

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:
- 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

Refer to Schedule F of Exhibit 50-B for the average day and maximum day and maximum hour system deliveries for the years 1962 through 2010. Support for the customer class demand factors is provided on the following pages, which were taken from the discussion of the customer class demand study submitted in the Company's filing at Docket No. R-00973952.

CUSTOMER CLASS DEMAND STUDY

The purpose of the customer class demand study is to develop empirical bases for the maximum day and hour extra capacity factors used in the cost allocation study. The study of customer demands is being conducted in accordance with the plans submitted by the Company to the Pennsylvania Public Utility Commission during the course of the rate proceeding at Docket No. R-911892.

Previous reports on the customer class demand study were submitted as Exhibit No. 9-A in Docket No. R-00922476, and as part of Exhibit No. 50-B in Docket Nos. R-00932868, R-00953343 and R-00973952. The initial report sets forth descriptions of the selection of customers, the initial experience with data collection in 1991, and the data obtained in 1992. Subsequent reports included the observed maximum day and hour use for each customer or group of customers being monitored during the 1992 through 1996 data collection periods.

This report sets forth the data through the 1996 monitoring period as shown in the schedule on pages 7 through 22 of this response. Data during each period were reviewed to determine the maximum day and hour use for each customer or group of customers being monitored. The maximum use was divided by the average use for the year in which the monitoring was performed to develop indications of maximum day and hour ratios for the customer's classification.

The customers and customer groups, i.e., residential neighborhoods, were classified based on their revenue or billing category or, with respect to residential

neighborhoods, the housing density and annual use. The monitoring results were organized in this manner, inasmuch as data related to the proportions of the customer classification represented by these categories were available. For example, the Company prepares an analysis of consumption in each of its load control areas which indicates the housing density, high, medium or low, the number of residential customers and their annual consumption. The neighborhoods were grouped according to housing density and annual consumption, e.g., medium density housing with customers whose average annual use is between 60,000 and 70,000 gallons. Similarly, commercial and public customers were organized by revenue categories such as apartments, colleges, etc., and industrial customers were organized based on their billing frequency, quarterly or monthly.

Average ratios were calculated for each category and also are presented in the schedule on pages 7 through 22 of this response. The average ratios of the categories for which empirical data were available, and estimated ratios for six residential categories representing 3.49 percent of residential consumption, are weighted to determine the composite ratios for the several classifications in the schedule on pages 23 and 24 of this response.

Residential. The residential maximum day and hour ratios used in the most recent cost allocation study were 2.1 and 4.5, respectively. The maximum day ratio used in studies of other water utilities which were based on empirical demands is 2.5 and the maximum hour ratios range from 4.5 to 6.0.

The observed maximum day ratios of selected Philadelphia Suburban residential neighborhoods range from 0.76 to 5.27. The observed maximum hour ratios range from 1.31 to 33.86. The average maximum day and hour ratios by residential neighborhood category range from 1.23 to 3.87 and from 2.57 to 7.31, respectively. The weighted ratios, as shown in the schedule on page 23 of this response, are 2.119 for maximum day and 4.508 for maximum hour. The weighted maximum day and hour ratios of 2.1 and 4.5 confirm their continued use in the cost allocation study.

Commercial and Public. The commercial and public maximum day and hour ratios used in the most recent study were 2.0 and 3.8, respectively. Maximum day and hour ratios used in studies of other water utilities which were based on empirical demands range from 1.6 to 2.5 and 3.3 to 5.0, respectively.

The observed maximum day ratios of selected commercial and public customers range from 0.70 to 9.88. The observed maximum hour ratios range from 1.85 to 39.95. The average maximum day and hour ratios by revenue category range from 1.28 to 6.36 and from 2.52 to 23.84, respectively. The upper end of each range represents data for a golf course. A review of the data indicates that the golf course would likely contribute to the peak day load; however, its peak hour occurs in the early morning and would not occur at the same time as the peak hour of other commercial and public customers.

Thus, the weighted maximum day ratio of 2.0, as shown in the schedule on page 24 of this response, continues to be used for the commercial and public classifications. It includes the effect of the golf course and is within the range of

ratios used in other studies. The weighted maximum hour ratio excluding the golf course data of 3.8 is maintained for use in the cost allocation study and also is within the range of ratios used in other studies.

The weighted ratios for commercial and public customers do not reflect the initial data obtained in 1996 for six small commercial customers as shown in the schedule on page 18 of this response. The ratios for the small customers are generally higher than the weighted ratios of the other commercial and public customers. However, inasmuch as limited data are available, no further increase in the ratios for these classifications is proposed.

Industrial. The industrial maximum day and hour ratios used in the most recent study were 1.7 and 2.7, respectively. Maximum day ratios used in studies of other water utilities which were based on empirical demands range from 1.5 to 1.8 for day and the maximum hour ratio is 2.7.

The observed maximum day ratios of selected industrial customers range from 1.03 to 3.10. The observed maximum hour ratios range from 1.43 to 6.25. The average maximum day ratios by billing frequency are 1.68 and 1.73 and the weighted maximum day ratio is 1.69. The average maximum hour ratios by billing frequency are 2.58 and 3.12 and the weighted maximum hour ratio is 2.73.

Based on the current estimates, estimates of other utilities and the observed ratios during 1992-1996; maximum day and hour ratios of 1.7 and 2.7, respectively, continue to be used in the allocation study.

Sales to Other Water Utilities. The Sales to Other Water Utilities maximum day and hour ratios used in the most recent cost allocation study were

10.0 and 20.0, respectively, for the customers located in the Main Division. Maximum day and hour ratios used in a study for another water utility which were based on empirical demands range from 2.0 to 10.0 for maximum day and 5.0 to 20.0 for maximum hour. The observed maximum day ratios of selected resale customers range from 1.46 to 20.23. The observed maximum hour ratios range from 4.80 to 52.52. The maximum day and hour ratios for the Bristol Division customers in the last study were estimated at 1.5 and 2.0, respectively.

As a result of acquisitions since the last study, the Company has lost and gained Sales to Other Water Utilities customers. There are now several customers with relatively uniform demand characteristics. These customers have been assigned maximum day and hour ratios of 1.50 and 2.00, respectively, and designated as Group A. There also are several customers whose demand characteristics are less favorable, but collectively, not as high as the Main Division customers in the last study. Maximum day and hour ratios of 3.00 and 5.00, respectively, have been assigned to these customers, designated as Group B.

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1962-1968

AREA (1)	LCA (2)	NUMBER OF CUST. (3)	TEST PERIOD		AVERAGE ANNUAL CONSUMPTION CONNECTIONS WITH TEST YEAR (gallons)			MAXIMUM DAY DURING TEST PERIOD			MAXIMUM HOUR DURING TEST PERIOD				
			FROM (4)	TO (5)	ANNUAL AVG DAY (6)	ANNUAL AVG HOUR (7)	PER DAY PER CUST. (10)	GALLONS (11)	TEST RATIO (12)	DATE (13)	GALLONS (14)	TEST RATIO (15)	HOUR (16)	DATE (17)	
RESIDENTIAL-LOW DENSITY ANNUAL USE OF 70-80,000															
Pocopson															
	527	105	05/01/62	08/31/62	19,523.0	813.5	185.8	32,185.0	1.65	5/23/62	3,041.0	3.74	10-11 AM	5/23/62	
		105	05/01/63	08/31/63	21,431.0	893.0	204.1	44,828.0	2.08	7/12/63	4,488.0	8.02	8-9 PM	7/12/63	
		105	08/01/64	10/31/64	20,837.0	872.4	189.4	27,184.0	1.30	8/17/64	2,588.0	2.98	10-11 AM	8/17/64	
Average for Annual Use of 70-80,000									1.67			3.91			
ANNUAL USE OF 80-90,000															
Narberth															
	247	37	05/24/63	10/08/63	8,268.0	344.4	223.4	18,427.8	2.23	6/3/63	1,822.7	4.42	11-12 AM	6/3/63	
		37	05/02/64	10/21/64	8,812.0	367.2	238.2	17,181.0	1.88	6/7/64	1,351.0	3.88	8-10 AM	6/7/64	
		37	05/24/65	10/08/65	8,838.5	368.8	230.8	20,182.0	2.38	8/04/65	1,888.0	5.24	4-5 PM	8/04/65	
		37	04/12/66	08/18/66	8,678.0	361.8	234.5	14,008.1	1.61	8/2/66	4,084.4	11.21	11-12 AM	8/31/66	
Average for Annual Use of 80-90,000									2.18			4.46			
ANNUAL USE OF 90-100,000															
Astrington															
	346	48	05/14/62	07/31/62	12,271.0	511.3	285.6	35,788.5	2.92	5/18/62	3,648.4	7.14	3-4 PM	5/23/62	
		48	05/17/63	10/08/63	12,701.0	528.2	284.8	80,780.4	4.00	7/13/63	8,333.4	10.08	11-12 AM	7/18/63	
		48	08/02/64	10/21/64	12,138.0	505.6	282.8	63,940.0	6.27	8/13/64	11,922.0	23.88	2-3 AM	8/13/64	
		48	06/24/65	10/08/65	12,389.0	518.4	287.7	82,388.0	4.24	6/17/65	4,418.0	8.87	3-4 PM	6/17/65	
		48	04/12/66	08/17/66	12,628.0	528.1	283.0	88,447.4	4.71	8/28/66	4,401.8	8.37	2-3 AM	5/28/66	
	354	40	05/01/62	08/28/62	12,788.0	532.8	318.7	40,827.4	3.20	8/23/62	2,852.7	4.88	4-8 AM	8/23/62	
		40	05/17/63	10/08/63	11,881.0	483.5	287.3	38,088.8	3.34	7/10/63	3,088.8	6.18	7-8 PM	7/8/63	
		40	05/08/64	10/21/64	11,483.0	478.9	287.3	30,308.0	2.84	8/18/64	2,787.0	5.78	8-9 PM	8/23/64	
		40	05/24/65	07/27/65	12,088.7	502.4	301.4	64,888.0	4.84	7/15/65	4,243.0	8.45	10-11 AM	7/04/65	
		40	04/12/66	08/17/66	9,518.0	388.8	237.9	21,041.0	2.21	7/23/66	5,238.0	13.21	12-1 PM	4/28/66	
Average for Annual Use of 90-100,000									3.87			7.31			
ANNUAL USE OF > 100,000															
Radnor															
	230	51	05/14/62	10/01/62	17,430.0	728.3	341.8	48,388.0	2.77	7/11/62	3,608.8	5.01	9-10 AM	6/28/62	
		51	05/17/63	10/08/63	20,720.0	863.3	408.3	88,638.7	3.38	7/11/63	8,117.1	6.83	8-10 PM	7/11/63	
		51	05/02/64	10/21/64	18,227.0	801.1	377.0	58,207.0	2.82	7/13/64	4,374.0	5.48	10-11 AM	6/23/64	
		51	05/24/65	10/08/65	18,128.7	786.9	378.0	88,588.0	3.64	8/4/65	4,488.0	5.88	7-8 AM	8/8/65	
		51	08/07/66	08/18/66	18,480.0	885.4	322.5	67,288.0	3.48	8/8/66	3,885.7	5.38	7-8 AM	8/7/66	
Average for Annual Use of > 100,000									3.18			5.50			

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1962-1968

NUMBER OF CUST.	AREA (1)	LCA (2)	TEST PERIOD FROM (3) TO (4)	AVERAGE ANNUAL CONSUMPTION CORRESPONDS WITH TEST YEAR (gallons)			MAXIMUM DAY DURING TEST PERIOD			MAXIMUM HOUR DURING TEST PERIOD			
				ANNUAL AVG DAY (5)	ANNUAL AVG HOUR (6)	PER DAY PER CUST. (10)	GALLONS (11)	TEST RATIO (12)	DATE (13)	GALLONS (14)	TEST RATIO (15)	HOUR (16)	DATE (17)
RESIDENTIAL-MEDIUM DENSITY ANNUAL USE OF 60-80,000													
48	Nearbath	263	05/01/62	6,942.0	298.3	144.6	12,499.7	1.80	7/16/62	3,758.9	13.00 *	8-9 AM	8/16/62
48			06/06/63	6,672.0	278.0	139.0	10,148.8	1.82	6/19/63	1,301.7	4.68	8-9 PM	7/6/63
48			04/28/64	5,777.0	240.7	120.4	10,894.0	1.83	6/5/64	1,175.0	4.68	7-8 PM	6/5/64
48			06/28/65	6,463.7	269.3	134.7	13,489.0	2.08	7/30/65	1,303.0	4.84	6-7 PM	7/30/65
48			04/12/66	6,826.0	284.4	142.2	8,468.0	1.24	5/6/66	976.2	3.43	8-10 PM	4/20/66
Average for Annual Use of 60-80,000													
ANNUAL USE OF 80-110,000													
64	Frazier	117	04/30/62	10,688.0	439.9	165.5	17,535.6	1.66	5/23/62	1,307.9	3.43	8-10 AM	7/11/62
54			06/17/63	10,640.0	443.3	167.0	16,091.5	1.70	6/23/63	1,976.4	3.78	7-8 PM	7/27/63
54			05/12/64	9,937.0	414.0	182.8	16,280.0	1.64	7/12/64	1,888.0	3.76	8-9 PM	7/6/64
54			06/24/65	10,378.3	432.4	181.8	16,846.0	1.62	7/14/65	1,899.0	3.60	8-9 PM	6/14/65
27	Willow Grove	344	09/30/62	4,470.0	186.3	165.9	7,629.0	1.71	6/29/62	974.2	4.99	5-8 AM	7/14/62
27			06/17/63	4,898.0	198.3	173.6	10,791.4	2.29	6/18/63	1,124.5	5.78	6-7 PM	7/6/63
27			05/08/64	4,992.0	203.0	184.9	21,318.0	4.27	6/18/64	7,042.0	33.86 *	6-10 AM	6/18/64
27			06/24/65	4,718.7	188.6	174.7	14,899.0	3.09	7/13/65	1,267.0	6.40	3-4 PM	6/18/65
27			04/12/66	4,962.0	202.6	180.1	6,764.9	1.80	6/16/66	807.5	3.89	7-8 PM	6/20/66
23	Stratford	219	06/02/62	4,266.0	178.6	166.3	7,634.4	1.78	6/14/62	803.6	4.60	8-9 PM	7/30/62
23			05/17/63	4,624.0	192.7	201.0	15,630.6	3.36	7/12/63	1,392.9	7.23	6-7 PM	6/28/63
23			05/02/64	4,600.0	187.6	186.7	12,473.0	2.77	7/10/64	3,708.0	19.78 *	10-11 AM	6/10/64
23			05/24/65	4,469.7	186.2	184.3	12,616.0	2.87	8/21/65	1,214.0	6.82	1-2 PM	6/24/65
23			04/12/66	4,611.0	192.1	200.6	6,557.0	1.86	6/27/66	876.3	4.69	7-8 PM	6/24/66
Average for Annual Use of 60-70,000													
2.36													
4.97													

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1982-1988

AREA (1)	LCA (2)	NUMBER OF CUST. (3)	TEST PERIOD		ANNUAL CONSUMPTION CORRESPONDS WITH TEST YEAR (gallons)			MAXIMUM DAY DURING TEST PERIOD			MAXIMUM HOUR DURING TEST PERIOD						
			FROM (5)	TO (6)	ANNUAL AVG DAY (8)	ANNUAL AVG HOUR (9)	PER DAY PER CUST. (10)	GALLONS (11)	TEST RATIO (12)	DATE (13)	GALLONS (14)	TEST RATIO (15)	HOUR (16)	DATE (17)			
RESIDENTIAL-MEDIUM DENSITY ANNUAL USE OF 80-99,000																	
ANNUAL USE OF 70-89,000																	
Lawrence Park	405	77	04/30/82	10/01/82	15,940.0	647.5	201.8	28,427.8	1.70	8/23/82	4,008.4	6.19	7-8 PM	5/16/82			
		77	05/17/83	10/08/83	15,483.0	646.1	201.1	28,340.0	1.83	8/11/83	2,800.9	4.12	8-9 PM	7/11/83			
		77	05/08/84	10/18/84	18,088.0	670.3	208.9	28,777.0	1.85	5/7/84	2,514.0	3.75	8-9 PM	7/8/84			
		77	05/24/85	10/08/85	16,703.0	664.3	203.9	24,803.0	1.86	8/18/85	2,316.0	3.64	10-11 AM	8/18/85			
		77	04/12/86	08/17/86	14,880.0	620.3	193.4	23,140.5	1.55	8/18/86	2,170.7	3.60	11-12 AM	5/19/86			
St. Albans																	
	254	22	03/23/82	08/31/82	4,208.0	176.4	181.3	11,321.5	2.88	4/7/82	802.6	5.15	7-8 AM	4/7/82			
		22	05/17/83	10/08/83	4,128.0	171.9	187.5	6,285.9	1.82	7/10/83	884.9	5.15	7-8 PM	7/12/83			
		22	05/02/84	10/21/84	4,387.0	182.5	188.4	6,489.0	1.47	7/10/84	682.0	3.79	4-5 PM	7/10/84			
		22	05/24/85	10/08/85	4,240.7	176.7	182.8	8,737.0	2.08	8/28/85	801.0	4.63	5-8 PM	7/14/85			
		22	05/16/86	08/23/86	3,601.0	158.4	172.8	5,478.3	1.44	5/23/86	707.2	4.47	7-8 PM	6/8/86			
Average for Annual Use of 70-89,000									1.81			4.41					
ANNUAL USE OF 60-69,000																	
Wyncoke																	
	336	35	05/24/83	10/08/83	7,485.0	311.9	213.9	14,088.0	1.88	8/4/83	1,658.6	4.67	3-4 PM	7/18/83			
		35	05/03/84	10/21/84	8,227.0	342.8	238.1	23,475.0	2.88	8/8/84	1,854.0	4.83	6-7 PM	8/8/84			
		35	05/24/85	10/08/85	7,858.0	327.3	224.5	28,481.0	3.37	7/28/85	2,154.0	6.58	7-8 PM	7/28/85			
		35	04/12/86	08/17/86	8,843.0	401.8	275.5	18,084.8	1.87	8/18/86	1,814.0	4.51	12-1 PM	7/14/86			
Average for Annual Use of 60-69,000									2.70			5.36					

* Not Included In Average.

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1962-1968

AREA (1)	LCA (2)	NUMBER OF CUST. (3)	TEST PERIOD		AVERAGE ANNUAL CONSUMPTION CORRESPONDING WITH TEST YEAR			MAXIMUM DAY DURING TEST PERIOD			MAXIMUM HOUR DURING TEST PERIOD				
			FROM (4)	TO (5)	ANNUAL AVG DAY (6)	ANNUAL AVG HOUR (7)	PER DAY PER CENT. (10)	GALLONS (11)	TEST RATIO (12)	DATE (13)	GALLONS (14)	TEST RATIO (15)	HOUR (16)	DATE (17)	
RESIDENTIAL-HIGH DENSITY ANNUAL USE OF 60-70,000															
Dorcy															
	424	36	05/07/62	08/31/62	5,846.0	235.2	150.8	7,804.8	1.36	8/23/62	731.8	3.11	7-8 AM	8/14/62	
		36	05/17/63	10/09/63	5,161.0	218.0	143.4	8,078.7	1.57	7/6/63	738.7	3.44	11-12 AM	7/10/63	
		36	05/02/64	10/21/64	5,467.0	228.0	152.4	11,847.0	2.12	8/28/64	901.0	3.94	4-6 PM	8/14/64	
		36	05/24/65	10/09/65	5,431.0	228.3	150.9	12,840.0	2.36	7/15/65	785.0	3.47	10-11 AM	7/15/65	
		36	04/12/66	07/23/66	5,593.0	233.0	155.4	4,243.4	0.78	8/14/66	304.7	1.31	1-2 PM	8/14/66	
Cifton Heights															
	416	84	05/07/62	10/01/62	12,577.0	524.0	148.7	16,624.4	1.52	8/6/62	1,404.7	2.88	9-10 AM	8/1/62	
		84	05/17/63	10/09/63	12,218.0	509.0	145.4	15,388.1	1.38	7/6/63	1,461.5	2.87	10-11 AM	7/11/63	
		84	05/02/64	10/21/64	12,717.0	528.9	151.4	17,259.0	1.36	7/10/64	1,538.0	2.90	10-11 AM	8/4/64	
		84	05/24/65	10/09/65	12,503.0	521.0	148.8	28,116.0	2.25	7/24/65	4,477.0	8.99	1-2 PM	8/2/65	
		84	04/12/66	07/23/66	12,989.0	540.4	154.4	19,941.3	1.24	4/20/66	1,488.7	2.75	11-12 PM	4/21/66	
Average for Annual Use of 50-60,000															
									1.59			3.59			
ANNUAL USE OF 60-70,000															
Upper Dorcy															
	412	74	05/07/62	08/31/62	12,551.0	539.8	174.7	13,388.0	1.04	7/16/62	1,254.4	2.33	9-10 AM	8/27/62	
		74	05/17/63	10/09/63	11,704.0	487.7	168.2	16,172.1	1.38	7/17/63	1,472.3	3.02	9-10 AM	7/14/63	
		74	06/22/64	10/21/64	12,863.0	528.5	171.4	16,316.0	1.28	8/11/64	1,295.0	2.38	10-11 AM	10/6/64	
		74	05/24/65	10/09/65	12,439.3	518.9	166.1	15,337.0	1.23	8/20/65	1,318.0	2.54	12-1 PM	8/12/65	
		74	04/12/66	07/17/66	11,864.0	494.3	160.3	15,191.0	1.28	5/6/66	1,298.8	2.63	11-12 AM	8/9/66	
Average for Annual Use of 60-70,000															
									1.23			2.67			

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1982-1988

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption (gallons) Corresponds with Test Period		Minimum Day During Test Period		Maximum Hour During Test Period		Date (13)	
	From (2)	To (3)		Average Day (5)	Average Hour (6)	Gallons (7)	Ratio (8)	Gallons (10)	Ratio (11)		
											Hour (12)
COMMERCIAL AND PUBLIC											
APARTMENTS											
Valley Stream Village	07/13/82	08/03/82	21	28,045.1	1,085.2	29,808.2	1.14	2,985.0	2.72	6-7 AM	9/30/82
	08/14/82	10/05/82	21								
	07/08/83	07/19/83	13	24,809.8	1,037.9	31,017.3	1.25	2,910.0	2.80	7-8 AM	10/1/83
	08/17/83	08/30/83	13								
	09/28/83	10/11/83	13								
	09/09/84	09/21/84	15	24,978.0	1,040.7	30,878.2	1.23	2,754.3	2.65	12-1 PM	10/30/84
	07/05/84	07/18/84	13								
	08/19/84	08/29/84	13								
	10/14/84	11/04/84	21								
Greenhill Condo Assoc.											
	07/20/83	08/03/83	14	119,980.8	4,888.2	164,880.8	1.29	11,400.0	2.28	10-11 AM	9/5/83
	08/31/83	09/13/83	13								
	10/12/83	10/25/83	13								
	08/24/84	09/06/84	13	119,838.0	4,987.3	163,143.9	1.36	13,144.0	2.63	9-10 AM	5/25/84
	08/20/84	07/05/84	15								
	07/18/84	08/01/84	14								
	08/28/84	09/12/84	14								
Cambridge Hill Apart.											
	05/08/82	07/30/82	85	28,394.8	1,088.8	46,887.5	1.74	3,878.7	3.82	8-9 AM	5/25/82
	08/31/82	10/01/82	31								
	06/17/83	10/08/83	144	22,231.5	828.3	37,135.8	1.87	3,311.7	3.58	8-9 AM	6/28/83
	08/20/84	10/21/84	123	30,240.0	1,280.0	38,822.0	1.21	3,237.0	2.57	7-9 AM	9/21/84
				28,064.0	1,169.3						
	04/15/86	08/18/86	158	28,734.0	1,113.9	46,821.2	1.70	3,501.0	3.14	7-8 AM	5/17/86
Total Apartments				448,511.8	18,729.7	574,273.1	1.28	47,281.3	2.52		

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1982-1986

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption (gallons) Corresponds with Test Period		Maximum Day During Test Period			Maximum Hour During Test Period			
	From (2)	To (3)		Average Day (5)	Average Hour (6)	Gallons (7)	Ratio (8)	Date (9)	Gallons (10)	Ratio (11)	Hour (12)	Date (13)
HOSPITALS Fitzgerald Mercy Hospital	07/07/83	07/20/83	13	37,401.9	1,558.4	51,650.1	1.36	8/24/83	(10)	(11)	(12)	(13)
	08/17/83	08/30/83	13						5,254.8	3.37	7-8 AM	7/11/83
	08/28/83	10/12/83	14									
	08/22/84	07/05/84	13	40,465.0	1,888.0	68,581.2	1.85	8/3/84	5,827.7	3.34	10-11 AM	8/3/84
	08/01/84	08/28/84	28									
	08/28/85	07/24/85	28	38,280.7	1,883.8	58,848.0	1.63	8/28/85	4,747.0	2.86	7-8 AM	7/20/85
Holy Redeemer Hospital	08/07/83	07/07/83	30									
	08/03/83	08/18/83	13	94,141.8	3,822.8	129,821.7	1.36	8/4/83	9,187.7	2.94	2-3 PM	8/3/83
	07/05/84	07/18/84	13	100,835.0	4,183.1	148,532.5	1.48	7/13/84	10,288.6	2.48	2-3 PM	7/13/84
	08/18/84	08/28/84	13									
	08/12/84	08/27/84	16									
	08/12/85	08/28/85	14	102,881.7	4,278.8	115,941.0	1.13	8/8/85	9,377.0	2.19	12-1 PM	8/8/85
07/24/85	08/02/85	9										
08/05/85	08/18/85	13										
Total Hospitals				413,585.9	17,232.7	589,175.5	1.38		44,483.8	2.58		

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1982-1986

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption (gallons) Corresponds with Test Period		Minimum Day During Test Period			Minimum Hour During Test Period			
	From (2)	To (3)		Average Day (5)	Average Hour (6)	Gallons (7)	Ratio (8)	Date (9)	Gallons (10)	Ratio (11)	Hour (12)	Date (13)
Stewart's Stewartbridge & Clothier	07/07/83	07/20/83	13	10,538.2	438.0	22,246.1	2.11	7/14/83	2,255.9	5.14	3-4 PM	7/10/83
	08/17/83	08/30/83	13									
	04/22/84	05/08/84	17	10,307.0	428.5	14,641.2	1.41	4/24/84	1,655.5	3.85	2-3 PM	8/30/84
	08/27/84	10/14/84	17									
	05/15/85	08/31/85	16	10,423.1	434.3	25,828.0	2.48	8/15/85	4,404.0	10.14	11-12 AM	10/18/85
	08/12/85	08/28/85	14									
	08/22/85	09/05/85	14									
	10/18/85	10/31/85	15									
	08/21/85	08/28/85	60	6,538.0	434.3	18,811.5	1.97	8/28/85	1,641.7	3.78	3-4 PM	7/8/88
Shouffer Restaurant & Inn	08/04/83	08/16/83	12									
	08/31/83	09/13/83	13	54,189.9	2,287.9	90,800.1	1.88	8/7/83	6,588.7	3.80	8-9 AM	9/2/83
	10/11/83	10/25/83	14									
	07/05/84	07/18/84	13	50,760.0	2,115.0	118,219.8	2.29	8/3/84	10,810.5	5.11	12-1 PM	8/3/84
	08/01/84	08/18/84	18									
	08/29/84	08/12/84	14									
	09/27/84	10/14/84	17									
	07/24/85	08/06/85	15	65,985.9	2,391.9	94,148.0	1.88	9/3/85	7,178.0	3.88	12-1 PM	9/4/85
	08/22/85	08/05/85	14									
	08/17/85	10/02/85	15									
Arco Chemical Company	08/22/82	07/13/82	21	112,834.4	4,705.8	202,818.4	1.80	8/25/82	13,519.8	2.87	8-9 PM	8/25/82
	08/24/82	08/14/82	21									
	08/07/83	07/08/83	28	118,608.2	4,942.0	208,727.8	1.78	8/20/83	13,823.4	2.78	6-7 AM	8/20/83
	08/24/84	08/08/84	13	122,677.0	5,111.5	218,105.0	1.78	7/28/84	15,844.4	3.88	3-4 PM	7/28/84
	07/18/84	08/01/84	14									
	08/28/84	08/12/84	14									

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1982-1988

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption (gallons) Corresponds with Test Period		Maximum Day During Test Period			Maximum Hour During Test Period			
	From (2)	To (3)		Average Day (5)	Average Hour (6)	Gallons (7)	Ratio (8)	Date (9)	Gallons (10)	Ratio (11)	Hour (12)	Date (13)
BURNER, Carol Rydal Presbyterian Home	06/03/83	06/30/83	27	71,728.6	2,988.7	101,008.9	1.41	8/8/83	8,863.0	2.30	9-10-AM	8/13/83
	06/28/83	10/12/83	14	67,388.0	2,807.0	88,711.9	1.32	7/21/84	8,672.2	2.36	2-3 AM	7/25/84
	06/21/84	07/08/84	14	75,851.8	3,180.5	142,806.0	1.88	6/8/85	18,882.0	5.91	8-9 AM	6/8/85
	07/18/84	08/01/84	14	120,271.2	5,011.3	248,325.9	2.08	6/4/83	23,585.2	4.71	4-5 PM	6/3/83
	06/30/85	08/12/85	15	148,280.0	6,177.1	289,188.6	1.82	6/8/84	24,585.1	3.88	12-1 PM	6/13/84
	07/18/84	08/01/84	14	167,889.2	6,889.6	378,487.0	2.25	8/10/85	22,184.0	3.17	8-9 AM	8/10/85
	06/28/86	07/11/86	15	29,214.5	1,217.3	52,431.0	1.79	8/20/83	5,889.4	4.84	1-2 PM	9/30/83
	06/07/85	10/31/85	15	32,488.0	1,354.1	53,885.1	1.88	8/12/84	5,122.3	3.78	1-2 PM	7/12/84
	06/12/86	08/28/86	14	28,885.0	1,110.6	42,888.0	1.80	8/8/85	5,385.0	4.85	12-1 PM	7/25/85
	07/24/85	08/08/85	15									
06/22/85	09/05/85	14										
Chief Francisco of PA	06/24/83	06/08/83	15									
	06/21/83	07/08/83	15									
	06/03/83	06/18/83	13									
	06/08/84	06/15/84	9									
	07/18/84	08/01/84	14									
	06/28/84	08/12/84	14									
	06/30/85	08/12/85	13									
	06/28/86	07/11/86	15									
	06/07/85	08/22/85	15									
	10/18/86	10/31/86	15									
CIBA Geigy	07/08/83	07/18/83	13									
	06/17/83	06/30/83	13									
	06/28/83	10/11/83	13									
	07/05/84	07/18/84	13									
	06/01/84	06/18/84	15									
	06/12/84	08/27/84	15									
	06/12/85	08/28/85	14									
	07/24/85	08/08/85	15									
	06/22/85	09/05/85	14									

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1962-1966

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption Corresponds with Test Period (gallons)		Maximum Day During Test Period			Maximum Hour During Test Period			
	From (2)	To (3)		Average Day (5)	Average Hour (6)	Gallons (7)	Ratio (8)	Date (9)	Gallons (10)	Ratio (11)	Hour (12)	Date (13)
BLISSNER, Carol Strochmann Bakery	07/07/63	07/20/63	13	38,512.1	1,604.7	82,367.9	1.82	7/8/63	5,011.2	3.12	4-5 AM	7/11/63
	08/17/63	08/30/63	13									
	04/22/64	05/09/64	17	34,131.0	1,422.1	51,846.2	1.51	6/16/64	2,828.1	1.85	5-6 AM	6/16/64
	08/09/64	08/20/64	14									
	08/29/64	09/12/64	14									
	10/14/64	11/04/64	21									
	05/15/65	05/30/65	15	30,023.0	1,261.9	40,089.0	1.34	10/28/65	3,058.0	2.44	7-8 AM	5/20/65
	05/30/65	06/13/65	14									
	08/21/65	09/05/65	15									
	10/16/65	10/31/65	15									
Total Business				1,367,432.9	58,304.9	2,542,947.1	1.82		208,985.1	3.58		
GOLF COURSE Springfield Club Sprinkler	07/20/63	08/03/63	14	34,282.2	1,428.4	182,339.5	5.81	7/28/63	29,280.2	20.50	5-8 AM	8/2/63
	08/13/63	08/13/63	13									
	10/12/63	10/28/63	14									
	08/08/64	08/20/64	14	27,996.0	1,166.5	189,728.8	6.82	8/10/64	27,850.5	23.88	4-5 PM	10/23/64
	07/20/64	08/01/64	12									
	08/16/64	08/28/64	13									
	10/14/64	11/04/64	21									
	08/28/65	07/10/65	14	31,180.7	1,289.6	208,733.0	6.89	8/7/65	35,708.0	27.48	6-7 AM	7/4/65
	08/02/65	08/22/65	20									
	09/06/65	09/19/65	13									
Total Golf Course				93,468.9	3,894.5	594,801.8	6.38		92,838.7	23.84		

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1992-1995

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption (gallons) Corresponds with Test Period			Minimum Day During Test Period			Maximum Hour During Test Period		
	From	To		Average Day	Average Hour	Gallons	Ratio	Date	Gallons	Ratio	Hour	Date
	(2)	(3)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
HOTELS												
Randison Hotel	07/07/93	07/20/93	13	46,082.3	1,820.5	79,844.1	1.70	8/29/93	6,371.2	3.32	9-10 AM	8/29/93
	08/17/93	08/30/93	13									
	06/20/94	07/05/94	15	44,422.0	1,850.9	71,184.9	1.80	8/4/94	5,748.5	3.11	7-8 AM	9/15/94
	08/01/94	08/18/94	15									
	08/12/94	08/27/94	15									
	08/30/95	09/12/95	13	34,874.2	1,483.1	79,733.0	2.29	8/27/95	7,586.0	5.22	7-8 AM	8/29/95
	08/22/95	09/06/95	15									
	09/17/95	10/02/95	15									
Total Hotels				125,388.50	5,224.92	229,471.97	1.83		19,707.72	3.77		
COLLEGES												
Swarthmore College	06/24/92	08/14/92	21	79,906.7	3,328.5	134,987.9	1.69	8/25/92	28,744.3	8.03	8-9 PM	8/25/92
	04/28/93	05/11/93	15	65,054.0	3,543.9	89,417.8	0.70	5/3/93	8,993.5	2.51	5-8 PM	4/29/93
	04/22/94	05/09/94	17	79,900.0	3,328.0	118,423.0	1.48	8/14/94	12,370.7	3.72	7-8 PM	4/28/94
	09/12/94	10/10/94	28									
	05/15/95	05/31/95	16	60,741.4	2,630.9	89,491.0	1.47	10/9/95	10,008.0	3.95	7-8 AM	5/29/95
	10/03/95	10/31/95	28									
	08/23/96	09/19/96	24	57,836.0	2,409.8	418,829.5	7.20	8/31/96	65,792.9	27.30	10-11 PM	8/29/96
	04/28/93	05/12/93	15									
	08/14/93	09/28/93	14	30,440.5	1,288.4	30,908.6	1.02	5/4/93	3,517.3	2.77	9-10 AM	5/10/93
	04/22/94	05/09/94	17	35,188.0	1,488.2	57,802.0	1.64	11/29/94	5,008.5	3.42	9-10 AM	4/28/94
	09/27/94	11/04/94	38									
	05/16/95	05/30/95	15	30,205.8	1,259.9	33,765.0	1.12	10/25/95	4,088.0	3.25	9-10 AM	10/25/95
	10/16/95	10/31/95	15									
Total Colleges				459,174.20	19,132.29	941,172.67	2.05		136,430.90	7.13		

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1962-1966

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption (gallons) Corresponds with Test Period		Maximum Day During Test Period			Maximum Hour During Test Period			
	From (2)	To (3)		Average Day (5)	Average Hour (6)	Gallons (7)	Ratio (8)	Date (9)	Gallons (10)	Ratio (11)	Hour (12)	Date (13)
PRIVATE SCHOOLS												
V.F. Military Academy												
	06/24/62	06/14/62	21	16,947.5	706.1	62,841.2	3.69	9/4/62	9,268.5	13.13	7-8 AM	9/4/62
	05/10/63	05/25/63	16	18,817.5	784.1	32,614.4	1.73	9/10/63	3,738.5	4.77	10-11 PM	5/10/63
	06/14/63	06/28/63	14									
	04/22/64	05/12/64	20	21,064.0	914.8	33,058.1	1.51	4/27/64	3,543.7	3.87	5-6 AM	5/5/64
	05/15/65	05/30/65	16	20,827.8	869.5	47,280.0	2.29	10/5/65	4,943.0	5.75	10-11 PM	10/5/65
	10/03/65	10/31/65	28									
	06/17/66	07/20/66	33	30,463.0	1,270.1	82,040.9	2.69	9/1/66	7,846.8	6.18	7-8 AM	9/2/66
	06/20/66	06/19/66	30									
				108,829.8	4,534.6	257,434.7	2.37		29,341.5	6.47		
Total Private Schools												
PUBLIC SCHOOLS												
Marple Nwtn. High Sch.												
	06/14/62	10/05/62	21	10,413.9	433.9	23,420.7	2.25	9/30/62	4,291.3	9.89	6-8 AM	9/30/62
	05/10/63	05/25/63	16	6,265.5	261.9	16,235.6	2.58	5/11/63	6,320.7	24.13	12-1 PM	5/11/63
	06/14/63	06/28/63	14									
	04/22/64	05/24/64	32	10,202.0	428.1	19,265.0	1.89	5/11/64	4,284.3	10.03	9-10 AM	9/20/64
	06/12/64	10/14/64	32									
	05/15/65	05/31/65	16	7,037.9	289.2	23,978.0	3.41	5/17/65	8,118.0	27.88	7-8 AM	5/30/65
	06/14/65	10/30/65	42									
				33,939.3	1,414.1	82,668.3	2.44		22,864.3	16.26		
Total Public Schools												

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1992-1996

Test Site	Test Period		Test Days (4)	Average Annual Consumption (gallons)		Minimum Day During Test Period			Minimum Hour During Test Period			
	From (2)	To (3)		Average Day (5)	Average Hour (6)	Gallons (7)	Ratio (8)	Date (9)	Gallons (10)	Ratio (11)	Hour (12)	Date (13)
OTHER PUBLIC US Postal Service	07/20/93	08/03/93	14	12,367.8	514.9	23,799.0	1.93	7/28/93	1,761.4	3.42	3-4 PM	10/20/93
	08/14/93	08/28/93	14									
	10/11/93	10/25/93	14									
	06/24/94	08/08/94	13	14,218.0	992.4	20,399.9	2.00	5/29/94	3,240.1	5.47	2-3 PM	7/6/94
	07/05/94	07/18/94	13									
	08/01/94	08/18/94	15									
	10/14/94	11/04/94	21	11,094.7	492.3	21,735.00	1.96	8/31/95	1,643.00	3.34	7-9 AM	8/28/95
	06/18/95	08/12/95	24									
	08/29/95	07/11/95	15									
	08/21/95	09/05/95	15									
Total Other Public			37,670.50	1,669.60	73,932.96	1.98		6,544.53	4.17			
SMALL COMMERCIAL												
Great Valley Freeb. Church	07/22/96	08/18/96	58	232.00	10.5	2,498.95	9.88	8/14/96	419.50	39.95	1-2 PM	8/30/96
Story Wrm Fuel Co.	07/23/96	08/18/96	55	124.00	5.2	261.50	2.03	9/4/96	139.96	26.90	4-5 PM	9/4/96
Strefford Pharmacy	07/22/96	08/18/96	56	64.00	2.7	147.28	2.30	9/24/96	32.56	12.21	9-10 AM	9/3/96
Dayton Sure Grip	07/23/96	08/18/96	55	407.00	17.0	529.55	1.30	9/11/96	86.94	5.07	11-12 AM	8/21/96
Dollar Land	07/22/96	08/18/96	56	396.00	18.1	297.30	0.77	7/29/96	50.80	3.16	1-2 PM	7/25/96
McCausland Jeep Eagle	07/22/96	08/18/96	56	357.00	14.9	2,678.20	7.50	9/21/96	299.30	20.12	3-4 PM	8/28/96
			1,560.00	68.25	6,300.78	4.02		1,027.08	15.90			

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1992-1999

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption Corresponds with Test Period (gallons)			Maximum Day During Test Period			Maximum Hour During Test Period		
	From	To		Average Day	Average Hour	Gallons	Ratio	Date	Gallons	Ratio	Hour	Date
	(2)	(3)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
INDUSTRIAL QUARTERLY INDUSTRIAL Johnson Matthey, Inc.	07/07/93	07/20/93	13	35,708.8	1,467.8	61,767.6	1.73	7/12/93	3,631.8	2.44	1-2 PM	8/20/93
	08/17/93	08/30/93	13									
	09/28/93	10/11/93	13									
	07/18/94	08/01/94	14	47,686.0	1,967.4	77,228.3	1.82	7/21/94	4,225.5	2.13	1-2 PM	7/21/94
	08/28/94	09/12/94	14									
	10/14/94	11/04/94	21									
	09/12/95	09/28/95	14	38,349.3	1,597.9	67,770.0	1.77	9/15/95	3,999.0	2.48	8-9 PM	6/18/95
	07/07/95	07/22/95	15									
	09/19/95	10/03/95	14									
	09/03/92	09/22/92	19	63,341.0	2,639.2	153,614.8	2.43	9/19/92	13,017.5	4.93	12-1 PM	8/19/92
	09/10/92	09/24/92	14									
	07/20/93	08/03/93	14	77,567.4	3,282.0	102,563.9	1.32	8/0/93	4,633.3	1.43	8-9 AM	9/8/93
	08/31/93	09/13/93	13									
	07/06/94	07/18/94	13	54,000.0	2,250.0	78,572.3	1.42	7/9/94	3,946.2	1.75	1-2 PM	7/9/94
10/14/94	11/12/94	29										
08/31/95	09/12/95	12	29,842.5	1,243.4	42,466.0	1.42	8/29/95	3,638.0	2.93	4-5 PM	6/5/95	
07/25/95	08/07/95	13										
09/19/95	10/03/95	14										
08/21/96	09/20/96	60	37,040.0	1,543.7	69,968.0	1.89	8/28/96	4,349.1	2.82	10-11 AM	6/25/96	

Martin Marietta

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1982-1986

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption (gallons) Corresponds with Test Period			Maximum Day During Test Period			Minimum Hour During Test Period		
	From (2)	To (3)		Average Day (5)	Average Hour (6)	Gallons (7)	Ratio (8)	Date (9)	Gallons (10)	Ratio (11)	Hour (12)	Date (13)
QUAKERTOWN INDUSTRIAL												
7-UP Bottling Co.												
	06/03/82	06/22/82	19	35,131.7	1,463.8	74,324.9	2.12	6/11/82	5,353.4	3.66	9-10 PM	6/11/82
	06/03/82	06/24/82	21									
	07/20/83	08/03/83	14	42,386.5	1,766.1	64,942.9	1.53	7/28/83	5,754.0	3.28	3-4 PM	7/28/83
	08/31/83	09/13/83	13									
	10/12/83	10/28/83	14									
	05/12/84	05/24/84	12	48,968.0	2,061.9	92,665.2	1.86	5/29/84	7,940.4	3.81	8-9 AM	5/29/84
	06/21/84	07/05/84	14									
	08/01/84	08/16/84	15									
	08/12/84	08/27/84	16									
	05/31/85	08/13/85	13	48,501.0	1,940.0	62,705.0	1.76	8/23/85	12,121.0	6.25	8-9 AM	8/12/85
	08/21/85	09/05/85	15									
				567,596.2	23,233.3	996,638.6	1.73		72,579.1	3.12		
Total Quarterly Industrial												
MONROE INDUSTRIAL												
Philadelphia Electric												
	07/13/82	08/03/82	21	327,595.6	13,848.8	938,624.5	2.97	7/18/82	51,953.2	3.81	1-2 PM	7/18/82
	07/20/83	08/03/83	14	540,274.0	22,511.4	667,588.1	1.91	7/27/83	62,709.8	2.34	12-1 AM	7/24/83
	08/31/83	09/28/83	28									
	10/12/83	10/28/83	14									
	05/03/84	05/24/84	15	579,610.0	24,150.4	818,383.2	1.41	5/12/84	49,438.0	2.05	9-10 AM	5/16/84
	09/27/84	11/04/84	38									
	07/24/85	08/02/85	9	277,197.8	11,549.9	361,711.0	1.30	8/6/85	20,922.0	1.81	6-7 AM	8/7/85
	08/22/85	09/08/85	16									
	08/18/85	10/03/85	14									
	08/21/86	09/16/86	27	263,279.0	11,803.3	676,098.0	3.10	8/21/86	47,015.1	3.96	4-5 AM	8/27/86

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1982-1988

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption (gallons) Corresponds with Test Period		Maximum Day During Test Period			Maximum Hour During Test Period			
	From (2)	To (3)		Average Day (5)	Average Hour (6)	Gallons (7)	Ratio (8)	Date (9)	Gallons (10)	Ratio (11)	Hour (12)	Date (13)
MONTHLY INDUSTRIAL - cont.												
Boeing Helicopter-Ridley	05/24/83	06/08/83	16	370,820.5	15,436.4	475,887.2	1.28	04/15/83	30,247.8	1.98	6-7 AM	04/18/83
	09/14/83	09/28/83	15									
	09/08/84	09/20/84	14	346,833.0	14,409.7	429,387.2	1.24	04/15/84	25,020.6	1.74	12-1 PM	04/15/84
	09/12/84	09/27/84	14									
	05/15/85	05/30/85	16	305,071.8	12,711.3	607,571.0	1.99	5/25/85	48,207.0	3.64	1-2 PM	5/25/85
	06/23/85	07/10/85	14									
Boeing Helicopter-Essexington												
	05/24/83	06/08/83	16	167,880.4	6,987.9	173,363.8	1.03	04/15/83	15,337.0	2.19	9-10 AM	5/25/83
	06/21/83	07/07/83	16									
	06/08/84	06/20/84	14	186,115.0	7,754.8	206,178.1	1.11	04/15/84	17,861.8	2.28	11-12 AM	8/28/84
	07/05/84	07/20/84	16									
	08/16/84	08/29/84	13									
	05/15/85	05/30/85	16	160,581.8	6,680.9	188,919.0	1.24	6/28/85	22,861.0	3.42	11-12 PM	5/22/85
	06/28/85	07/10/85	14									
McNeil CPC												
	06/21/83	07/07/83	16	105,772.9	4,487.2	176,254.5	1.67	04/13/83	13,045.5	2.86	10-11 AM	04/19/83
	06/03/83	06/18/83	13									
	09/14/83	09/28/83	14									
	07/05/84	07/19/84	13	104,978.0	4,374.1	180,217.5	1.72	7/8/84	11,920.2	2.75	11-12 AM	7/8/84
	08/16/84	08/29/84	13									
	09/27/84	10/14/84	17									
Total Monthly Industrial				3,754,778.6	168,449.2	6,313,282.1	1.68		404,336.7	2.58		

PHILADELPHIA SUBURBAN WATER COMPANY

SUMMARY OF OBSERVED MAXIMUM DAY AND HOUR DEMAND RATIOS DURING THE PERIOD 1962-1966

Test Site (1)	Test Period		Test Days (4)	Average Annual Consumption Corresponds with Test Period (gallons)			Minimum Day During Test Period			Minimum Hour During Test Period		
	From (2)	To (3)		Average Day (5)	Average Hour (6)	Gallons (7)	Ratio (8)	Date (9)	Gallons (10)	Ratio (11)	Hour (12)	Date (13)
SALES TO OTHER WATER UTILITIES												
PA Water Company	06/06/64	06/21/64	15	4,094.0	170.6	70,691.5	17.24	6/6/64	6,524.6	38.25	7-8 AM	6/6/64
	06/16/64	06/29/64	13									
	10/18/64	11/04/64	17									
	05/18/65	05/31/65	12	690.0	28.6	5,470.0	7.93	5/23/65	1,510.0	52.52	10-11 AM	5/23/65
	06/29/65	07/10/65	14									
	06/07/66	06/21/66	14									
	06/18/66	10/03/66	14									
	06/21/66	07/22/66	31	827.0	34.5	1,209.6	1.46	6/28/66	165.4	4.80	10-11 AM	5/23/65
Warminster Township Auth.												
	07/26/63	08/03/63	14									
	08/31/63	09/13/63	13	95,416.1	3,976.6	376,116.9	3.93	7/28/63	74,606.0	18.77	10-11 AM	7/28/63
	10/12/63	10/28/63	14									
	09/06/64	09/21/64	15	36,926.0	1,621.9	787,331.5	20.23	6/18/64	70,666.6	43.69	8-9 PM	6/18/64
	06/29/64	09/12/64	14									
	10/14/64	11/04/64	21									
	08/12/65	07/11/65	28	67,170.1	2,796.6	715,543.0	10.65	8/12/65	73,146.0	26.13	9-10 AM	6/20/65
	06/07/66	06/21/66	14									
	06/05/66	06/19/66	14									
Total Sales to Other Water Utilities				207,121.20	8,630.10	1,956,262.57	9.44		226,820.90	26.26		

PHILADELPHIA SUBURBAN WATER COMPANY

WEIGHTED MAXIMUM DAY AND HOUR RATIOS BY CUSTOMER CLASSIFICATION

Annual Average Consumption Per Customer (1)	1994 Consumption		Maximum Day Ratio		Maximum Hour Ratio	
	Consumption 1000 Gals (2)	Percent of Total (3)	Average Ratio (4)	Weighted Ratio (5)	Average Ratio (6)	Weighted Ratio (7)
Residential						
High Density						
80-90,000	188,775	1.03%	1.89	0.016	3.59	0.037
90-100,000	2,549,923	15.61%	1.23	0.182	2.57	0.401
90-100,000	48,030	0.28%	2.00	0.008	4.00	0.012
Subtotal	2,786,728	16.93%		0.214		0.450
Medium Density						
60-80,000	114,094	0.70%	1.81	0.013	4.80	0.034
60-70,000	5,736,901	35.10%	2.35	0.825	4.87	1.744
70-80,000	3,868,377	22.39%	1.81	0.405	4.41	0.967
80-90,000	953,157	5.83%	2.70	0.157	5.36	0.312
90-100,000	139,241	0.85%	2.50	0.021	5.00	0.043
>100,000	114,757	0.70%	2.50	0.018	5.00	0.035
Subtotal	10,716,228	65.57%		1.439		3.155
Low Density						
< 60,000	4,918	0.03%	1.50	0.000	3.50	0.001
50-60,000	108,053	0.65%	2.00	0.013	4.00	0.026
60-70,000	157,800	0.97%	2.00	0.019	4.00	0.039
70-80,000	485,275	2.85%	1.67	0.048	3.91	0.111
80-90,000	880,489	5.27%	2.18	0.115	4.46	0.235
90-100,000	589,022	3.67%	3.87	0.142	7.31	0.268
>100,000	662,817	4.06%	3.18	0.129	5.50	0.223
Subtotal	2,856,373	17.50%		0.496		0.903
Total Residential	16,339,329	100.00%		2.119		4.508

PHILADELPHIA SUBURBAN WATER COMPANY

WEIGHTED MAXIMUM DAY AND HOUR RATIOS BY CUSTOMER CLASSIFICATION

Revenue Class	Annual Consumption		Maximum Day Ratio		Maximum Hour Ratio	
	Consumption (1,000 gals)	Percent of Total	Average Ratio	Weighted Ratio	Average Ratio	Weighted Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Commercial and Public</i>						
Apartments	335,900	25.17%	1.28	0.322	2.52	0.635
Hospitals	282,454	21.91%	1.38	0.302	2.58	0.586
Business	317,548	23.80%	1.82	0.433	3.58	0.853
Golf Course	94,242	7.06%	6.36	0.449	23.84	1.683
Hotels	37,627	2.82%	1.83	0.052	3.77	0.106
Colleges	220,739	16.54%	2.05	0.339	7.13	1.179
Private Schools	35,984	2.70%	2.37	0.064	6.47	0.175
Total Commercial and Public	<u>1,334,502</u>	<u>1.0000</u>		<u>1.981</u>		<u>5.197</u>
Total Excluding Golf Course				1.627		3.781
<i>Industrial</i>						
Quarterly Industrial	5,573,673	28.73%	1.73	0.46	3.12	0.84
Monthly Industrial	<u>15,278,688</u>	73.27%	1.66	<u>1.23</u>	2.58	<u>1.89</u>
Total Industrial	<u>20,852,361</u>			<u>1.69</u>		<u>2.73</u>

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

RESPONSE

For cost allocation purposes, mains that are 12-inch and larger are considered to be transmission mains and are allocated using Factor 3, which is based on average and maximum day extra capacity demands plus the daily requirement for fire demand. Mains sized under 12-inch are considered distribution mains and are allocated using Factor 4, which is based on average and maximum hour extra capacity demands plus the hourly requirement for fire demands.

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

RESPONSE

Storage is utilized to meet base, maximum day and maximum hour demands.

The storage tanks play a major role in supplementing the maximum hourly demands. These facilities are located strategically throughout the Company's service territory to provide peak hour and emergency fire flow demands to all areas. Many of the facilities are also supplied with booster pumping stations, which automatically sense low pressures in the system and operate to pump water from the tanks to meet these peak demands.

For maximum day demands, the tanks are intended primarily to supplement demands during peak periods that exceed maximum send-out capacity of the Company's plants. Maximum plant send-out capacities are maintained at a level below the industry standard of 150% of average day demand. The Company's storage tank capacity is sufficient to meet at least a 30-day period of system demands in excess of plant capacity.

For meeting base day demands, the tanks are mainly relied on to stabilize pressures in the distribution system. They may be filling or emptying over the course of the day depending on local and system-wide demands. It is difficult to identify the extent to which each facility meets daily or hourly demands because their use varies continuously depending on the location and extent of the demands. Also, the storage facilities often serve areas beyond their actual pressure zones.

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:
- 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 dollar equivalent was developed using recent price quotations by meter size, received by the Company, as follows:

5/8-Inch Meter Equivalents

<u>Meter Size</u>	<u>Unit Price</u>	<u>5/8-Inch Dollar Equivalent</u>
5/8"	\$153.26	1.00
3/4"	175.85	1.15
1"	201.73	1.32
1-1/2"	435.85	2.84
2"	481.82	3.14
3"	1,569.02	10.24
4"	2,234.65	14.58
6"	3,737.47	24.39
8"	6,600.09	43.06
10"	6,838.29	42.92

AQUA PENNSYLVANIA, INC.
RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

RS1f., cont.

3/4-inch Service Equivalents

<u>Service Size</u>	<u>Installed Cost</u>	<u>3/4-Inch Equivalent</u>
3/4"	\$ 448.62	1.00
1"	832.67	1.86
1-1/2"	2,075.62	4.63
2"	2,758.03	6.15
over 2"	4,960.39	11.06

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

RESPONSE

The source for the estimated fire protection demand of 20,000 gpm is published fire flow criteria for the population served. The 20,000 gpm estimate is the maximum fire flow requirement generally accepted by published authorities, regardless of population size. This maximum has been established by the National Board of Fire Underwriters (now the American Insurance Association).

General fire-fighting requirements, based on population established by the National Board of Fire Underwriters, are as follows:

- a) For populations of 200,000 or less,

$$Q = 1020 \sqrt{P} (1 - 0.01 \sqrt{P})$$

Where Q is the fire draft in gpm and P is the population in thousands.

- b) For populations in excess of 200,000,

Q = 12,000 gpm plus 2,000 to 8,000 gpm for a potential second fire.

Inasmuch as AQUA-PA serves a population of over 1,000,000, the maximum fire flow of 12,000 gpm would apply. Also, in consideration of the population being well over 200,000, the maximum of the additional allowance to provide for a second fire was selected for a maximum fire flow of 20,000 gpm.

AQUA PENNSYLVANIA, INC.
RESPONSES TO RATE STRUCTURE
AND COST OF SERVICE FILING REQUIREMENTS

The foregoing requirements were published in Volume I, "Water and Wastewater Engineering," by Fair, Geyer & Okon, published in 1966 by John Wiley & Sons, Inc.

The required 10 hour fire duration is based on the Insurance Services Office "Grading Schedule for the Municipal Fire Protection" dated 1974.

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:

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

RESPONSE

Please refer to Schedule G of Exhibit 50-B for a breakdown of the number of private fire lines by size. A breakdown of the private fire lines by general water service classification is not available.

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

RESPONSE

The calculation of the base cost of water per thousand gallons is as follows:

Base Cost of Water (See attached Functional Allocation)	\$201,544,972
Pro Forma Water Consumption (Excludes Contract Sales) (Thousand Gallons)	34,407,520
Base Cost per Thousand Gallons	\$5.858

AQUA PENNSYLVANIA, INC.

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

Account Number	Account Description	Factor Ref.	Total Company Test. Year	Base		Extra Capacity		Customer Facilities		Customer Accounting		Fire Service		Residential Fire
				(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
OPERATION AND MAINTENANCE EXPENSES														
Source of Supply														
---Operation---														
601.1	Operation Labor													
	Treatment Plants & Wells	2	310,130	220,005	88,604	0	0	0	0	0	0	310	1,210	0
	Booster Stations	3	17,528	11,668	4,699	0	0	0	0	0	0	359	775	26
620.1	Materials and Supplies													
	Treatment Plants & Wells	2	135,977	96,462	38,849	0	0	0	0	0	0	136	530	0
	Booster Stations	3	7,665	5,116	2,060	0	0	0	0	0	0	158	340	12
631.1	Contract Services - Engineering	2	2,036	1,444	582	0	0	0	0	0	0	2	8	0
636.1	Contract Services Other	2	34,103	24,193	9,743	0	0	0	0	0	0	34	133	0
641.1	Building Rental													
	Treatment Plants & Wells	2	385,267	273,309	110,071	0	0	0	0	0	0	385	1,503	0
	Booster Stations	3	21,775	14,496	5,838	0	0	0	0	0	0	448	962	33
650.1	Transportation													
	Treatment Plants & Wells	2	0	0	0	0	0	0	0	0	0	0	0	0
	Booster Stations	3	0	0	0	0	0	0	0	0	0	0	0	0
675.1	Miscellaneous													
	Treatment Plants & Wells	2	7,917	5,617	2,262	0	0	0	0	0	0	8	31	0
	Booster Stations	3	453	302	122	0	0	0	0	0	0	9	20	1
	Total Operation		922,872	652,613	262,930	0	0	0	0	0	0	1,847	5,512	72
---Maintenance---														
601.2	Maintenance Labor													
	Treatment Plants & Wells	2	412,278	292,470	117,788	0	0	0	0	0	0	412	1,608	0
	Booster Stations	3	153,262	102,026	41,090	0	0	0	0	0	0	3,142	6,774	230
620.2	Materials and Supplies													
	Treatment Plants & Wells	2	-430	-305	-123	0	0	0	0	0	0	0	-2	0
	Booster Stations	3	-160	-106	-43	0	0	0	0	0	0	-3	-7	0
631.2	Contractor Services													
	Treatment Plants & Wells	2	1,426	1,012	408	0	0	0	0	0	0	1	6	0
	Booster Stations	3	530	353	142	0	0	0	0	0	0	11	23	1
636.2	Contractor Services - other	2	85,286	60,502	24,366	0	0	0	0	0	0	85	333	0
642.2	Equipment Rental													
	Treatment Plants & Wells	2	0	0	0	0	0	0	0	0	0	0	0	0
	Booster Stations	3	0	0	0	0	0	0	0	0	0	0	0	0
650.2	Transportation													
	Treatment Plants & Wells	2	304	216	87	0	0	0	0	0	0	0	1	0
	Booster Stations	3	113	75	30	0	0	0	0	0	0	2	5	0
675.2	Miscellaneous													
	Treatment Plants & Wells	2	1,432	1,016	409	0	0	0	0	0	0	1	6	0
	Booster Stations	3	533	355	143	0	0	0	0	0	0	11	24	1
	Total Maintenance		654,574	457,614	184,297	0	0	0	0	0	0	3,662	8,771	232

AQUA PENNSYLVANIA, INC.

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

Account Number	Account Description	Factor Ref.	Total Company Test Year	Base	Extra Capacity		Customer Meters	Customer Facilities Services	Customer Accounting		Fire Service		Residential Fire
					Max Day	Max Hour			Billing and Coll	Meter Reading	Private Fire	Public Fire	
(1)	(2)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
----Miscellaneous----													
610.1	Water Purchased for Resale	1	12,497,001	12,410,772	0	0	0	0	0	0	17,496	68,734	0
615.1	Power Purchased	1	12,367,311	12,281,977	0	0	0	0	0	0	17,314	68,020	0
	Total Miscellaneous		24,864,312	24,692,749	0	0	0	0	0	0	34,810	136,754	0
	Total Source of Supply Expenses		26,441,758	25,802,976	447,127	0	0	0	0	0	40,319	151,037	304
Water Treatment Expenses													
----Operation----													
601.3	Operating Labor	2	9,320,615	6,612,044	2,662,900	0	0	0	0	0	9,321	36,350	0
618.3	Chemicals	1	4,933,140	4,899,101	0	0	0	0	0	0	6,906	27,132	0
620.3	Materials and Supplies	2	395,731	280,732	113,060	0	0	0	0	0	396	1,543	0
631.3	Contractor Services	2	2,637	1,871	753	0	0	0	0	0	3	10	0
635.3	Contractor Services - testing	2	136,646	96,956	39,040	0	0	0	0	0	137	533	0
636.3	Contractor Services - other	2	692,438	491,216	197,830	0	0	0	0	0	692	2,701	0
642.3	Equipment Rental	2	2,818	1,999	805	0	0	0	0	0	3	11	0
650.3	Transportation	2	0	0	0	0	0	0	0	0	0	0	0
675.3	Miscellaneous	2	37,730	26,766	10,779	0	0	0	0	0	38	147	0
	Total Operation		15,521,755	12,410,665	3,025,167	0	0	0	0	0	17,496	68,427	0
----Maintenance----													
601.4	Maintenance Labor	2	1,289,585	914,832	368,434	0	0	0	0	0	1,290	5,029	0
620.4	Materials and Supplies	2	28,019	19,877	8,005	0	0	0	0	0	28	109	0
631.4	Contractor Services - Eng	2	1,532	1,067	438	0	0	0	0	0	2	6	0
636.4	Contractor Services - Other	2	518,636	367,920	148,174	0	0	0	0	0	519	2,023	0
642.4	Equipment Rental	2	0	0	0	0	0	0	0	0	0	0	0
650.4	Transportation	2	0	0	0	0	0	0	0	0	0	0	0
675.4	Miscellaneous	2	1,399	952	400	0	0	0	0	0	1	5	0
	Total Maintenance		1,839,170	1,304,708	525,451	0	0	0	0	0	1,840	7,172	0
	Total Water Treatment Expenses		17,360,925	13,715,373	3,550,618	0	0	0	0	0	19,336	75,599	0

AQUA PENNSYLVANIA, INC.
ALLOCATION OF COST OF SERVICE TO COST FUNCTIONS
FOR THE TWELVE MONTHS ENDED JUNE 30, 2012

Account Number (1)	Account Description (2)	Factor Ref. (2)	Total Company Test Year (3)	Base (4)	Extra Capacity (5)		Customer Meters (7)	Customer Facilities Services (8)	Customer Accounting (9)		Fire Service (10-12)			Residential Fire (13)
					Max Day (5)	Max Hour (6)			Billing and Coll (9)	Meter Reading (10)	Private Fire (11)	Public Fire (12)		
Transmission & Distribution Expenses														
----Operating----														
601.5	Operating Labor													
	Supervision & Engineering	13	339,427	47,859	2,546	41,546	202,163	17,786	0	0	9,775	17,548	0	204
	Maps & Records	13	651,776	91,900	4,888	79,777	388,198	34,153	0	0	18,771	33,697	0	391
	Storage Facilities	5	442,900	208,030	0	209,536	0	0	0	0	7,928	16,830	0	576
	12 inch and Over Mains	3	107,824	71,778	28,908	0	0	0	0	0	2,210	4,766	0	162
	Under 12 inch Mains	4	583,117	262,578	0	260,770	0	0	0	0	18,835	39,535	0	1,399
	Hydrants	7	148,922	0	0	0	0	0	0	0	11,244	137,679	0	0
	Removing and Resetting Meters	8	2,231,899	0	0	0	2,187,484	0	0	0	44,415	0	0	0
	Miscellaneous Meter Expense	8	103,955	0	0	0	101,886	0	0	0	2,069	0	0	0
	Services on Customer's Premises	9	225,317	0	0	0	0	201,343	0	0	23,974	0	0	0
620.5	Materials and Supplies	13	1,135,321	160,080	8,515	138,963	676,197	59,491	0	0	32,697	58,696	0	681
631.5	Contractor Services - Eng	13	0	0	0	0	0	0	0	0	0	0	0	0
636.5	Contractor Services - Other	13	497,001	70,077	3,728	60,833	296,014	26,043	0	0	14,314	25,695	0	298
641.5	Property Rental	13	16,404	2,313	123	2,008	9,770	860	0	0	472	848	0	10
642.5	Property & Equipment Rental	13	3,243	457	24	397	1,931	170	0	0	93	188	0	2
650.5	Transportation - Labor	13	592,281	83,512	4,442	72,495	352,762	31,036	0	0	17,058	30,621	0	355
650.5	Transportation	13	1,284,514	181,116	9,634	157,225	765,057	67,309	0	0	36,994	66,409	0	771
675.5	Miscellaneous	13	13,002	1,833	98	1,591	7,744	681	0	0	374	672	0	8
	Total Operation		8,376,902	1,181,533	62,906	1,025,141	4,989,206	438,872	0	0	241,223	433,154	0	4,857
----Maintenance----														
601.6	Maintenance Labor													
	Supervision & Engineering	14	316,570	86,930	6,775	69,645	16,018	69,962	0	0	17,221	49,606	0	412
	Structures & Improvements	5	79,264	37,230	0	37,500	0	0	0	0	1,419	3,012	0	103
	12 inch and Over Mains	3	363,251	241,816	97,388	0	0	0	0	0	7,447	16,056	0	545
	Under 12 inch Mains	4	2,152,277	969,170	0	962,498	0	0	0	0	69,519	145,924	0	5,165
	Services	9	1,124,279	0	0	0	0	1,004,656	0	0	119,623	0	0	0
	Meters	8	234,874	0	0	0	230,200	0	0	0	4,674	0	0	0
	Hydrants	7	592,290	0	0	0	0	0	0	0	44,718	547,572	0	0
620.6	Materials and Supplies	14	588,154	161,507	12,586	129,384	29,761	129,982	0	0	31,996	92,164	0	765
631.6	Contractor Services - Eng	14	2,016	554	43	443	102	445	0	0	110	316	0	3
636.6	Contractor Services - Other	14	3,341,689	917,628	71,512	735,172	169,089	738,513	0	0	181,788	523,643	0	4,344
641.6	Equipment Rental	14	0	0	0	0	0	0	0	0	0	0	0	0
650.6	Transportation	14	0	0	0	0	0	0	0	0	0	0	0	0
675.6	Miscellaneous	14	19,796	5,436	424	4,355	1,002	4,375	0	0	1,077	3,102	0	26
	Total Maintenance		8,814,459	2,420,271	188,728	1,939,007	446,172	1,947,933	0	0	479,592	1,381,395	0	11,363
	Total Transmission and Distribution Expenses		17,191,362	3,601,804	251,634	2,964,148	5,435,378	2,386,805	0	0	720,815	1,814,559	0	16,220

AQUA PENNSYLVANIA, INC.

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

Account Number (1)	Account Description (2)	Factor Ref. (2)	Total Company Test Year (3)	Base (4)	Extra Capacity Max Day (5)	Extra Capacity Max Hour (6)	Customer Facilities Meters (7)	Customer Facilities Services (8)	Customer Accounting Billing and Coll (9)	Customer Accounting Meter Reading (10)	Private Fire (11)	Fire Service Public Fire (12)	Residential Fire (13)
Customer Accounting and Collecting Expenses													
601.7	Labor	12	1,090,367	0	0	0	0	0	827,261	249,258	13,521	327	0
620.7	Materials and Supplies	10	17,329	0	0	0	0	0	17,107	0	215	7	0
636.7	Contractor Services - Billing	10	6,351,798	0	0	0	0	0	6,270,495	0	78,762	2,541	0
636.7	Contractor Services - Meter Reading	11	2,766,254	0	0	0	0	0	0	2,731,952	34,302	0	0
650.7	Transportation	10	305	0	0	0	0	0	301	0	4	0	0
670.7	Bad Debt Expense	10	2,815,434	0	0	0	0	0	2,779,396	0	34,911	1,126	0
675.7	Miscellaneous	10	0	0	0	0	0	0	0	0	0	0	0
	Total Customer Accounting and Collecting Expenses		13,041,487	0	0	0	0	0	9,894,560	2,981,210	161,715	4,001	0
Administrative and General Expenses													
601.8	Labor	15	5,295,191	1,618,210	508,868	354,778	650,779	285,940	1,184,534	356,896	108,022	225,046	2,118
603.8	Officers Labor	15	1,322,620	404,193	127,104	88,616	162,550	71,421	295,870	89,145	26,981	56,211	529
604.8	Employee Health Plans	16	15,976,213	6,647,702	2,201,522	1,179,044	2,324,539	929,816	1,249,340	377,039	316,329	744,492	6,390
620.8	Materials and Supplies	15	151,965	46,440	14,604	10,182	18,676	8,206	33,995	10,242	3,100	6,459	61
631.8	Contractor Services - Engineering	15	132,489	40,489	12,732	8,877	16,283	7,154	29,638	8,930	2,703	5,631	53
632.8	Contractor Services - Accounting	15	496,875	151,845	47,750	33,291	61,066	26,831	111,151	33,489	10,136	21,117	199
633.8	Contractor Services - Legal	15	393,098	120,131	37,777	26,338	48,312	21,227	87,936	26,495	8,019	16,707	157
634.8	Contractor Services - Mgmt Fee	15	14,987,119	4,580,064	1,440,262	1,004,137	1,841,917	809,304	3,352,619	1,010,132	305,737	636,953	5,995
635.8	Contractor Services - Testing	15	0	0	0	0	0	0	0	0	0	0	0
636.8	Contractor Services - Other	15	848,377	259,264	81,529	56,841	104,266	45,812	189,782	57,181	17,307	36,056	339
641.8	Rent - Building	15	32,979	10,078	3,169	2,210	4,053	1,781	7,377	2,223	673	1,402	13
642.8	Rent - Equipment	15	83,053	25,381	7,981	5,565	10,207	4,485	18,579	5,598	1,694	3,530	33
650.8	Transportation	15	-3,601	-1,100	-346	-241	-443	-194	-806	-243	-73	-153	-1
656.8	Vehicle Insurance	15	185,146	56,581	17,793	12,405	22,754	9,998	41,417	12,479	3,777	7,869	74
657.8	General Liability Insurance	15	1,978,997	604,782	190,182	132,593	243,219	106,866	442,702	133,384	40,372	84,107	792
658.8	A&G Workers Comp Insurance	16	980,215	407,987	135,074	72,340	142,621	57,048	76,653	23,133	19,408	45,678	392
659.8	A&G General Liability Insurance	15	1,465,003	447,705	140,787	98,155	180,049	79,110	327,721	98,741	29,886	62,263	566
660.8	Advertising	15	167,528	51,197	16,099	11,224	20,589	9,047	37,476	11,291	3,418	7,120	67
666.8	Rate Case Amortization	19	471,954	216,627	41,202	77,872	48,281	35,491	25,627	7,740	12,365	6,277	472
666.8	Merger amortization	15	0	0	0	0	0	0	0	0	0	0	0
666.8	Miscellaneous Amortization	15	33,913	10,364	3,259	2,272	4,168	1,831	7,586	2,286	692	1,441	14
675.8	A & G Miscellaneous	15	3,163,366	966,725	303,999	211,946	388,778	170,822	707,645	213,211	64,533	134,443	1,265
	Subtotal Administrative and General		48,162,500	16,664,545	5,331,347	3,388,445	6,292,664	2,681,996	8,226,842	2,479,392	975,079	2,102,649	19,548
	Utility Plant Acquisition Adj. Amort.	17	-337,938	-156,432	-30,245	-76,036	-10,949	-29,029	-3,616	-1,081	-10,476	-19,600	-473
	Total Operation & Maintenance Expenses		121,860,093	59,628,286	9,550,481	6,276,557	11,717,093	5,099,772	18,117,786	5,459,521	1,906,788	4,128,245	35,599

AQUA PENNSYLVANIA, INC.

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

Account Number (1)	Account Description (2)	Factor Ref. (2)	Total Company Test Year (3)	Base (4)	Extra Capacity (5)		Customer Facilities Meters (7)	Services (8)	Customer Accounting Billing and Coll (9)	Meter Reading (10)	Fire Service (11)		Residential Fire (13)
					Max Day (5)	Max Hour (6)					Private Fire (11)	Public Fire (12)	
503.00	DEPRECIATION EXPENSE												
304.20	Power and Pumping Structures			90,655	36,510	0	0	0	0	0	128	498	0
	Major Treatment Plants	2	127,791	404,471	162,894	0	0	0	0	0	12,456	26,855	911
	Other Structures	3	607,568										
304.30	Purification Buildings												
	Major Treatment Plants	2	3,262,375	2,314,329	932,061	0	0	0	0	0	3,262	12,723	0
	Other Structures	2	476,208	337,822	136,053	0	0	0	0	0	476	1,857	0
304.61	Office Buildings	15	1,225,434	374,493	117,764	82,104	150,606	66,173	274,130	82,594	24,959	52,081	490
304.62	Stores, Shop and Garage Bldgs.	15	215,116	65,739	20,673	14,413	26,438	11,616	48,121	14,499	4,388	9,142	86
304.63	Misc. Structures and Impr.	15	772,920	236,204	74,278	51,786	94,992	41,738	172,902	52,095	15,768	32,849	309
305.00	Collecting & Impounding Res.	1	658,101	653,560	0	0	0	0	0	0	921	3,620	0
306.00	Lake, River and Other Intakes	2	436,819	309,879	124,799	0	0	0	0	0	437	1,704	0
307.00	Wells and Springs	2	1,010,334	716,731	288,652	0	0	0	0	0	1,010	3,940	0
310.40	Other Power Producing Equipment	6	800,225	541,912	202,297	39,371	0	0	0	0	4,881	11,443	320
310.70	Oil Engine Pumping Equipment	6	0	0	0	0	0	0	0	0	0	0	0
311.00	Electric Pumping Equipment	6	2,256,432	1,528,056	570,426	111,016	0	0	0	0	13,764	32,267	903
320.00	Purification System												
	Structures	2	2,017,672	1,431,337	576,449	0	0	0	0	0	2,018	7,869	0
	Wells and Boosters	2	176,676	125,335	50,477	0	0	0	0	0	177	689	0
	Equipment	2	2,845,824	1,876,948	755,912	0	0	0	0	0	2,646	10,319	0
	Computers	2	1,106,399	784,879	316,098	0	0	0	0	0	1,106	4,315	0
	Painting	2	0	0	0	0	0	0	0	0	0	0	0
	Filter Media	2	69,574	49,356	19,877	0	0	0	0	0	70	271	0
330.00	Distir. Reservoirs & Standpipes												
	Tanks	5	1,249,908	587,082	0	591,331	0	0	0	0	22,373	47,497	1,625
	Tank Painting	5	1,881,579	883,778	0	890,175	0	0	0	0	33,680	71,500	2,446
331.00	Mains and Accessories												
	12 inch and Over	3	3,055,291	2,033,907	819,124	0	0	0	0	0	62,633	135,044	4,583
	Under 12 inch	4	17,197,388	7,743,984	0	7,690,672	0	0	0	0	555,476	1,165,983	41,274
333.00	Services	9	6,612,598	0	0	0	0	5,909,018	0	0	703,580	0	0

AQUA PENNSYLVANIA, INC.

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

Account Number (1)	Account Description (2)	Factor Ref. (2)	Total Company Test Year (3)	Base (4)	Extra Capacity (5)		Max Hour (6)	Customer Facilities (7)		Billing and Coll (9)	Customer Accounting (10)		Fire Service (11)		Residential Fire (13)	
					Max Day (5)	Max Hour (6)		Meters (7)	Services (8)		Meter Reading (10)	Private Fire (11)	Public Fire (12)			
334.00	Meters															
	Remote	8	4,991,260	0	0	0	4,891,934	0	0	0	0	0	99,326	0	0	0
	ERTS	8A	2,302,283	0	0	0	2,302,283	0	0	0	0	0	0	0	0	0
335.00	Fire Hydrants	7	1,392,318	0	0	0	0	0	0	0	0	0	105,120	1,287,198	0	0
339.00	Other Plant and Miscellaneous	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
340.00	Office Furniture and Equipment															
	Furniture	15	267,578	81,772	25,714	17,928	32,885	14,449	18,035	59,857	18,035	5,459	11,372	107	107	
	Mechanical Equipment	15	348,281	106,435	33,470	23,335	42,804	18,807	23,474	77,910	23,474	7,105	14,802	139	139	
	Computers	15	8,357,593	2,554,080	803,165	559,959	1,027,148	451,310	563,302	1,869,594	563,302	170,495	355,198	3,343	3,343	
341.00	Transportation Equipment															
	Vehicles	15	1,806,758	552,145	173,629	121,053	222,051	97,565	121,775	404,172	121,775	36,858	76,787	723	723	
	Other	15	95,796	29,275	9,206	6,418	11,773	5,173	6,457	21,430	6,457	1,954	4,071	38	38	
342.00	Stores Equipment	15	38,296	11,703	3,680	2,566	4,707	2,068	2,581	8,567	2,581	781	1,628	15	15	
343.10	Shop Equipment	15	46,843	14,315	4,502	3,138	5,757	2,530	3,157	10,479	3,157	956	1,991	19	19	
343.20	Tools & Work Equipment - General	15	521,760	159,450	50,141	34,958	64,124	28,175	35,167	116,718	35,167	10,644	22,175	209	209	
344.00	Laboratory Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Conventional	2	39,324	27,896	11,235	0	0	0	0	0	0	39	153	0	0	
	Electronic	2	104,540	74,161	29,867	0	0	0	0	0	0	105	408	0	0	
346.00	Communication Equipment															
	Communication Equipment	15	261,356	79,870	25,116	17,511	32,121	14,113	17,615	58,465	17,615	5,332	11,108	105	105	
	SCADA Equipment	6	267,540	181,178	67,634	13,163	0	0	0	0	0	1,632	3,826	107	107	
347	Miscellaneous Equipment	15	99,151	30,301	9,528	6,643	12,186	5,354	6,683	22,180	6,683	2,023	4,214	40	40	
348	Other Tangible Plant	15	2,582	789	248	173	317	139	174	578	174	53	110	1	1	
	Total Depreciation Expense		68,805,513	26,983,827	6,451,479	10,277,713	8,922,126	6,688,228	947,608	3,145,103	947,608	1,914,131	3,427,507	57,793	57,793	

AQUA PENNSYLVANIA, INC.

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

Account Number (1)	Account Description (2)	Factor Ref. (2)	Total Company Test Year (3)	Base (4)		Extra Capacity (5)		Customer Facilities (6)		Customer Accounting Billing and Coll. (9)	Meter Reading (10)	Fire Service (11)		Residential Fire (13)
				Max Day (4)	Max Hour (4)	Max Day (5)	Max Hour (5)	Meters (7)	Services (8)			Private Fire (11)	Public Fire (12)	
TAXES OTHER THAN INCOME TAXES														
16	Federal and State Payroll Taxes		2,593,876	1,079,312	191,428	357,436	191,428	377,409	150,964	202,841	61,215	51,359	120,875	1,038
18	State Capital Stock Tax		1,655,164	766,010	372,743	147,972	372,743	53,627	142,179	17,710	5,297	51,310	96,000	2,317
19	PUC Assessment		2,055,158	943,318	339,101	179,415	339,101	210,243	154,548	111,595	33,705	53,845	27,334	2,055
19	OCA and SBA Assessments		615,151	282,354	101,500	53,703	101,500	62,930	46,259	33,403	10,088	16,117	8,182	615
18	Local Property Taxes		723,056	334,630	64,641	64,641	162,832	23,427	62,110	7,737	2,314	22,415	41,937	1,012
18	Public Utility Realty Taxes		3,609,629	1,670,536	812,888	322,701	812,888	116,952	310,067	38,623	11,551	111,898	209,358	5,053
	Total Taxes Other Than Income Taxes		11,252,034	5,076,160	1,980,492	1,125,868	1,980,492	844,588	866,127	411,909	124,170	306,944	503,686	12,090
INCOME TAXES														
18	Federal Income Taxes		22,877,300	10,587,614	5,151,968	2,045,231	5,151,968	741,225	1,965,160	244,787	73,207	709,196	1,326,883	32,028
18	State Income Taxes		18,581,500	8,599,518	4,184,554	1,661,186	4,184,554	602,041	1,596,151	198,822	59,461	576,027	1,077,727	26,014
18	Deferred Taxes		41,357,034	19,140,035	9,313,604	3,697,319	9,313,604	1,339,968	3,552,589	442,520	132,343	1,282,068	2,398,708	57,900
18	ITC-Amortized		-196,735	-91,049	-44,305	-17,588	-44,305	-5,374	-16,900	-2,105	-630	-5,099	-11,411	-275
	Total Income Taxes		82,619,099	38,236,118	18,605,821	7,396,148	18,605,821	2,676,860	7,096,980	884,024	264,381	2,561,192	4,791,907	115,667
UTILITY OPERATING INCOME														
18	UTILITY OPERATING INCOME		162,983,563	75,428,793	36,703,898	14,570,731	36,703,898	5,280,667	14,000,288	1,743,924	521,547	5,052,490	9,453,047	228,177
Total Cost of Service														
	Total Cost of Service		447,520,302	205,363,164	39,084,707	39,084,707	73,844,481	29,441,334	33,671,395	24,302,746	7,317,227	11,741,545	22,304,392	449,326
Less:														
19	Other Water Revenues		-2,206,960	-1,012,995	-364,148	-192,668	-364,148	-225,772	-165,963	-119,838	-36,194	-57,822	-29,353	-2,207
19	Revenues from Contract Sales		-6,111,540	-2,805,197	-1,008,404	-533,537	-1,008,404	-625,211	-459,598	-331,857	-100,229	-160,122	-81,283	-6,112
20	Unrecovered Public Fire		-16,360,681	0	0	0	0	0	0	0	0	0	-16,360,681	0
21	Reallocate Unrecovered Public Fire		16,360,681	0	0	0	0	16,360,681	0	0	0	0	0	0
	Total Cost of Service Related to Sales		439,201,802	201,544,972	38,358,502	38,358,502	72,471,929	44,951,032	33,045,844	23,651,051	7,180,804	11,523,601	5,633,075	441,007

AQUA PENNSYLVANIA, INC.
FACTOR 18. ORIGINAL COST MEASURE OF VALUE RATE BASE ALLOCATED TO
FUNCTIONAL CLASSIFICATIONS

Account	Factor Ref. (2)	Measure of Value (3)	Base (5)	Extra Capacity		Maximim Hour (7)	Customer Facilities		Customer Accounting		Fire Service		Residential Fire (14)
				Maximum Day (6)	Maximum Day (6)		Meters (8)	Services (9)	Billing and Coll (10)	Meter Reading (11)	Private Fire (12)	Public Fire (13)	
NONDEPRECIABLE PLANT													
301	17	Organization	5,751,926	2,662,567	514,797	1,294,183	186,362	494,090	61,546	18,406	178,310	333,612	8,053
302	17	Franchise and Consents	1,797,470	832,049	160,874	404,431	58,238	154,403	19,233	5,752	55,722	104,253	2,516
303	17	Miscellaneous Intangible Plant	1,552,577	718,688	138,956	349,330	50,303	133,366	16,613	4,968	48,130	90,049	2,174
303	1	Water Rights	1,703,879	1,692,122	-	-	-	-	-	-	2,385	9,371	-
303	1	Reservoir Land	2,984,536	2,963,943	-	-	-	-	-	-	4,178	16,415	-
303	2	Other Sources of Supply Land	6,548,232	4,645,316	1,870,830	-	-	-	-	-	6,548	25,538	-
303	6	Power and Pumping Land	1,073,656	727,080	271,420	52,824	-	-	-	-	6,549	15,353	429
303	2	Purification Land	1,420,928	1,008,007	405,959	-	-	-	-	-	1,421	5,542	-
303	2	Land and Rights of Way	1,192,948	846,277	340,825	-	-	-	-	-	1,193	4,652	-
304	5	Distr. Reservoir & Standpipe Land	1,352,029	635,048	300,618	639,645	384,453	168,922	699,774	210,839	24,201	51,377	1,758
304	15	Office Land	3,128,180	955,972	209,588	209,588	123,263	54,160	224,361	67,599	63,815	132,948	1,251
304	15	Stores, Shop and Garage Land	1,002,955	308,503	96,384	67,198	123,605	54,310	224,963	67,787	20,460	42,626	401
304	15	Miscellaneous Land	1,005,737	307,353	96,651	67,364	123,605	54,310	224,963	67,787	20,517	42,744	402
		Total Nondepreciable Plant	30,515,053	18,300,925	4,197,314	3,084,583	926,224	1,059,251	1,246,510	375,351	433,429	874,480	16,964
DEPRECIABLE PLANT													
304	2	Power and Pumping Structures	4,979,810	3,532,677	1,422,732	-	-	-	-	-	4,980	19,421	-
304	3	Major Treatment Plants	18,745,301	12,478,747	5,025,615	-	-	-	-	-	384,279	828,542	28,118
304	2	Purification Buildings	114,552,486	81,263,534	32,727,645	-	-	-	-	-	114,552	446,755	-
305	2	Office Structures	12,411,759	8,804,902	3,546,040	-	-	-	-	-	12,412	48,406	-
305	15	Stores, Shop and Garage Bldgs.	25,133,825	7,680,897	2,415,361	1,683,966	3,088,947	1,357,227	5,622,437	1,694,020	512,730	1,068,188	10,054
305	15	Misc Structures and Impr.	16,337,346	4,992,693	444,827	310,129	588,878	249,955	1,035,461	311,981	94,427	196,724	1,852
305	1	Collecting & Impounding Res.	25,832,735	25,654,489	1,570,019	1,094,602	2,007,860	882,217	3,654,664	1,101,137	333,282	694,337	6,535
306	2	Lake, Rive and Other Intakes	11,713,194	8,309,340	3,346,460	-	-	-	-	-	11,713	45,681	-
307	2	Wells and Springs	34,528,969	24,494,851	9,864,926	-	-	-	-	-	34,529	134,663	-
310	6	Other Power Producing Equipment	17,549,384	11,984,443	4,436,484	863,430	-	-	-	-	107,051	250,956	7,020
311	6	Oil Engine Pumping Equipment	0	0	0	-	-	-	-	-	0	0	-
311	6	Pumping Equipment	41,477,154	28,088,329	10,485,425	2,040,676	-	-	-	-	253,011	593,123	16,591
320	2	Purification System	56,292,007	39,933,550	16,082,626	-	-	-	-	-	56,292	219,539	-
320	2	Wells & Boosters	5,992,026	4,250,743	1,711,922	-	-	-	-	-	5,992	23,369	-
320	2	Equipment	69,628,429	49,394,408	19,892,842	-	-	-	-	-	69,628	271,551	-
320	2	Computers	8,988,564	6,376,487	2,568,033	-	-	-	-	-	8,989	35,055	-
320	2	Painting	0	0	0	-	-	-	-	-	0	0	-
320	2	Filter Media	233,394	165,570	66,681	-	-	-	-	-	233	910	-
330	5	Distr. Reservoirs & Standpipes	44,841,756	21,062,173	-	21,214,635	-	-	-	-	802,667	1,703,967	58,294
330	5	Tanks	13,608,909	6,392,105	-	6,438,375	-	-	-	-	243,599	517,139	17,682
331	3	Mains & Accessories	245,086,533	163,154,105	65,707,699	-	-	-	-	-	5,024,274	10,832,825	367,630
333	4	Under 12 Inch	985,707,069	443,863,893	-	440,808,201	-	-	-	-	31,838,338	66,890,939	2,365,697
334	9	Services	198,365,561	-	-	-	-	177,259,465	-	-	21,106,096	-	-
334	8	Remote	40,484,867	-	-	-	-	-	-	-	805,649	-	-
335	8A	ERTS	16,868,469	-	-	-	-	-	-	-	2,933,917	-	-
335	7	Fire Hydrants	38,859,830	-	-	-	-	-	-	-	-	35,925,913	-

AQUA PENNSYLVANIA, INC.

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

Account (1)	Factor Ref. (2)	Measure of Value (3)	Base (5)	Extra Capacity (6)		Maximum Hour (7)	Customer Facilities Services (9)		Customer Accounting Billing and Coll (10)		Meter Reading (11)	Fire Service (12)		Residential Fire (14)
				Maximum Day	Maximum Day		Meters	Services	Private Fire	Public Fire				
340														
Office Furniture & Equipment														
Furniture	15	4,461,718	1,363,501	428,771	298,935	240,933	548,345	998,086	300,720	91,019	189,623	1,785		
Mechanical Equipment	15	1,669,719	510,266	160,460	111,871	90,165	205,208	373,516	112,539	34,062	70,963	668		
Computers	15	22,785,740	6,963,322	2,199,710	1,528,645	1,230,430	2,800,367	5,097,170	1,535,759	464,929	968,394	9,114		
341														
Transportation Equipment														
Vehicles	15	7,773,957	2,375,721	747,077	520,855	419,794	955,419	1,739,034	523,965	158,589	330,393	3,110		
Other	15	1,716,891	524,682	164,983	115,032	92,712	211,006	384,069	115,718	35,025	72,968	687		
Stores Equipment	15	724,085	221,280	69,586	48,514	39,101	88,990	161,978	48,803	14,771	30,774	290		
Shop Equipment	15	892,212	272,660	85,742	59,778	48,179	109,653	199,588	60,135	18,201	37,919	357		
343														
Tools & Work Equipment - General	15	6,606,967	2,019,089	634,930	442,667	356,776	811,996	1,477,979	445,310	134,782	280,796	2,643		
344														
Laboratory Equipment														
Conventional	2	836,482	593,400	238,983	-	-	-	-	-	836	3,262	-		
Electronic	2	1,145,735	812,784	327,336	-	-	-	-	-	1,146	4,468	-		
346														
Communication Equipment	15	1,839,911	562,277	176,815	123,274	99,355	226,125	411,588	124,010	37,534	78,196	736		
SCADA Equipment	6	1,886,117	1,277,278	476,810	92,797	-	-	-	-	11,505	26,971	754		
347														
Miscellaneous Equipment	15	1,615,184	493,600	155,219	108,217	87,220	198,506	361,317	108,863	32,950	68,645	646		
348														
Other Intangible Plant	15	60,660	18,538	5,829	4,064	3,276	7,455	13,570	4,088	1,237	2,578	24		
Total Depreciable Plant		2,106,863,546	971,200,893	187,177,597	477,906,663	182,456,805	66,376,442	21,530,457	6,487,048	65,831,292	122,996,053	2,900,297		
Total Utility Plant		2,137,378,599	989,501,818	191,374,911	480,991,246	183,516,056	69,302,666	22,776,967	6,862,399	66,264,721	123,870,533	2,917,281		
OTHER RATE BASE ELEMENTS														
Materials and Supplies	17	5,081,569	2,352,254	454,800	1,143,351	436,506	164,643	54,373	16,261	157,528	294,730	7,114		
Cash Working Capital - Expenses	15	0	-	-	-	-	-	-	-	-	-	-		
Cash Working Capital - Taxes	17	0	-	-	-	-	-	-	-	-	-	-		
Cash Working Capital - P/R Tax	16	0	-	-	-	-	-	-	-	-	-	-		
Acquisition Adjustments	17	1,501,397	694,997	134,375	337,814	128,970	48,645	16,065	4,804	46,543	87,081	2,102		
Previously Approved Rate Base Item	17	2,372,116	1,098,053	212,304	533,726	203,765	76,857	25,382	7,591	73,536	137,563	3,321		
Hubbard Contract Adjustment	2	-1,031,693	(731,883)	(284,755)	(64,594,159)	(24,660,614)	(9,301,559)	(3,071,811)	(918,672)	(1,032)	(4,024)	(401,919)		
Deferred Income Taxes	17	-287,085,151	(132,891,716)	(25,694,121)	(64,594,159)	(24,660,614)	(9,301,559)	(3,071,811)	(918,672)	(8,899,640)	(16,650,939)	(401,919)		
Accrued Interest	17	0	-	-	-	-	-	-	-	-	-	-		
Total Other Rate Base Elements		-279,161,771	-129,478,295	-25,187,397	-62,579,268	-23,691,373	-9,011,414	-2,975,991	-890,016	-8,623,065	-16,135,569	-389,382		
Total Original Cost Measure of Value		1,858,216,828	860,023,523	166,187,514	418,411,978	159,624,683	60,291,252	19,800,976	5,972,383	57,641,656	107,734,964	2,527,899		

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:

- 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 schedule.

AQUA PENNSYLVANIA, INC.
CALCULATION OF CUSTOMER COST PER MONTH FOR A 5/8-INCH METER

<u>Cost Function</u> (1)	<u>Cost of Service</u> (2)	<u>Total Units</u> (3)	<u>Cost Per 5/8-inch Meter</u> (4)	<u>Cost Per 5/8-inch Meter Monthly Bill</u> (5)
Meters	28,590,351	429,519 5/8-inch Equivalents	\$66.56	\$5.55
Services	33,045,844	440,233 3/4-inch Equivalents	75.06	6.26
Billing and Collecting	23,851,051	4,742,739 Bills	5.03	5.03
Meter Reading	<u>7,180,804</u>	4,742,739 Readings	1.51	<u>1.51</u>
Subtotal Customer Costs	\$92,668,050			18.35
Unrecovered Public Fire	<u>16,360,681</u>	429,519 5/8-inch Equivalents	38.09	<u>3.17</u>
Total Customer Costs and Public Fire	<u>\$109,028,731</u>			<u>\$21.52</u>

AQUA PENNSYLVANIA, INC.

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

Please refer to the attached schedules for the comparison of the present and proposed tariff revenues with contract revenues for the contract customers.

AQUA PENNSYLVANIA, INC.

SUMMARY OF CONTRACT REVENUES UNDER PRESENT AND PROPOSED RATES

	<u>Present Contract Revenue</u>	<u>Proposed Contract Revenue</u>
<u>INDUSTRIAL</u>		
Montenay En Resources	\$ 491,608	\$ 504,967
Mt. Carmel	681,591	694,549
Liberty Cogeneration	<u>1,654,553</u>	<u>1,696,205</u>
Total Industrial	<u>2,827,752</u>	<u>2,895,721</u>
<u>PUBLIC</u>		
Canaan Federal Prison	\$ 314,625	\$ 322,482
SCI Forest County Prison	<u>594,210</u>	<u>711,902</u>
Total Public	<u>908,835</u>	<u>1,034,384</u>
<u>OTHER WATER UTILITIES</u>		
Warwick Township	\$ 695,118	\$ 712,524
Schwenksville Borough	103,765	106,674
Horsham	317,947	326,180
Bucks County	53,318	56,495
Borough of Sharpville	452,187	467,179
New Wilmington	350,962	360,271
Masury Water Company	<u>147,350</u>	<u>152,111</u>
Total Other Water Utilities	<u>2,120,648</u>	<u>2,181,434</u>
Total	<u>\$5,857,234</u>	<u>\$6,111,539</u>

AQUA PENNSYLVANIA, INC.
MAIN DIVISION

APPLICATION OF TARIFF AND CONTRACT RATES TO CONSUMPTION ANALYSIS

<u>Customer</u>	<u>Bills/Usage 100 Gals.</u>	<u>Present Rate</u>	<u>Present Revenue</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
<u>MONTENAY EN RESOURCES</u>					
<u>TARIFF RATES</u>					
Customer Charges - 6"	12	\$808.00	\$9,696	\$916.00	\$10,992
First Block	1,200	0.8833	1,060	1.0582	1,270
Second Block	2,796	0.7760	2,170	0.9296	2,599
Third Block	36,000	0.6438	23,177	0.7713	27,767
Fourth Block	360,000	0.5890	212,040	0.7056	254,016
Fifth Block	800,004	0.5346	427,682	0.6405	512,403
Sixth Block	844,600	0.4277	361,235	0.5124	432,773
Subtotal	2,044,600		1,027,364		1,230,828
Total	2,044,600		\$1,037,060		\$1,241,820
<u>CONTRACT RATES</u>					
Customer Charges - 6"	12	\$808.00	\$9,696	\$916.00	\$10,992
All Usage	2,044,600	0.2357	481,912	0.2416	493,975
Total			491,608		504,967
Tariff less Contract Revenues			\$545,452		\$736,853
<u>LIBERTY POWER</u>					
<u>TARIFF RATES</u>					
Customer Charges - 10"	12	\$2,090.00	\$25,080	\$2,369.00	\$28,428
First Block	1,200	0.8833	1,060	1.0582	1,270
Second Block	2,796	0.7760	2,170	0.9296	2,599
Third Block	36,000	0.6438	23,177	0.7713	27,767
Fourth Block	333,767	0.5890	196,589	0.7056	235,506
Fifth Block	800,004	0.5346	427,682	0.6405	512,403
Sixth Block	6,043,133	0.4277	2,584,648	0.5124	3,096,501
	7,216,900		3,235,326		3,876,046
Total	7,216,900		3,260,406		3,904,474
<u>CONTRACT RATES</u>					
Customer Charges - 10"	12	\$83,512.07	\$1,002,145	\$85,599.87	\$1,027,198
All Usage	7,216,900	0.0904	652,408	0.0927	669,007
Total			1,654,553		1,696,205
Tariff less Contract Revenues			\$1,605,853		\$2,208,269

AQUA PENNSYLVANIA, INC.
MAIN DIVISION

APPLICATION OF TARIFF AND CONTRACT RATES TO CONSUMPTION ANALYSIS

<u>Customer</u>	<u>Bills/Usage 100 Gals.</u>	<u>Present Rate</u>	<u>Present Revenue</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
<u>Mt. Carmel</u>					
<u>TARIFF RATES</u>					
Customer Charges	12	\$808.00	\$9,696	\$916.00	\$10,992
First Block	1,200	0.8833	1,060	1.0582	1,270
Second Block	2,796	0.7760	2,170	0.9296	2,599
Third Block	36,000	0.6438	23,177	0.7713	27,767
Fourth Block	360,000	0.5890	212,040	0.7056	254,016
Fifth Block	800,004	0.5346	427,682	0.6405	512,403
Sixth Block	<u>1,391,600</u>	0.4277	<u>595,187</u>	0.5124	<u>713,056</u>
Subtotal	<u>2,591,600</u>		<u>1,261,316</u>		<u>1,511,111</u>
Total	<u>2,591,600</u>		<u>1,271,012</u>		<u>1,522,103</u>
<u>CONTRACT RATES</u>					
Minimum Charges	1,500,000	\$32,875	\$394,500	\$33,500	\$402,000
All Excess Usage	<u>1,091,600</u>	0.263	<u>287,091</u>	0.268	292,549
Total	<u>2,591,600</u>		<u>681,591</u>		<u>694,549</u>
Tariff less Contract Revenues			<u>\$589,421</u>		<u>\$827,554</u>

AQUA PENNSYLVANIA, INC.
MAIN DIVISION

APPLICATION OF TARIFF AND CONTRACT RATES TO CONSUMPTION ANALYSIS

<u>Customer</u>	<u>Bills/Usage 100 Gals.</u>	<u>Present Rate</u>	<u>Present Revenue</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
<u>WARWICK TOWNSHIP WATER AND SEWER AUTHORITY</u>					
<u>TARIFF RATES</u>					
Customer Charges - 8"	12	\$1,414.00	\$16,968	\$1,603.00	\$19,236
First Block	3,996	0.8833	3,530	1.0582	4,229
Second Block	<u>2,964,364</u>	0.8833	<u>2618423</u>	1.0582	<u>3,136,890</u>
Subtotal	<u>2,968,360</u>		<u>2,621,953</u>		<u>3,141,119</u>
Total	<u>2,968,360</u>		<u>\$2,638,921</u>		<u>\$3,160,355</u>
<u>CONTRACT RATES</u>					
Minimum Charges	2,190,000	\$44,158.29	\$529,899	\$45,262.25	\$543,147
Up to 243,333	553,355	0.2140	118,418	0.2194	121,406
Over 243,333	<u>225,005</u>	0.2080	<u>46,801</u>	0.2132	<u>47,971</u>
Total	<u>2,968,360</u>		<u>\$695,118</u>		<u>712,524</u>
Tariff less Contract Revenues			<u>\$1,943,803</u>		<u>\$2,447,831</u>

SCHWENKSVILLE BOROUGH AUTHORITY

<u>TARIFF RATES</u>					
Customer Charges - 3"	12	\$241.00	\$2,892	\$273.00	\$3,276
First Block	<u>235,906</u>	0.8833	<u>208,376</u>	1.0582	<u>249,636</u>
Subtotal	<u>235,906</u>		<u>208,376</u>		<u>249,636</u>
Total	<u>235,906</u>		<u>\$211,268</u>		<u>\$252,912</u>
<u>CONTRACT RATES</u>					
Customer Charges - 3"	12	\$241.00	\$2,892	\$273.00	\$3,276
All Usage	235,906	0.42760	<u>100,873</u>	0.43830	<u>103,398</u>
Total			<u>103,765</u>		<u>106,674</u>
Tariff less Contract Revenues			<u>\$107,503</u>		<u>\$146,238</u>

AQUA PENNSYLVANIA, INC.
MAIN DIVISION

APPLICATION OF TARIFF AND CONTRACT RATES TO CONSUMPTION ANALYSIS

<u>Customer</u>	<u>Bills/Usage 100 Gals.</u>	<u>Present Rate</u>	<u>Present Revenue</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
<u>HORSHAM WATER AND SEWER AUTHORITY</u>					
<u>TARIFF RATES</u>					
Customer Charges - 3"	12	\$241.00	\$2,892	\$273.00	\$3,276
First Block	<u>1,060,790</u>	0.8833	<u>936,996</u>	1.0582	<u>1,122,528</u>
Subtotal	<u>1,060,790</u>		<u>936,996</u>		<u>1,122,528</u>
Total	<u>1,060,790</u>		<u>\$939,888</u>		<u>\$1,125,804</u>
<u>CONTRACT RATES</u>					
Customer Charges - 3"	12	\$241.00	\$2,892	\$273.00	\$3,276
All Usage	<u>1,060,790</u>	0.2970	<u>315,055</u>	0.3044	<u>322,904</u>
Total	<u>1,060,790</u>		<u>317,947</u>		<u>326,180</u>
Tariff less Contract Revenues			<u>\$621,941</u>		<u>\$799,624</u>

BUCKS COUNTY WATER AND SEWER AUTHORITY

<u>TARIFF RATES</u>					
Customer Charges - 8"	12	\$1,414.00	\$16,968	\$1,603.00	\$19,236
First Block	<u>105,670</u>	0.8833	<u>93,338</u>	1.0582	<u>111,820</u>
Subtotal	<u>105,670</u>		<u>93,338</u>		<u>111,820</u>
Total	<u>105,670</u>		<u>\$110,306</u>		<u>\$131,056</u>
<u>CONTRACT RATES</u>					
Customer Charges - 3"	12	\$1,414.00	\$16,968	\$1,603.00	\$19,236
All Usage	<u>105,670</u>	0.3440	<u>36,350</u>	0.3526	<u>37,259</u>
Total	<u>105,670</u>		<u>53,318</u>		<u>56,495</u>
Tariff less Contract Revenues			<u>\$56,988</u>		<u>\$74,561</u>

AQUA PENNSYLVANIA, INC.
MAIN DIVISION

APPLICATION OF TARIFF AND CONTRACT RATES TO CONSUMPTION ANALYSIS

<u>Customer</u>	<u>Bills/Usage 100 Gals.</u>	<u>Present Rate</u>	<u>Present Revenue</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
<u>Masury Water Company</u>					
<u>TARIFF RATES</u>					
Customer Charges	12	\$808.00	\$9,696	\$916.00	\$10,992
First Block	3,996	0.8833	3,530	1.0582	4,229
Fifth Block	<u>823,199</u>	0.5454	<u>448,973</u>	1.0582	<u>871,109</u>
Subtotal	<u>827,195</u>		<u>452,503</u>		<u>875,338</u>
Total	<u>827,195</u>		<u>462,199</u>		<u>\$886,330</u>
<u>CONTRACT RATES</u>					
Customer Charges	12	\$808.00	\$9,696	\$916.00	\$10,992
All Usage	<u>827,195</u>	0.16641	<u>137,654</u>	0.17060	141,119
Total	<u>827,195</u>		<u>147,350</u>		<u>152,111</u>
Tariff less Contract Revenues			<u>\$314,849</u>		<u>\$734,219</u>
<u>New Wilmington Water</u>					
<u>TARIFF RATES</u>					
Customer Charges	12	\$392.00	\$4,704	\$444.00	\$5,328
First Block	3,996	0.8833	3,530	1.0582	4,229
Fifth Block	<u>690,744</u>	0.5454	<u>376,732</u>	1.0582	<u>730,945</u>
Subtotal	<u>694,740</u>		<u>380,262</u>		<u>735,174</u>
Total	<u>694,740</u>		<u>384,966</u>		<u>\$740,502</u>
<u>CONTRACT RATES</u>					
Customer Charges	12	\$392.00	\$4,704	\$444.00	\$5,328
All Usage	<u>694,740</u>	0.49840	<u>346,258</u>	0.51090	354,943
Total	<u>694,740</u>		<u>350,962</u>		<u>360,271</u>
Tariff less Contract Revenues			<u>\$34,004</u>		<u>\$380,231</u>

AQUA PENNSYLVANIA, INC.
MAIN DIVISION

APPLICATION OF TARIFF AND CONTRACT RATES TO CONSUMPTION ANALYSIS

<u>Customer</u>	<u>Bills/Usage 100 Gals.</u>	<u>Present Rate</u>	<u>Present Revenue</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
<u>Borough of Sharpville</u>					
<u>TARIFF RATES</u>					
Customer Charges	24	\$1,414.00	\$33,936	\$1,603.00	\$38,472
First Block	3,996	0.8833	3,530	1.0582	4,229
Fifth Block	<u>1,897,144</u>	0.5454	<u>1,034,702</u>	1.0582	<u>2,007,558</u>
Subtotal	<u>1,901,140</u>		<u>1,038,232</u>		<u>2,011,787</u>
Total	<u>1,901,140</u>		<u>1,072,168</u>		<u>\$2,050,259</u>
<u>CONTRACT RATES</u>					
Customer Charges	24	\$1,414.00	\$33,936	\$1,603.00	\$38,472
All Usage	<u>1,901,140</u>	0.22000	<u>418,251</u>	0.22550	<u>428,707</u>
Total	<u>1,901,140</u>		<u>452,187</u>		<u>467,179</u>
Tariff less Contract Revenues			\$619,981		\$1,583,080

AQUA PENNSYLVANIA, INC.
MAIN DIVISION

APPLICATION OF TARIFF AND CONTRACT RATES TO CONSUMPTION ANALYSIS

<u>Customer</u>	<u>Bills/Usage 100 Gals.</u>	<u>Present Rate</u>	<u>Present Revenue</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
<u>WAYMART DIVISION - CANAAN FEDERAL PRISON</u>					
<u>TARIFF RATES</u>					
Customer Charges - 10"	12	\$2,090.00	\$25,080	\$2,369.00	\$28,428
First Block	1,200	0.8833	1,060	1.0582	1,270
Second Block	2,796	0.7760	2,170	0.9296	2,599
Third Block	36,000	0.6438	23,177	0.7713	27,767
Fourth Block	<u>869,004</u>	0.5382	<u>467,698</u>	0.6448	<u>560,334</u>
Subtotal	<u>909,000</u>		<u>494,105</u>		<u>591,970</u>
Total	909,000		\$519,185		\$620,398
<u>CONTRACT RATES</u>					
Take-or-pay Minimum up to 4,500,000 per mo.	540,000	\$22,375.00	\$268,500	\$22,934.38	\$275,213
All Usage Over Minimum	<u>369,000</u>	0.1250	<u>46,125</u>	0.1281	<u>47,269</u>
Total	909,000		<u>314,625</u>		<u>322,482</u>
Tariff less Contract Revenues			\$204,560		\$297,916

AQUA PENNSYLVANIA, INC.
MAIN DIVISION

APPLICATION OF TARIFF AND CONTRACT RATES TO CONSUMPTION ANALYSIS

<u>Customer</u>	<u>Bills/Usage 100 Gals.</u>	<u>Present Rate</u>	<u>Present Revenue</u>	<u>Proposed Rate</u>	<u>Proposed Revenue</u>
<u>SCI FOREST COUNTY PRISON</u>					
<u>TARIFF RATES</u>					
Customer Charges - 4"	12	\$365.00	\$4,380	\$444.00	\$5,328
First Block	1,200	0.8833	1,060	1.0582	1,270
Second Block	2,796	0.7760	2,170	0.9296	2,599
Third Block	36,000	0.6438	23,177	0.7713	27,767
Fourth Block	<u>842,046</u>	0.5382	<u>453,189</u>	0.6448	<u>542,951</u>
Subtotal	<u>882,042</u>		<u>479,596</u>		<u>574,587</u>
Total	882,042		\$483,976		\$579,915
<u>CONTRACT RATES</u>					
Take-or-pay Minimum up to 9,125,000 per mo.	882,042	\$49,517.48	\$594,210	\$59,325.20	\$711,902
All Usage Over Minimum					
First Block	0	\$0.8833	0	\$1.0582	0
Second Block	0	\$0.7760	0	\$0.9296	0
Third Block	0	\$0.6438	0	\$0.7713	0
Fourth Block	<u>0</u>	\$0.5382	<u>0</u>	\$0.6448	<u>0</u>
Total	882,042		<u>594,210</u>		<u>711,902</u>
Tariff less Contract Revenues			-\$110,234		-\$131,987