

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF
PAUL R. HERBERT

ON BEHALF OF
AQUA PENNSYLVANIA, INC.

CONCERNING
COST OF SERVICE ALLOCATION
AND
CUSTOMER RATE DESIGN

DOCKET NO. R-2011-2267958

NOVEMBER 18, 2011

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

RE: AQUA PENNSYLVANIA, INC.
DOCKET R-2011-2267958

DIRECT TESTIMONY OF PAUL R. HERBERT

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

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

4 **Q. By whom are you employed?**

5 A. I am employed by Gannett Fleming, Inc.

6 **Q. Please describe your position with Gannett Fleming, Inc., and briefly state your
7 general duties and responsibilities.**

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

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

13 A. Yes. I have testified before the Pennsylvania Public Utility Commission, the New
14 Jersey Board of Public Utilities, the Public Utilities Commission of Ohio, the Public
15 Service Commission of West Virginia, the Kentucky Public Service Commission, the
16 Iowa State Utilities Board, the Virginia State Corporation Commission, the Tennessee
17 Regulatory Authority, the California Public Utilities Commission, the New Mexico
18 Public Regulation Commission, the Illinois Commerce Commission, the Arizona
19 Corporation Commission, the Delaware Public Service Commission, the Connecticut
20 Department of Public Utility Control, the Idaho Public Utilities Commission, and the
21 Missouri Public Service Commission concerning revenue requirements, cost of service

1 allocation, rate design and cash working capital claims. A list of the cases in which I
2 have testified is provided at the end of my direct testimony.

3 **Q. What is your educational background?**

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

6 **Q. Would you please describe your professional affiliations?**

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

12 **Q. Briefly describe your work experience.**

13 A. I joined the Valuation Division of Gannett Fleming Corddry and Carpenter, Inc.,
14 predecessor to Gannett Fleming Valuation and Rate Consultants, Inc. and the
15 Valuation Division of Gannett Fleming, Inc., in September 1977, as a Junior Rate
16 Analyst. Since then, I advanced through several positions and was assigned the
17 position of Manager of Rate Studies on July 1, 1990. On June 1, 1994, I was
18 promoted to the position of Vice President. On November 3, 2003, I was promoted to
19 the position of Senior Vice President and on July 1, 2007, I was promoted to my
20 current position of President.

21 While attending Penn State, I was employed during the summers of 1972,
22 1973 and 1974 by the United Telephone System - Eastern Group in its accounting
23 department. Upon graduation from college in 1975, I was employed by Herbert

1 Associates, Inc., Consulting Engineers (now Herbert Rowland and Grubic, Inc.), as a
2 field office manager until September 1977.

3
4 **COST OF SERVICE ALLOCATION**

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

6 A. My testimony is in support of the cost of service allocation and rate design studies
7 conducted under my direction and supervision for the combined utility plant of Aqua
8 Pennsylvania, Inc.

9 **Q. Have you prepared exhibits presenting the results of your studies?**

10 A. Yes. Exhibit No. 50-B presents the results of the allocation of the pro forma cost of
11 service of Aqua Pennsylvania, Inc. ("Aqua PA" or the "Company") as of June 30,
12 2012. Exhibit No. 5-A, Part I, is the analysis of customers' consumption in the form of
13 a bill frequency analysis. Exhibits No. 5-A, Part II, and 50-A present the application of
14 rates to the analysis of customers' consumption.

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

16 A. The purpose of the study was to allocate the total cost of service, which is the total
17 revenue requirement, to the several customer classifications. The cost of service
18 study includes all of Aqua PA's water operations in Pennsylvania. In the study, the
19 total costs were allocated to the residential, commercial, industrial, public, other water
20 utilities, private fire protection and public fire protection classifications in accordance
21 with generally-accepted principles and procedures. The cost of service allocation
22 results in indications of the relative cost responsibilities of each class of customers.
23 The allocated cost of service is one of several criteria appropriate for consideration in
24 designing customer rates to produce the required revenues.

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

2 A. Yes. As previously noted, the results of my allocation of the pro forma cost of service
3 as of June 30, 2012, are presented in Exhibit No. 50-B.

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

5 A. The base-extra capacity method, as described in the 2000 and prior Water Rates
6 Manuals published by the American Water Works Association (AWWA), was used to
7 allocate the pro forma costs. This is a recognized method for allocating the cost of
8 providing water service to customer classifications in proportion to each
9 classifications' use of the commodity, facilities and services. It is generally accepted
10 as a sound method for allocating the cost of water service and has been used by the
11 Company and accepted by this Commission in the Company's rate cases for over 30
12 years.

13 **Q. Is the method described in Exhibit No. 50-B?**

14 A. Yes. It is described on pages 3 and 4 of the exhibit.

15 **Q. Please describe the procedure followed in the cost allocation study.**

16 A. Each identified classification of cost in the pro forma cost of service was allocated to
17 the customer classifications through the use of appropriate allocation factors. This
18 allocation is presented in Schedule D on pages 10 through 16 of Exhibit No. 50-B.
19 The items of cost, which include operation and maintenance expenses, depreciation
20 expense, taxes and income available for return, are identified in column 1 of
21 Schedule D. The cost of each item, shown in column 3, is allocated to the several
22 customer classifications based on allocation factors referenced in column 2. The
23 development of the allocation factors is presented in Schedule E of the exhibit.

1 I will use some of the larger cost items to illustrate the principles and
2 considerations used in the cost allocation methodology. Water purchased for resale,
3 purchased electric power and treatment chemicals are examples of costs that tend to
4 vary with the amount of water consumed and are thus considered base costs. They
5 are allocated to the several customer classifications in direct proportion to the
6 average daily consumption of those classifications through the use of Factor 1. The
7 development of Factor 1 is shown in Schedule E on page 17 of Exhibit No. 50-B.

8 Other source of supply, pumping, purification and transmission costs are
9 associated with meeting usage requirements in excess of the average, generally to
10 meet maximum day requirements. Costs of this nature were allocated to customer
11 classifications partially as base costs, proportional to average daily consumption,
12 partially as maximum day extra capacity costs, in proportion to maximum day extra
13 capacity, and, in the case of certain pumping stations and transmission mains,
14 partially as fire protection costs, through the use of Factors 2 and 3. The
15 development of the allocation factors, referenced as Factors 2 and 3, is shown in
16 Schedule E, on pages 17 and 18 and pages 19 and 20, respectively, of Exhibit No.
17 50-B.

18 Costs associated with distribution mains and storage facilities were allocated
19 partly on the basis of average consumption and partly on the basis of maximum hour
20 extra demand, including the demand for fire protection service, because these
21 facilities are designed to meet maximum hour and fire demand requirements. The
22 development of the factors, referenced as Factors 4 and 5, used for these allocations
23 is shown in Schedule E, on pages 21 through 24, of Exhibit No. 50-B. Fire demand
24 costs were allocated to public and private fire protection service and general service

1 in proportion to the relative potential demands on the system by hydrants, fire
2 services and commercial service lines sized to provide both fire protection and
3 general service, as presented in Schedule G on page 41 of Exhibit No. 50-B.

4 Costs associated with pumping facilities were allocated on combined bases
5 of maximum day, maximum day including fire and maximum hour extra capacity
6 because these facilities serve these functions. The relative weightings of Factor 2
7 (maximum day), Factor 3 (maximum day with fire) and Factor 4 (maximum hour) for
8 pumping facilities were based on the horsepower of the pumps serving these
9 functions. The development of the pump horsepower serving each function was
10 based on a review and classification of the pumps in the system. The development of
11 these weighted factors, referenced as Factor 6, is presented on page 25 of Exhibit
12 No. 50-B.

13 Costs associated with meters and services facilities were allocated to
14 customer classifications in proportion to the capital costs of the sizes and quantities of
15 meters and services serving each classification. The development of factors for
16 meters and services, referenced as Factor 8 and Factor 9, is presented on pages 26
17 through 29 of Exhibit No. 50-B.

18 Costs for customer accounting, billing and collecting were allocated on the
19 basis of the number of bills for each classification, and costs for meter reading were
20 allocated on the basis of the number of bills rendered to metered customers. The
21 development of these factors, referenced as Factor 10 and Factor 11, is presented on
22 page 30 of Exhibit No. 50-B.

23 Administrative and general costs were allocated on the basis of allocated
24 direct costs excluding those costs such as purchased water, power and chemicals

1 which require little administrative and general expense. The development of factors
2 for this allocation, referenced as Factor 15, is presented on page 32 of Exhibit No. 50-
3 B.

4 Annual depreciation accruals were allocated on the basis of the function of
5 the facilities represented by the depreciation expense for each depreciable plant
6 account. The original cost less depreciation of utility plant in service was similarly
7 allocated for the purpose of developing Factor 18 for allocating items such as income
8 taxes and return. The development of Factor 18 is presented on pages 36 through
9 38 of Exhibit No. 50-B.

10 **Q. What was the source of the total cost of service data set forth in column 3 of**
11 **Schedule D of Exhibit No. 50-B?**

12 A. The pro forma costs of service were furnished by the rate department of the
13 Company, and are set forth in Exhibit No. 1-A.

14 **Q. Refer to Schedule E, pages 18 and 22 of Exhibit No. 50-B, and explain the**
15 **source of the system maximum day and maximum hour ratios used in the**
16 **development of Factors 2, 3, 4 and 5.**

17 A. The ratios were based on a review of experienced Company data set forth on
18 Schedule F of Exhibit No. 50-B. The maximum day ratio of 1.4 times the average day
19 approximates the ratio of maximum daily send-out to average daily send-out ex-
20 perience by the Company in 1999, 2001 and 2010, which are the years in which the
21 highest maximum day deliveries were experienced. The maximum hour ratio of 2.0
22 times the average hour approximates the ratio of peak hour to average hour
23 consumption experienced by the Company in 1995, 1997, 2001 and 2010, which are
24 the years in which the highest peak hour deliveries were experienced.

1 **Q. Are the system maximum day and maximum hour ratios the same as the ratios**
2 **used in the study presented in the Company's most recent water base rate**
3 **proceeding at Docket No. R-2009-2132019?**

4 A. Yes, they are.

5 **Q. What factors were considered in estimating the maximum day extra capacity**
6 **and maximum hour extra capacity demands used for the customer**
7 **classifications in the development of Factors 2, 3, 4 and 5?**

8 A. The estimated demands were based on judgment which considered field studies of
9 customer class demands conducted for the Company, field observations of the
10 service areas of the Company, field studies of similar service areas in Pennsylvania
11 conducted by my firm, and generally-accepted customer class maximum day and
12 maximum hour demand ratios. The study of customer class demands was initiated in
13 1991 with the selection and monitoring of Residential customers and neighborhoods.
14 Monitoring continued for these customers with some additional modifications and for
15 customers from other classes. The results of the demand study are presented in the
16 Appendix to Exhibit No. 50-B. A discussion of the specific factors considered for
17 each class also is presented in the Appendix.

18 **Q. Are the customer class extra capacity factors the same as those used in the**
19 **most recent cost of service study for the Company?**

20 A. Yes, they are.

21 **Q. Please explain why the unrecovered portion of public fire protection is**
22 **allocated to other classes.**

23 A. The study reallocates the unrecovered portion of public fire protection costs to the
24 residential, commercial, industrial and public classifications. This was done pursuant

1 to Section 1328 of the Public Utility Code, which provides that public fire hydrant rates
2 only need to recover 25% of the cost of service and that the portion of such costs not
3 recovered in public fire protection rates should be recovered from other classes
4 through those classes' fixed charges. Effectively, the statute has reassigned the
5 unrecovered costs to other classes, and it is appropriate to reflect that reassignment
6 in the cost of service study.

7 **Q. How did you allocate the unrecovered portion of the cost of public fire**
8 **protection service?**

9 A. Based on the requirement that these costs are to be recovered in fixed charges, I
10 allocated the unrecovered public fire costs using Factor 21, which is based on the
11 meter equivalents of the residential, commercial, industrial and public classifications.
12 Factor 21 is the allocation factor used to allocate among customer classes the bulk of
13 the costs that comprise their fixed charges.

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

15 A. Yes. The results are summarized in columns 1, 2 and 3 of Schedule A on page 7 of
16 Exhibit No. 50-B. Column 2 sets forth the total allocated pro forma cost of service as
17 of June 30, 2012, for each customer classification identified in column 1. Column 3
18 presents each customer classification's cost responsibility as a percent of the total
19 cost.

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

22 A. Yes. The allocated cost responsibilities shown in column 3 of Schedule A of Exhibit
23 50-B can be compared to the percentage revenue under existing rates shown in
24 column 5 of that schedule. A similar comparison can be made of the percentage cost

1 responsibilities (relative cost of service) and the percentage of pro forma revenues
2 (relative revenues) under proposed rates, which are shown in columns 3 and 7,
3 respectively, of Schedule A of Exhibit No. 50-B.

4
5 **CUSTOMER RATE DESIGN**

6 **Q. Who is responsible for the design of the rate schedules proposed by the**
7 **Company in this proceeding?**

8 A. Mr. William C. Packer, Jr., Aqua PA's Manager of Rates & Planning – Northeast
9 Divisions, and I are responsible for the rate design.

10 **Q. Is the proposed rate structure presented in an exhibit?**

11 A. Yes. A comparison of the present and proposed rate schedules is presented in the
12 response to Standard Data Request OR-3.

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

15 A. In preparing a rate structure, one should consider the allocated costs of service, the
16 impact of radical changes from the present rate structure, the understandability and
17 ease of application of the rate structure, community and social influences, and the
18 value of service, particularly competitive concerns. General guidelines should be
19 developed with management to determine the extent to which each of these criteria is
20 to be incorporated in the rate structure to be designed, inasmuch as the pricing of a
21 commodity or service ultimately should be a function of the Company's management.

22 **Q. Were rate design guidelines developed in collaboration with Company**
23 **management?**

1 A. Yes, they were. Those guidelines are: (1) maintain separate rate divisions for those
2 areas with normal usage and those areas with seasonal usage; (2) maintain a low-
3 use block for the residential class at 2,000 gallons per month in each division, and a
4 sixth block for the industrial classification for usage over 10 million gallons per month;
5 (3) continue movement of those areas with normal usage toward the Main Division
6 rates and those with seasonal usage toward a seasonal rate structure; (4) maintain
7 the existing Main Division private fire rates and move the remaining divisions toward
8 the Main Division rates; and (5) maintain all existing public fire hydrant rates except
9 for those that are below 25% of cost of service, which will be increased to, or toward,
10 the 25% cost of service level. I would note that questions concerning these
11 guidelines should be directed to Mr. Packer.

12 **Q. Do the proposed rates comply with these guidelines?**

13 A. Yes, they do.

14 **Q. How does the proposed rate structure advance the goal of rate equalization for**
15 **those Divisions encompassed by Guideline Number 3, above?**

16 A. In general, the proposed customer charges, minimum allowances and consumption
17 rates for those Divisions are being moved toward the Main Division rates by varying
18 degrees.

19 For the Main Division, the 5/8-inch customer charge was set at \$17.00 per
20 month. This represents a 13.3% base rate-to-base rate increase in the customer
21 charge, or 5.4% over the present base rate customer charge including the DSIC. The
22 proposed customer charge is still less than the customer charge indicated by the
23 customer cost analysis for a 5/8-inch meter, which is \$21.52 per month. The base
24 rate customers charges for all other meter sizes are being increased by 13.3% as

1 well. Consumption charges are being increased such that revenues by class move
2 toward cost of service and so that the total revenue requirement will be recovered.

3 **Q. Please explain the proposed rates for all of the non-seasonal divisions.**

4 A. The following divisions have either achieved Main Division rates or are proposed to
5 merge with the Main Division in this case:

- 6 • Hedgerow and Paupaken Lake.

7
8 The following Divisions are expected to be merged with the Main Division at the
9 conclusion of this case:

- 10 • White Haven, Pinecrest, Marienville/Applewood, Cove Village, Clarendon,
11 Emlenton, and Washington Park.

12
13 The following Divisions are being moved toward Main Division, but will require
14 additional rate cases to achieve Main Division Rates:

- 15 • Bensalem, Chalfont, Country Club Estates, Kratzerville, and Honesdale.

16
17
18 **Q. Please explain the change in rate structure for the multi-unit customers in
19 Honesdale.**

20 A. Under existing rates in Honesdale, multi-unit customers (such as apartments
21 buildings served from one meter) are billed a 5/8-inch or 3/4-inch customer charge for
22 each unit served from the common meter. The consumption allowance and
23 consumption blocks also are multiplied by the number of units served and the usage
24 over the allowance is priced through the modified blocks.

25 In order to move toward Main Division rates, this multi-unit rate structure is
26 being eliminated. Thus, the proposed rates will be designed to be appropriate for the
27 meter size actually being employed to serve the customer; there will be no usage
28 allowance; and the rates for each consumption block will be the same as those

1 currently in effect for the Main Division. Consequently, the proposed rates for
2 customers formerly served under the multi-unit rate structure will be the same as the
3 rates currently in effect for the Main Division for customers with the same size meters.

4 **Q. Please explain the rate structure for seasonal areas.**

5 A. Fawn Lake, Woodledge Village, Western, and Eagle Rock Divisions have a
6 significant number of seasonal customers and will be merged into the seasonal rate
7 design in this case or at the conclusion of this case. The customer charge will be
8 increased to \$28.00 per month, but will be offset by lower residential consumption
9 rates than those of the Main Division. Customers' bills under the seasonal rate
10 structure will be the same as under the Main Division's rates at usage levels of 4,000
11 gallons per month and above.

12 The Pinecrest, Oakland Beach, and Lakeside Acres Divisions are expected
13 to be merged into the seasonal rate design at the conclusion of this case.

14 The CS Water Division is proposed to move toward the seasonal rate design
15 in this case, but will require additional cases to attain the seasonal rate design.

16 **Q. Please explain the concerns regarding competing sources of supply for
17 Industrial, Public and Sales to Other Water Utilities customers.**

18 A. Many of the Company's very large customers are capable of developing alternative
19 sources of water. In order to avoid the loss of very large customers from which the
20 Company recovers a significant amount of its fixed costs, competitive service riders
21 were proposed and approved in the Company's 1997 rate proceeding. The
22 competitive service riders DIS (Demand-Based Industrial Service), DRS (Demand-
23 Based Resale Service) and EGS (Electric Generation Service) enable the Company
24 to retain customers who are able to develop water supplies at average costs per

1 hundred gallons that are less than the Company's tariff rates. These customers, in
2 return for a negotiated rate that is less than the tariff rate, are required to enter into a
3 contract with the Company, purchase a minimum amount of water each month and
4 maintain favorable load factors. The use of such riders retains the recovery of
5 significant fixed costs from these customers that otherwise would have to be
6 recovered from all other customers.

7 **Q. Have you reflected revenues based on the competitive service riders in**
8 **developing the revenues to be produced under proposed rates by the**
9 **Industrial, Public and Sales to Other Water Utilities classes?**

10 A. Yes, I have. The revenues for the Industrial, Public and Sales to Other Water Utilities
11 classifications include contract revenues for four Industrial customers, two Public
12 customers and four Other Water Utility customers. There is also a separate tariff rate
13 in effect for Masury Water Company, which is a Sale for Resale customer served
14 from the Company's Shenango Valley Division.

15 **Q. Why did you maintain the Main Division public fire hydrant rate at \$303 per**
16 **year?**

17 A. The present annual rate of \$303 per year is more than 25 percent of the annual cost
18 of service per hydrant. Section 1328 of the Public Utility Code precludes increases in
19 public fire hydrant rates when the rate is more than 25 percent of the cost.

20 **Q. What changes are proposed for the public fire hydrant rates in the other**
21 **divisions?**

22 A. The present public fire hydrant rates in Bristol, Bensalem, Chalfont, Roaring Creek,
23 NUI-II, Fawn Lake Forest, Pinecrest, Emlenton, NUI-III, Kratzerville, and Honesdale
24 are being increased toward, or equal to, the 25% of cost of service level, which is

1 \$22.00 per month. All new hydrants throughout Aqua PA will be set at this \$22.00
2 rate except in areas where the prevailing rate is less than \$22.00. The remaining
3 public fire hydrant rates were left unchanged, as shown in Schedule 3B of Exhibit No.
4 50-A.

5 **Q. Does the Company propose to increase the current metered private fire**
6 **protection rates?**

7 A. No, it does not. The present Main Division base rates for private fire customers will
8 not be increased under proposed rates. The rates for the Bensalem and Honesdale
9 Divisions will be moved toward, or equal to, the Main Division private fire protection
10 rates, as shown in Schedule 3A of Exhibit No. 50-A.

11 **Q. Please describe the development of the standby tariff rates.**

12 A. The proposed Industrial Standby Rates and Resale and Electric Generation Standby
13 Rates include service, demand and commodity charges. The service charges are the
14 same as those set forth on the Schedule of Rates for the Main Division proposed in
15 this case.

16 The demand and commodity rates are based on the allocation of the cost of
17 service to cost functions as shown in the Appendix to Exhibit No. 50-B. The firm
18 standby demand charge includes the fixed operating and capital costs for the base
19 and extra capacity functions. The interruptible standby demand charge includes only
20 the fixed operating costs for the base and extra capacity functions.

21 The commodity rate associated with water deliveries pursuant to firm standby
22 demand includes only variable operating costs. The commodity rate associated with
23 deliveries pursuant to interruptible standby demand includes variable operating costs
24 as well as capital costs for the base and extra capacity functions. The commodity

1 rate for deliveries in excess of either the specified firm or interruptible standby
2 demand is the same as the rate for the first block of the industrial rate schedule for
3 the Main Division.

4 **Q. Did you prepare an exhibit to show the calculation of the standby rates?**

5 A. Yes. Schedule H in Exhibit No. 50-B, sets forth the calculation of the firm and
6 interruptible standby rates based on the cost of service data submitted in this case.

7
8 **APPLICATION OF RATES TO**
9 **CUSTOMERS' CONSUMPTION ANALYSIS**

10
11 **Q. Please describe Exhibits No. 5-A and 50-A.**

12 A. Exhibit No. 5-A is presented in two parts. Part I, titled "Water Consumption Analysis
13 for the Twelve Months Ended June 30, 2011", presents the detailed water customers'
14 consumption analysis. Part II, titled "Application of Rates to Consumption Analysis
15 for the Twelve Months Ended June 30, 2011" presents the application of the present
16 rates to the bill analysis for each rate division and the development of pro forma
17 revenues under present rates as of June 30, 2012.

18 Exhibit No. 50-A, titled "Operating Revenue from Sales of Water", presents
19 the development of pro forma revenues under proposed rates based on estimated
20 conditions during the future test year ended June 30, 2012.

21 **Q. What is the purpose of the rate application?**

22 A. The purpose of the rate application is to establish the level of revenues to be derived
23 from each customer classification under present and proposed rates based on
24 consumption for the twelve months ended June 30, 2011 and June 30, 2012.

25 **Q. Please outline the contents of Exhibit No. 5-A, Part I.**

1 A. Exhibit No. 5-A, Part I, includes the water customers' consumption analysis for each
2 meter size, billing frequency and customer classification for each division. Each
3 analysis sets forth the number of bills, consumption and the cumulative bills and
4 consumption at each level of consumption in hundred gallons.

5 **Q. Please outline the contents of Exhibit No. 5-A, Part II.**

6 A. Exhibit No. 5-A, Part II, includes the plan of the exhibit, an explanation of the rate
7 application procedures, summaries of the rate applications and the application of
8 present rates to the several consumption analyses.

9 Schedule 1 (page 3) presents the summary of pro forma revenues for the
10 consolidated divisions for the twelve months ended June 30, 2012.

11 Schedule 2 (pages 4 and 5) presents the summary of the application of
12 present rates and the development of the pro forma revenue under present rates for
13 each division. Schedules 3A and 3B set forth the application of present metered
14 private fire and private and public fire hydrant rates.

15 Schedule 4 (pages 8 through 52) presents the application of present rates to
16 the consumption analysis for each of the divisions.

17 **Q. Please explain the calculations associated with the application of the rates to**
18 **consumption.**

19 A. An analysis of customer consumption for the twelve months ended June 30, 2011,
20 was prepared by the Company and was provided in electronic form. The Company's
21 analysis was summarized and the results are presented in Part I of Exhibit No. 5-A.
22 The present rates effective June 17, 2010, for each division were applied to the
23 consumption data and summarized in Schedule 2. The total revenues from Schedule
24 2 were brought forward to column 4 of Schedule 1.

1 Column 5 applies the 7.5% DSIC surcharge to the consumption analysis
2 revenue to determine revenues under present rates in column 5. The revenues are
3 further adjusted for pro forma revenue adjustments, set forth in columns 6 and 7, to
4 develop the total revenues shown in column 8.

5 **Q. Please outline the contents of Exhibit No. 50-A.**

6 A. Exhibit No. 50-A includes the plan of the exhibit, summaries of the rate applications
7 and the application of proposed rates.

8 Schedule 1 (page 3) presents the summary of the pro forma revenues under
9 proposed rates for the twelve months ending June 30, 2012 for the consolidated
10 divisions. The revenues shown in columns 4 and 5 of Schedule 1 were developed in
11 Schedule 2. Columns 6 and 7 show the pro forma revenue adjustments under
12 proposed rates, and column 8 shows the total pro forma revenue under proposed
13 rates.

14 Schedule 2 summarizes the application of proposed rates and the
15 development of the pro forma revenue under proposed rates for the twelve months
16 ending June 30, 2012 for each division. Schedules 3A and 3B present the application
17 of proposed metered private fire rates and proposed fire hydrant charges for both
18 private and public fire protection, respectively.

19 The development of pro forma revenues under proposed rates for each
20 division is presented in Schedule 4. A comparison of the present and proposed rates
21 for each division, as well as comparisons of customer bills, are provided in response
22 to Standard Data Request OR-3.

Q. Does this conclude your direct testimony?

A. Yes, it does.

PAUL R. HERBERT - LIST OF CASES TESTIFIED

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

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50.	2007	Ca. PUC	U-339-W	Suburban Water Systems	Water Conservation Rate Design
51.	2007	Ca. PUC	U-168-W	San Jose Water Company	Water Conservation Rate Design
52.	2007	Pa. PUC	R-00072229	Pennsylvania American Water Company	Cost Allocation and Rate Design
53.	2007	Ky. PSC	2007-00143	Kentucky American Water Company	Cost Allocation and Rate Design
54.	2007	Mo. PSC	WR-2007-0216	Missouri American Water Company	Cost Allocation and Rate Design
55.	2007	Oh. PUC	07-1112-WS-AIR	Ohio American Water Company	Cost Allocation and Rate Design
56.	2007	Il. CC	07-0507	Illinois American Water Company	Customer Class Demand Study
57.	2007	Pa. PUC	R-00072711	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
58.	2007	NJ BPU	WR07110866	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
59.	2007	Pa. PUC	R-00072492	City of Bethlehem – Bureau of Water	Revenue Reqmts, Cost Alloc.
60.	2007	WV PSC	07-0541-W-MA	Clarksburg Water Board	Cost Allocation and Rate Design
61.	2007	WV PSC	07-0998-W-42T	West Virginia American Water Company	Cost Allocation and Rate Design
62.	2008	NJ BPU	WR08010020	New Jersey American Water Company	Cost Allocation and Rate Design
63.	2008	Va St Corp Com	PUE-2008-00009	Virginia American Water Company	Cost Allocation and Rate Design
64.	2008	Tn. Reg. Auth.	08-00039	Tennessee American Water Company	Cost Allocation and Rate Design
65.	2008	Mo PSC	WR-2008-0311	Missouri American Water Company	Cost Allocation and Rate Design
66.	2008	De PSC	08-96	Artesian Water Company, Inc.	Cost Allocation and Rate Design
67.	2008	Pa PUC	R-2008-2032689	Penna. American Water Co. – Coatesville Wastewater	Cost Allocation and Rate Design
68.	2008	AZ Corp. Com.	W-01303A-08-0227 SW-01303A-08-0227	Arizona American Water Co. - Water - Wastewater	Cost Allocation and Rate Design
69.	2008	Pa PUC	R-2008-2023067	The York Water Company	Cost Allocation and Rate Design
70.	2008	WV PSC	08-0900-W-42T	West Virginia American Water Company	Cost Allocation and Rate Design
71.	2008	Ky PSC	2008-00250	Frankfort Electric and Water Plant Board	Cost Allocation and Rate Design
72.	2008	Ky PSC	2008-00427	Kentucky American Water Company	Cost Allocation and Rate Design
73.	2009	Pa PUC	2008-2079660	UGI – Penn Natural Gas	Cost of Service Allocation
74.	2009	Pa PUC	2008-2079675	UGI – Central Penn Gas	Cost of Service Allocation
75.	2009	Pa PUC	2009-2097323	Pennsylvania American Water Co.	Cost Allocation and Rate Design
76.	2009	Ia St Util Bd	RPU-09-	Iowa-American Water Company	Cost Allocation and Rate Design
77.	2009	Il CC	09-0319	Illinois-American Water Company	Cost Allocation and Rate Design
78.	2009	Oh PUC	09-391-WS-AIR	Ohio-American Water Company	Cost Allocation and Rate Design
79.	2009	Pa PUC	R-2009-2132019	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
80.	S009	Va St Corp Com	PUE-2009-00059	Aqua Virginia, Inc.	Cost Allocation (only)
81.	2009	Mo PSC	WR-2010-0131	Missouri American Water Company	Cost Allocation and Rate Design
82.	2010	Va St Corp Com	PUE-2010-00001	Virginia American Water Company	Cost Allocation and Rate Design
83.	2010	Ky PSC	2010-00036	Kentucky American Water Company	Cost Allocation and Rate Design
84.	2010	NJ BPU	WR10040260	New Jersey American Water Company	Cost Allocation and Rate Design
85.	2010	Pa PUC	2010-2167797	T.W. Phillips Gas and Oil Co.	Cost Allocation and Rate Design
86.	2010	Pa PUC	2010-2166212	Pennsylvania American Water Co. - Wastewater	Cost Allocation and Rate Design
87.	2010	Pa PUC	R-2010-2157140	The York Water Company	Cost Allocation and Rate Design
88.	2010	Ky PSC	2010-00094	Northern Kentucky Water District	Cost Allocation and Rate Design
89.	2010	WV PSC	10-0920-W-42T	West Virginia American Water Co.	Cost Allocation and Rate Design
90.	2010	Tn Reg Auth	10-00189	Tennessee American Water Company	Cost Allocation and Rate Design
91.	2010	Ct Dept PU Cntrl	10-09-08	United Water Connecticut	Cost Allocation and Rate Design
92.	2010	Pa PUC	R-2010-2179103	City of Lancaster-Bureau of Water	Rev Rqmts, Cst Alloc/Rate Dsgn
93.	2011	Pa PUC	R-2010-2214415	UGI Central Penn Gas, Inc.	Cost Allocation
94.	2011	Pa PUC	R-2011-2232359	The Newtown Artesian Water Co.	Revenue Requirement
95.	2011	Pa PUC	R-2011-2232243	Pennsylvania American Water Co.	Cost Allocation and Rate Design
96.	2011	Pa PUC	R-2011-2232985	United Water Pennsylvania Inc.	Demand Study, COS/Rate Dsgn
97.	2011	Pa PUC	R-2011-2244756	Bethlehem, City of – Bureau of Water	Rev. Rqmts/COS/Rate Dsgn
98.	2011	Mo PSC	WR-2011-337,338	Missouri American Water Company	Cost Allocation and Rate Dsgn
99.	2011	Oh PUC	11-4161-WS-AIR	Ohio American Water Company	Cost Allocation and Rate Dsgn
100.	2011	NJU BPU	WR11070460	New Jersey American Water Company	Cost Allocation and Rate Dsgn

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101.	2011	Id PUC	UWI-W-11-02	United Water Idaho Inc.	Cost Allocation and Rate Dsgn
102.	2011	Il CC		Illinois American Water Company	Cost Allocation and Rate Dsgn