,806,148)	(69,072,687)	(11,540,823)	(5,626,869)	(516,753)	(8,899,640)	(16,622,230)
Accrued Interest	17	-	-	-	-	-	-	-	-
Total Other Rate Base elements		(279,161,771)	(169,989,031)	(67,224,922)	(11,237,675)	(5,476,111)	(503,212)	(8,623,065)	(16,107,755)
Total Original Cost Measure of Value		1,858,216,828	1,131,169,055	447,078,589	74,732,894	36,493,781	3,351,385	57,641,656	107,749,473

AQUA PENNSYLVANIA, INC.

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 20. ALLOCATION OF UNRECOVERED PUBLIC FIRE PROTECTION.

These costs are deducted directly from the Public Fire Protection Classification.

<u>Customer Classification</u> (1)	<u>Allocation Factor</u> (2)
Public Fire Protection	1.0000

FACTOR 21. REALLOCATION OF UNRECOVERED PUBLIC FIRE PROTECTION.

These costs are allocated based on meter equivalents.

<u>Customer Classification</u> (1)	<u>5/8" Dollar Equivalents</u> (2)	<u>Allocation Factor</u> (3)
Residential	377,064	0.8781
Commercial	44,098	0.1027
Industrial	3,350	0.0078
Public	<u>4,892</u>	<u>0.0114</u>
 Total	 <u><u>429,404</u></u>	 <u><u>1.0000</u></u>

## AQUA PENNSYLVANIA, INC.

SUMMARY OF AVERAGE DAILY SEND OUT,  
MAXIMUM DAILY USE AND MAXIMUM HOURLY USE FOR THE YEARS 1962 - 2010

Year (1)	Average Daily Send Out (MGD) (2)	Maximum Daily Use			Maximum Hourly Use		
		MGD (3)	Ratio to Average (4)	Highest Use Day (5)	MGD (6)	Ratio to Average (7)	Highest Use Hour (8)
1962	56.90	78.18	1.37	5/19/62	131.83	2.32	6-7PM
1963	59.10	88.52	1.50	6/27/63	145.10	2.46	7-8PM
1966	66.50	94.68	1.42	6/25/66	133.20	2.00	7-8PM
1967	68.80	101.83	1.48	6/16/67	152.40	2.22	8-9PM
1968	72.90	92.06	1.26	7/23/68	152.11	2.09	7-8PM
1969	73.90	93.41	1.26	5/29/69	129.98	1.76	6-7PM
1970	74.60	91.28	1.22	9/24/70	129.46	1.74	6-7PM
1971	76.20	99.97	1.31	7/08/71	145.60	1.91	8-9PM
1972	75.90	94.35	1.24	8/25/72	137.59	1.81	6-7PM
1973	76.30	95.65	1.25	6/11/73	142.13	1.86	10-11AM
1974	77.60	97.21	1.25	6/10/74	134.21	1.73	7-8PM
1975	77.10	90.78	1.18	5/24/75	136.70	1.77	9-10AM
1976	79.40	96.90	1.22	6/10/76	132.20	1.66	7-8AM
1977	79.60	100.51	1.26	5/28/77	149.21	1.87	10-11AM
1978	78.60	91.53	1.16	6/19/78	129.77	1.65	8-9AM
1979	78.20	88.75	1.13	5/10/79	122.81	1.57	7-8AM
1980	80.80	102.04	1.26	7/15/80	147.88	1.83	7-8PM
1981	76.80	86.30	1.12	6/16/81	118.08	1.54	9-10PM
1982	78.50	93.00	1.18	7/26/82	130.01	1.66	N/A
1983	80.70	104.43	1.29	7/16/83	146.66	1.82	10-11AM
1984	82.20	100.75	1.23	6/11/84	152.09	1.85	7-8PM
1985	81.30	92.21	1.13	4/22/85	129.19	1.59	7-8AM
1986	88.00	114.19	1.30	7/07/86	157.94	1.79	7-8PM
1987	87.40	107.84	1.23	8/04/87	147.12	1.68	7-8PM
1988	89.20	117.52	1.32	6/21/88	128.90	1.45	8-9PM
1989	87.90	101.19	1.15	7/11/89	138.00	1.57	7-8AM
1990	88.40	102.75	1.16	7/04/90	151.52	1.71	9-10AM
1991	87.20	113.49	1.30	6/10/91	159.00	1.82	8-9PM
1992	85.40	100.30	1.17	6/15/92	132.00	1.55	9-10AM
1993	89.10	118.80	1.33	7/10/93	170.00	1.91	9-10AM
1994	89.80	113.90	1.27	7/13/94	142.40	1.59	7-8AM
1995	92.60	121.80	1.32	7/15/95	180.15	1.95	9-10AM
1996	94.20	110.00	1.17	6/8/96	161.09	1.71	9-10AM
1997	103.80	142.53	1.37	7/16/97	205.57	1.98	7-8PM
1998	108.80	139.39	1.28	7/29/98	182.65	1.68	7-8AM
1999	108.10	148.16	1.37	7/16/99	198.99	1.84	8-9PM
2000	113.54	136.91	1.21	6/11/00	195.58	1.72	10-11AM
2001	119.11	160.48	1.35	8/8/01	228.58	1.92	11-12AM
2002	115.41	152.07	1.32	8/14/02	196.46	1.70	7-8AM
2003	111.22	130.48	1.17	6/30/03	172.19	1.55	7-8AM
2004	112.93	133.44	1.18	7/11/04	177.15	1.57	8-9PM
2005	116.28	142.40	1.22	6/26/05	192.45	1.66	10-11AM
2006	113.19	142.50	1.26	8/23/06	180.09	1.59	8-9AM
2007	114.41	137.64	1.20	8/4/07	190.15	1.66	9-10AM
2008	113.27	141.79	1.25	7/18/08	192.98	1.70	3-4PM
2009	106.32	123.45	1.16	5/25/09	173.22	1.63	11-12PM
2010	109.92	152.25	1.39	7/7/10	222.17	2.02	6-7PM

## AQUA PENNSYLVANIA, INC.

BASIS FOR ALLOCATING DEMAND RELATED COSTS OF FIRE SERVICE  
TO RESIDENTIAL AND PRIVATE AND PUBLIC FIRE PROTECTION CUSTOMER CLASSIFICATIONS

Description			Restrictive Diameters Squared	Quantity	Relative Demand	Allocation Factor
(1)			(2)	(3)	(4)=(2)x(3)	(5)
<u>GENERAL SERVICE - RESIDENTIAL</u>						
3/4	- inch	meter	0.56	90	50	
1	- inch	meter	1.00	7,905	7,905	
1-1/2	- inch	meter	2.25	3,299	7,423	
2	- inch	meter	4.00	89	355	
				11,382	15,733	0.0237
<u>PRIVATE FIRE PROTECTION</u>						
<u>Hydrant</u>	<u>Lead</u>	<u>Nozzle Sizes</u>				
6	6	2-2 1/2", 1-4 1/2"	32.75	1,513	49,534	
4	4	2-2 1/2", 1-4 1/2"	16.00	11	176	
4	4	2-2 1/2"	12.50	22	275	
5	6	2-2 1/2", 1-4"	25.00	102	2,550	
<u>Fire Lines</u>						
1	-inch		1.00	60	60	
1-1/2	-inch		2.25	149	335	
2	-inch		4.00	214	856	
3	-inch		9.00	2	18	
4	-inch		16.00	1,580	25,280	
6	-inch		36.00	2,101	75,636	
8	-inch		64.00	822	52,608	
10	-inch		100.00	42	4,200	
12	-inch		144.00	2	288	
Total Fire Lines				4,972	159,281	
Total Private Fire Protection				6,620	211,816	0.3185
<u>PUBLIC FIRE PROTECTION</u>						
<u>Hydrant</u>	<u>Lead</u>	<u>Nozzle Sizes</u>				
6	6	2-5"	25.00	14,752	368,800	
6	6	2-2 1/2",	12.50	1,545	19,306	
4	4	2-2 1/2", 1-4 1/2"	16.00	95	1,520	
4	4	2-2 1/2"	12.50	590	7,375	
6	4	2-2 1/4", 1-4 1/2"	16.00	167	2,672	
5	6	2-2 1/2"	12.50	3,024	37,800	
Total Public Fire Protection				20,173	437,473	0.6578
Total Fire Protection				38,174	665,022	1.0000

## AQUA PENNSYLVANIA IINC.

## CALCULATION OF COMMODITY/DEMAND RATES FOR STANDBY SERVICE

**Firm Standby Service:**

	Cost of Service		Units Hundred Gals.	Cost Per Unit
	Annual	Per Month		
<b><u>Description:</u></b>				
Total Base Costs	201,544,972			
Less: Variable Costs	<u>29,797,453</u>		344,074,915	0.0866 Per Hundred Gallons
Fixed Base Costs	171,747,519	\$14,312,293	942,671 Avg Day	15.1827 Per Hundred of Avg Day
Max Day Extra Capacity	38,358,502	\$3,196,542	1,924,717 Peak Day	1.6608 Per Hundred of Peak Day
Max Hour Extra Capacity	72,471,929	\$6,039,327	163,229 Peak Hour	36.9991 Per Hundred Peak Hour

**Interruptible Standby Service:**

	Cost of Service		Units Hundred Gals.	Cost Per Unit
	Annual	Per Month		
<b><u>Description:</u></b>				
Fixed Base Costs	171,747,519			
Less: Depreciation Return and Taxes	<u>143,429,914</u>			
Total	28,317,605	\$2,359,800	942,671 Avg Day	2.5033 Per Hundred of Avg Day
Max Day Extra Capacity	38,358,502			
Less: Depreciation Return and Taxes	<u>28,943,672</u>			
Total	9,414,830	\$784,569	1,924,717 Peak Day	0.4076 Per Hundred of Peak Day
Max Hour Extra Capacity	72,471,929			
Less: Depreciation Return and Taxes	<u>66,935,895</u>			
Total	5,536,034	\$461,336	163,229 Peak Hour	2.8263 Per Hundred Peak Hour
Depreciation, Return & Taxes for Base, Max Day and Max Hour	239,309,481			
Plus: Variable Costs	<u>29,797,453</u>			
Total	269,106,934		344,074,915	\$0.7821 Per Hundred Gallons

APPENDIX

RESPONSES TO RATE STRUCTURE AND  
COST OF SERVICE FILING REQUIREMENTS



## AQUA PENNSYLVANIA, INC.

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 on pages 3 through 5 of Exhibit 50-B and in PSW Statement No. 5. A comparison of the allocated cost of service by class with the present and proposed revenues is provided on Schedule A of Exhibit No. 50-B. Schedules B and C showing the rate of return produced by present and proposed rates by customer classification are provided in Exhibit No. 50-B.

## AQUA PENNSYLVANIA, INC.

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

The methods used for establishing the allocation factors in the cost of service study have not deviated from the previous study submitted in the last case.