Exhibit No.:	
Issues:	Cost Allocation/Rate Design
Witness:	Paul R. Herbert
Exhibit Type:	Direct
Sponsoring Party:	Missouri-American Water Company
Case No.:	WR-2011-0337 SR-2011-0338
Date:	June 30, 2011

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2011-0337
CASE NO. SR-2011-0338

DIRECT TESTIMONY

OF

PAUL R. HERBERT

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

IN THE MATTER OF MISSOURI-AMERICAN WATER COMPANY FOR AUTHORITY TO FILE TARIFFS REFLECTING INCREASED RATES FOR WATER AND SEWER SERVICE	)))))	**CASE NO. WR-2011-XXXX CASE NO. SR-2011-XXX**

AFFIDAVIT OF PAUL R. HERBERT

Paul R. Herbert, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Direct Testimony of Paul R. Herbert"; that said testimony and schedules were prepared by him and/or under his direction and supervision; that if inquires were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge.

Paul R. Herbert

Commonwealth of Pennsylvania
County of Cumberland
SUBSCRIBED and sworn to
Before me this 20th day of June 2011.

Notary Public

My commission expires: February 20, 2015

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Cheryl Ann Rutter, Notary Public
East Pennsboro Twp., Cumberland County
My Commission Expires Feb. 20, 2015
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

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WITNESS INTRODUCTION AND QUALIFICATIONS AND EXPERIENCE

1. Q. Please state your name and address.

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

2. Q. By whom are you employed?

A. I am employed by Gannett Fleming, Inc.

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

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

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

A. Yes. I have testified before the Pennsylvania Public Utility Commission, the New Jersey Board of Public Utilities, the Public Utilities Commission of Ohio, the Public Service Commission of West Virginia, the Kentucky Public Service Commission, the Iowa State Utilities Board, the Virginia State Corporation Commission, the Missouri Public Service Commission, the New Mexico Public Regulation Commission, the Public Utilities Commission of the State of California, the Illinois Commerce Commission, the Arizona Corporation

Commission, the Delaware Public Service Commission, the Connecticut Department of Public Utility Control, and the Tennessee Regulatory Authority, concerning revenue requirements, cost of service allocation, rate design and cash working capital claims. A list of cases in which I have testified is attached to my testimony.

5. Q. What is your educational background?

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

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

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

7. Q. Briefly describe your work experience.

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

While attending Penn State, I was employed during the summers of

1972, 1973 and 1974 by the United Telephone System - Eastern Group in its accounting department. Upon graduation from college in 1975, I was employed by Herbert Associates, Inc., Consulting Engineers (now Herbert Rowland and Grubic, Inc.), as a field office manager until September 1977.

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

A. The purpose of my testimony is to present and explain Missouri-American Water Company's (or MAWC or Company) State-wide cost of service allocation study (sometimes called class cost of service study) and proposed consolidated tariff pricing rate design set forth in Schedule PRH-1.

9. Q. Was Schedule No. PRH-1 prepared by you or under your direction and supervision?

A. Yes, it was.

COST OF SERVICE ALLOCATION

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

A. The purpose of the study was to allocate the State-wide cost of service, which is the total revenue requirement for MAWC water operations to the customer classifications. The State-wide cost of service is the sum of the pro forma cost of operations for the following districts: Brunswick (BRU), Jefferson City (JFC), Joplin (JOP), Mexico (MEX), Parkville (PKW), St. Joseph (SJO), Warrensburg (WAR), Warren County Water (WCW), and the St. Louis Metro Area (SLM), which includes the former St. Charles (SCH) district; the recently acquired districts of Roark Water and Loma Linda; and the former Aqua Missouri operations in Maplewood and Lake Carmel, Riverside Estates, White

Branch, Rankin Acres, Ozark Mountain, Spring Valley, Lakewood Manor, and Lake Taneycomo Acres. Class cost of service allocation studies were not performed for the sewer districts in Parkville, Cedar Hill, Warren County, and the former Aqua properties since these districts are predominantly residential customers.

In the State-wide study, the aggregated cost of water service was allocated to the following customer classifications: Rate A, consisting of residential, commercial, small industrial, and other public authorities customers, Rate B, consisting of sales for resale customers, Rate J, consisting of large users, and Rate F, private fire protection customers. The cost of service associated with public fire protection was identified and reallocated back to the Rate A and Rate J classifications.

The study was performed in accordance with generally accepted principles and procedures and results in indications of the relative cost responsibilities of each class of customers. The allocated cost of service is one of several criteria appropriate for consideration in designing customer rates to produce the required revenues. The results of the allocation of the State-wide cost of service for the test year ended December 31, 2010, and proposed STP customer rates which produce the pro forma revenue requirements, are presented in the study.

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

A. The base-extra capacity method, as described in 2000 and prior Water Rates Manuals published by the American Water Works Association (AWWA), was

used to allocate the pro forma costs. Base-extra capacity is a recognized method for allocating the cost of providing water service to customer classifications in proportion to the classifications' use of the commodity, facilities, and services. It is generally accepted as a sound method for allocating the cost of water service and was used by the Company in previous cases.

12. Q. Please describe the procedure followed in the cost allocation study.

A. Each identified classification of cost in the cost of service study was allocated to the customer classifications through the use of appropriate factors. These allocations are presented in Schedule B for each study. The items of cost, which include operation and maintenance expenses, depreciation expense, taxes and income available for return, are identified in column 1 of Schedule B. The cost of each item, shown in column 3, is allocated to the several customer classifications based on allocation factors referenced in column 2. The development of the allocation factors is presented in Schedule C. I will use some of the larger cost items to illustrate the principles and considerations used in the cost allocation methodology.

Purchased water, purchased electric power, treatment chemicals and waste disposal are examples of costs that tend to vary with the amount of water consumed and are thus considered base costs. They are allocated to the several customer classifications in direct proportion to the average daily consumption of those classifications through the use of Factor 1. The development of Factor 1 is shown in Schedule C.

Other source of supply, water treatment and transmission costs are

associated with meeting usage requirements in excess of the average, generally to meet maximum day requirements. Costs of this nature were allocated to customer classifications partially as base costs, proportional to average daily consumption, partially as maximum day extra capacity costs, in proportion to maximum day extra capacity, and, in the case of certain pumping stations and transmission mains, partially as fire protection costs, through the use of Factors 2 and 3. The development of the allocation factors, referenced as Factors 2 and 3, is shown in Schedule C.

Costs associated with storage facilities and the capital costs of distribution mains were allocated partly on the basis of average consumption and partly on the basis of maximum hour extra demand, including the demand for fire protection service, because these facilities are designed to meet maximum hour and fire demand requirements. The development of the factors, referenced as Factors 4 and 5, used for these allocations is shown in Schedule C.

Fire demand costs were allocated to public and private fire protection service in proportion to the relative potential demands on the system by public fire hydrants and private service lines as presented in Schedule E.

Costs associated with pumping facilities and the operation and maintenance of mains were allocated on combined bases of maximum day and maximum hour extra capacity because these facilities serve both functions. For pumping facilities, the relative weightings of Factor 2 (maximum day), Factor 3 (maximum day and fire) and Factor 4 (maximum hour) were based on the horsepower of pumps serving maximum day,

maximum day and fire and maximum hour functions. The development of this weighted factor is referenced as Factor 6.

For operation and maintenance of mains, the relative weightings of Factor 3 (maximum day and fire) and Factor 4 (maximum hour) were based on the footage of transmission and distribution mains. Generally, for cost allocation purposes, mains larger than 10-inch were classified as serving a transmission function and mains 10-inch and smaller were classified as serving a distribution function. The development of this weighted factor is referenced as Factor 7.

Costs associated with meters were allocated to customer classifications in proportion to the relative unit costs of the sizes and quantities of meters serving each classification. The development of the factor for meters is referenced as Factor 9. Factor 10, Allocation of Services, was developed in a similar manner as Factor 9, except that the relative unit cost per foot by service size was used in order to weight the number of services by classification. Costs associated with public fire hydrants were assigned directly to the public fire protection class (Factor 8).

Costs for customer accounting, billing and collecting were allocated on the basis of the number of customers for each classification, and costs for meter reading were allocated on the basis of metered customers. The development of these factors is referenced as Factor 13 and Factor 14.

Administrative and general costs were allocated on the basis of allocated direct costs, excluding those costs such as purchased water, power, chemicals and waste disposal, which require little administrative and general

expense. The development of the factor is referenced as Factor 15.

Cash working capital is allocated based on total operation and maintenance expense. The development of the factor is referenced as Factor 15A.

Annual depreciation accruals were allocated on the basis of the function of the facilities represented by the depreciation expense for each depreciable plant account. The original cost less depreciation of utility plant in service was similarly allocated for the purpose of developing factors, referenced as Factor 18, for allocating items such as income taxes and return. The development of Factor 18 is presented on the last three pages of Schedule C.

Factors 15, 15A and 18, as well as Factors 11, 12, 16, 17 and 19, are composite allocation factors. These factors are based on the result of allocating other costs and are computed internally in the cost allocation program. Refer to Schedule C for a description of the bases for each composite allocation factor.

13. Q. What was the source of the total cost of service data set forth in column 3 of Schedule B?

A. The pro forma costs of service were furnished by the Company, and are set forth in Company accounting exhibits and workpapers.

14. Q. Refer to Schedule C, and explain the source of the system maximum day and maximum hour ratios used in the development of factors referenced as Factors 2, 3 and 4.

A. The ratios were based on a review of State-wide system deliveries for the

Company. Schedule D shows the experienced maximum day ratios over the last several years. The maximum hour ratios were estimated based on actual data or the relationship of system maximum hour ratios compared to system maximum day ratios for similar systems.

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

A. The estimated demands were based on judgment which considered field studies of actual customer class demands conducted for other American Water Companies, field observations of the service areas of the Company, and generally-accepted customer class maximum day and maximum hour demand ratios.

16. Q. Please explain the allocation of small mains.

A. Factor 4, used to allocate distribution mains, was modified to exclude consumption for certain Rate B and Rate J large customers connected primarily to large mains, commonly referred to as transmission mains, in Joplin, St. Joseph and St. Louis Metro Area districts. This was done to recognize that certain industrial and sales for resale customers are connected directly to the transmission system and do not benefit from the smaller distribution mains.

17. Q. How was this adjustment accomplished?

A. In Joplin, the six largest industrial customers are connected to mains 12-inch and larger. The test year consumption for these six customers was excluded from the Rate J class for the basis of developing Factor 4. In addition, all

sales for resale customers are served from the transmission system and therefore were excluded from Factor 4.

In St. Joseph, the four largest industrial accounts and all sales for resale accounts are served from mains 12-inch and larger. The test year consumption for these customers was excluded in the development of Factor 4.

In the St. Louis Metro Area, all sales for resale customers (Rates B) are served from the transmission system and therefore, were excluded from Factor 4. For the large user or Rate J classification, an analysis of the customers was performed to determine the size of main which serves each Rate J customer. The analysis showed that out of 141 Rate J customers, 73 customers representing 54.2% of the Rate J consumption are connected to mains 12-inch and larger. The remaining 68 customers with 45.8% of the consumption are connected to mains smaller than 12-inch.

A further analysis of the 68 customers connected to small mains was conducted to measure the length of distribution mains used to serve these customers from the transmission system. This analysis showed that approximately 130,000 feet of small mains are used from the transmission system to the connection point of the 68 Rate J customers. The 130,000 feet represents about 0.7% of the total 19.3 million feet of distribution mains in the St. Louis Metro area. This analysis clearly shows that although certain Rate J customers are connected to smaller mains, the length of those mains are only a small fraction of the total distribution main system. Therefore, based on this analysis, 10% of the Rate J consumption was used in the development of

Factor 4, to reflect that a small part of the distribution mains are used by Rate J customers. In a St. Louis Metro only allocation, this results in an allocation factor of 0.66% for Rate J, which approximates the 0.7% share of the distribution mains.

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

A. Yes. The results are summarized in columns 1, 2 and 3 of Schedule A. Column 2 sets forth the total allocated pro forma, State-wide cost of service as of December 31, 2010, for each customer classification identified in column 1. Column 3 presents each customer classification's cost responsibility as a percent of the total cost.

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

A. Yes. A comparison of the allocated cost responsibilities and the percentage revenue under existing rates can be made by comparing columns 3 and 5 of Schedule A. A similar comparison of the percentage cost responsibilities (relative cost of service) and the percentage of pro forma revenues (relative revenues) under proposed rates can be made by comparing columns 3 and 7 of Schedule A.

CUSTOMER RATE DESIGN

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

A. In preparing a rate structure, one should consider the allocated costs of service, the impact of changes from the present rate structure, the

understandability and ease of application of the rate structure, community and social influences, and the value of service. General guidelines should be developed with management to determine the extent to which each of these criteria is to be incorporated in the rate structure to be designed, inasmuch as the pricing of a commodity or service is a function of management.

21. Q. Did management discuss rate design guidelines with you?

A. Yes, they did. The guidelines were as follows: (1) Develop consolidated tariff pricing rate schedules applicable to all water customers State-wide; (2) propose uniform customer charges to recover the pro forma customer costs by meter size; (3) design consolidated-block volumetric rates for Rate A, Rate B, and Rate J so that proposed revenues by customer classification move toward or approximate the indicated cost of service; (4) design private fire line and private hydrant rates to recover the indicated cost of service; and (5) develop consolidated tariff rates for all wastewater service areas.

22. Q. Do you agree with these guidelines?

A. Yes, I do.

23. Q. Have you prepared proposed consolidated tariff rate schedules for each classification?

A. Yes. Comparisons of present and proposed rate schedules are set forth in Company Schedule CAS-13.

24. Q. Please explain the proposed customer charges.

A. An analysis of the State-wide customer costs was prepared to determine the appropriate monthly and quarterly minimum charges by meter size. The pro forma customer costs for a 5/8-inch meter is $17.30 per month and $30.62

per quarter (See Schedule F). Based on this analysis, the 5/8-inch minimum charge was set at $16.80 per month and $30.90 per quarter. The increases to the larger sizes (3/4-inch through 12-inch meters) were based on the existing meter ratios by size to the 5/8-inch charge.

25. Q. Please explain the volumetric charges.

A. Generally, a one-block uniform volumetric rate is proposed for each of the Rate A, Rate B and Rate J schedules. The rates were set so that proposed revenues would be nearly aligned with the indicated cost of service.

26. Q. Please explain private fire charges.

A. The existing private fire revenues exceed the indicated cost of service. Therefore, a consolidated tariff of monthly private fire line and private fire hydrant rates were designed so that proposed revenues would recover the cost of service.

27. Q. Please explain the public fire hydrant charges.

A. The cost of service for public fire protection was established and allocated back to Rate A and Rate J based on meter equivalents. Under existing rates, St. Louis Metro Area is the only district that bills each customer a monthly charge for public fire service. This charge is now rolled into the customer charge and recovered based on meter size.

28. Q. Has the Company prepared proof of revenue schedules under present and proposed rates?

A. Yes. The proof of revenue shows that the application of the present and proposed rates to the billing determinants or bill analysis produce the pro forma present and proposed revenue and proves that the proposed rates filed

in the proposed tariffs recover the requested revenue requirements.

Schedule CAS-12 and 13, sponsored by Mr. Williams, sets forth the proof of revenues from the application of present and proposed rates to the customer consumption analysis. The revenues from these exhibits are brought forward to Schedule A, columns 4 and 6.

CONSOLIDATED TARIFF PRICING

29. Q. Please describe the concept of consolidated tariff pricing.

A. Consolidated tariff pricing (also referred to as single tariff pricing or STP) is the use of the same rates for the same service rendered by a water company regardless of the customer's location.

30. Q. What are the factors that support the use of consolidated rates?

A. Consolidated rates are based on the long-term rate stability which results from a consolidated tariff, the operating characteristics of the tariff groups, the equivalent services offered, the cost of service on a district specific basis, and the principle of gradualism.

31. Q. Please explain how consolidated rates will provide long-term rate stability for the several areas.

A. Utility customer rates are dependent on the total expenses and rate base of the utility and the amount of the commodity which the utility sells. Changes in rate base, particularly as the result of the Safe Drinking Water Act, have a significant potential for adversely impacting the rates for certain areas within a utility.

The ability to absorb the cost of such projects over a larger customer

base is a compelling argument in support of rate equalization. Capital programs will never be uniform in the several operating areas, even over periods of 5 to 10 years. The cost of specific programs should be shared by all customers rather than burdening those of the affected areas. Rate increases will be more stable and major increases in specific tariff groups will be avoided.

32. Q. In what manner do the operating characteristics of the several areas support consolidated tariff pricing?

A. There are many similarities in the manner in which the several areas are operated. All of the systems pump their treated water through transmission lines to distribution areas that include mains, booster pump stations and storage facilities. All of the areas provide water to individual customers through a service line and meter. All of the areas rely on a centralized work force for billing, accounting, engineering, administration, and regulatory matters. All of the areas rely on a common source of funds for financing working capital and plant construction. Inasmuch as the costs of operation are related to functions in which the operating characteristics are the same, the use of equal rates is supported.

33. Q. Please explain why the equivalence of services offered support consolidated tariff pricing.

A. The use of the same rates in a utility with noncontiguous service areas is supported by the equivalent service rendered in each area. Although there would be considerable debate with respect to the equivalency of the service rendered to different customer classifications, there is no question that the

service rendered to a residence in one area is the same as the service rendered to a residence in another area. Residential customers are relatively consistent in their uses of water: cooking, bathing, cleaning and other sanitary purposes, and lawn sprinkling. If customers use water for the same purposes, the service offering is the same and should be priced accordingly. Thus, from this perspective, there is no basis for charging different prices to customers in different areas.

34. Q. Do variances between allocated costs of the districts warrant the use of separate rate schedules?

A. No, they do not. Charging one group of customers higher rates because they may be served by a newer plant whose original cost exceeds that of other plants (as a result of inflation) is not logical. The concepts previously discussed outweigh this consideration and justify the goal of moving toward a consolidated tariff. The electric industry reflects such concepts when it serves customers in geographically dispersed areas. A kilowatt-hour delivered in one area has the same price as a kilowatt-hour delivered in another area despite the fact that cost of service studies could be performed to identify differences in the cost of providing service to customer classes in different regions.

35. Q. Are there other cost of service considerations that support consolidated tariff pricing?

A. Yes. The Company manages the State-wide operations from a common location. Common costs which must be assigned or allocated to each operating area to establish district specific revenue requirements include management fees, corporate headquarter costs, office costs, customer service

costs, depreciation expense developed on the basis of Company-wide depreciation rates, capital structure, and income tax expense based on total Company financing and tax provisions. The allocations of common costs, while reasonable, are subject to judgment and may not result in the development of district specific revenue requirements which reflect precisely the cost of serving each area.

36. Q. Briefly summarize your analysis of consolidated tariff pricing for MAWC.

A. Consolidated Tariff Pricing is appropriate for MAWC. Such pricing is supported by considerations of the benefits of sharing the impact of capital programs on a Company-wide basis, the significant majority of common costs, and the equivalent service rendered. The best interests of the customers are served through gradualism by continuing to implement consolidated rates during this case and in subsequent rate cases.

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

A. Yes, it does.

LIST OF CASES IN WHICH PAUL R. HERBERT TESTIFIED

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

LIST OF CASES IN WHICH PAUL R. HERBERT TESTIFIED

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
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
50.	2007	Ca. PUC	U-339-W	Suburban Water Systems	Water Conservation Rate Design
51.	2007	Ca. PUC	U-168-W	San Jose Water Company	Water Conservation Rate Design
52.	2007	Pa. PUC	R-00072229	Pennsylvania American Water Company	Cost Allocation and Rate Design
53.	2007	Ky. PSC	2007-00143	Kentucky American Water Company	Cost Allocation and Rate Design
54.	2007	Mo. PSC	WR-2007-0216	Missouri American Water Company	Cost Allocation and Rate Design
55.	2007	Oh. PUC	07-1112-WS-AIR	Ohio American Water Company	Cost Allocation and Rate Design
56.	2007	Il. CC	07-0507	Illinois American Water Company	Customer Class Demand Study
57.	2007	Pa. PUC	R-00072711	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
58.	2007	NJ BPU	WR07110866	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
59.	2007	Pa. PUC	R-00072492	City of Bethlehem – Bureau of Water	Revenue Requirements, Cost 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 Reqmt, 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

MISSOURI-AMERICAN WATER COMPANY

St. Louis, Missouri

COST OF SERVICE

ALLOCATION STUDY

FOR THE TEST YEAR ENDED DECEMBER 31, 2010

GANNETT FLEMING, INC. - VALUATION AND RATE DIVISION

Harrisburg, Pennsylvania Calgary, Alberta Valley Forge, Pennsylvania

Gannett Fleming

GANNETT FLEMING, INC.
P.O. Box 67100
Harrisburg, PA 17106-7100
Location:
207 Senate Avenue
Camp Hill, PA 17011
Office: (717) 763-7211
Fax: (717) 763-4590
www.gannettfleming.com

June 30, 2011

Missouri-American Water Company
535 North New Ballas Road
St. Louis, MO 63141

ii

Attention Mr. Frank Kartman, President

Gentlemen:

Pursuant to your request, we have conducted a cost of service allocation study based on the consolidated water utility revenue requirements estimated for the test year ended December 31, 2010.

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

Respectfully submitted,

GANNETT FLEMING, INC.
Valuation and Rate Division

Paul R Herbert

PAUL R. HERBERT
President

CE Heppenstall

CONSTANCE E. HEPPENSTALL
Rate Analyst

PRH:krm

Attachment

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CONTENTS

PART I. INTRODUCTION

MISSOURI-AMERICAN WATER COMPANY

COST OF SERVICE ALLOCATION STUDY
FOR THE TEST YEAR ENDED DECEMBER 31, 2010

PART I. INTRODUCTION

PLAN OF REPORT

The report sets forth the results of the cost of service allocation study based on the consolidated state-wide revenue requirements for water utility operations as of December 31, 2010, for Missouri-American Water Company. Part I, Introduction, contains statements with respect to the basis of the study, the procedures employed, and a summary of the results of the study. Part II, Cost of Service by Customer Classification, presents detailed schedules of the allocation of costs to customer classifications, as well as the bases for the allocations. Schedule A in Part II summarizes the cost allocation and the revenues produced under present and proposed rates.

BASIS OF STUDY

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

ALLOCATION PROCEDURES

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

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

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

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

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

RESULTS OF STUDY

The results of the cost of service allocation study are set forth in Part II. The data summarized in Schedule A, Comparison of Pro Forma Cost of Service with Revenues Under Present and Proposed Rates for the Test Year Ended December 31, 2010, constitute the principal results of the cost allocation study and subsequent rate design.

The cost of service by customer classification shown in column 2 of Schedule A is developed in Schedule B, Cost of Service for the Twelve Months Ended December 31, 2010, Allocated to Customer Classifications. The allocation of the total cost of service to the several customer classifications was performed by applying the allocation factors referenced in column 2 of Schedule B to the cost of service set forth in column 3. The bases for the allocation factors are presented in Schedule C.

Schedule D sets forth the experienced average day and maximum day system sendout and the maximum day ratios from 1999 through 2010. Schedule E presents the basis for allocating demand related costs of fire service to private and public fire protection classifications.

II-1 PART II. COST OF SERVICE BY CUSTOMER CLASSIFICATION

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS

COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TEST YEAR ENDED DECEMBER 31, 2010

Customer Classification	Cost of Service Amount (Schedule B)	Cost of Service Percent	Revenues, Present Rates Amount	Revenues, Present Rates Percent	Revenues, Proposed Rates Amount	Revenues, Proposed Rates Percent	Proposed Increase Amount	Proposed Increase Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Rate A - Res/Com/Ind/OPA	$ 245,115,752	90.8%	$205,673,578 **	89.6%	$ 246,519,662	90.8%	$40,846,084	19.9%
Rate B - Sales for Resale	6,443,588	2.4%	6,570,466	2.9%	6,568,921	2.4%	(1,545)	0.0%
Rate J - Large User	14,935,216	5.5%	13,613,703 **	5.9%	14,800,628	5.5%	1,186,925	8.7%
Rate F - Private Fire	3,471,096	1.3%	3,669,221	1.6%	3,471,991	1.3%	(197,230)	-5.4%
Total Sales	269,965,653	100.0%	229,526,968	100.0%	271,361,202	100.0%	41,834,234	18.2%
Other Revenues*	7,101,644		$6,706,380		7,101,644		395,264	5.9%
Total	$ 277,067,296		$236,233,347		$ 278,462,846		$42,229,498	17.9%

* Includes Rate G, H and Contract Sales.
** Includes revenue for Public Fire.

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
OPERATION AND MAINTENANCE EXPENSES							
SOURCE OF SUPPLY EXPENSES							
Super & Eng Oper SS	2	$ 3,157	$ 2,694	$ 153	$ 300	$ 2	$ 8
Labor & Exp Oper SS - Labor	2	83,625	71,382	4,047	7,936	50	209
Labor & Exp Oper SS	2	257,242	219,582	12,451	24,412	154	643
Purchased Water	1	625,427	507,221	33,898	80,618	688	3,002
TOTAL SS EXPENSE - OPERATION		969,450	800,879	50,549	113,265	894	3,862
Misc Exp Oper SS	2	1,095,190	934,854	53,007	103,934	657	2,738
Misc Exp Oper SS	2	8,988	7,672	435	853	5	22
Rents Oper SS	2	100	85	5	9	0	0
Super & Eng Maint SS	2	0	0	0	0	0	0
Struct & Improve Maint SS - Labor	2	0	0	0	0	0	0
Struct & Improve Maint SS	2	90	77	4	9	0	0
Collect & Impound Maint SS	2	0	0	0	0	0	0
Lake, River & Oth Maint SS - Labor	2	0	0	0	0	0	0
Lake, River & Oth Maint SS	2	0	0	0	0	0	0
Wells & Springs Maint SS - Labor	2	2,291	1,956	111	217	1	6
Wells & Springs Maint SS	2	148	126	7	14	0	0
Infilt Gall & Tunnels Maint SS - Labor	2	0	0	0	0	0	0
Supply Mains Maint SS - Labor	2	0	0	0	0	0	0
Misc Plant Maint SS - Labor	2	520,751	444,513	25,204	49,419	312	1,302
Misc Plant Maint SS	2	141,055	120,405	6,827	13,386	85	353
TOTAL SS EXPENSE - MAINTENANCE		1,768,613	1,509,688	85,601	167,841	1,061	4,422
TOTAL SS EXPENSE		2,738,063	2,310,568	136,150	281,107	1,956	8,284
POWER AND PUMPING EXPENSES							
Super & Eng Oper P	6	63,896	53,871	3,029	5,962	217	818
Fuel for Power Prod	1	14,547	11,798	788	1,875	16	70
Labor & Exp Oper Pwr Prod - Labor	6	1,989	1,677	94	186	7	25
Labor & Exp Oper Pwr Prod	6	0	0	0	0	0	0
Purch Fuel/Power for Pump	1	9,489,648	7,696,105	514,339	1,223,216	10,439	45,550
Labor & Exp Oper Pump - Labor	6	2,112,229	1,780,821	100,120	197,071	7,182	27,037
Labor & Exp Oper Pump	6	648	546	31	60	2	8
Misc Exp Oper P	6	33,164	27,960	1,572	3,094	113	424
Rents Oper P	6	824	695	39	77	3	11
TOTAL PUMPING EXPENSE - OPERATION		11,716,946	9,573,472	620,012	1,431,540	17,978	73,943

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Super & Eng Maint P	6	67,726	57,099	3,210	6,319	230	867
Struct & Improve Maint P - Labor	6	450,083	379,465	21,334	41,993	1,530	5,761
Power Prod Equip Maint P - Labor	6	3,208	2,705	152	299	11	41
Pump Equip Maint P - Labor	6	97,653	82,331	4,629	9,111	332	1,250
Pump Equip Maint P	6	27,736	23,384	1,315	2,588	94	355
TOTAL PUMPING EXPENSES - MAINTENANCE		646,405	544,984	30,640	60,310	2,198	8,274
TOTAL PUMPING EXPENSES		12,363,351	10,118,457	650,651	1,491,850	20,176	82,217
WATER TREATMENT							
Super & Eng Oper WT	2	215,865	184,263	10,448	20,486	130	540
Chemicals	1	10,741,168	8,711,087	582,171	1,384,537	11,815	51,558
Labor & Exp Oper WT - Labor	2	1,470,748	1,255,431	71,184	139,574	882	3,677
Labor & Exp Oper WT	2	310,758	265,263	15,041	29,491	186	777
Misc Exp Oper WT	2	644,432	550,087	31,191	61,157	387	1,611
Misc Exp Oper WT	1	917,769	744,311	49,743	118,300	1,010	4,405
Misc Exp Oper WT	2	39,028	33,314	1,889	3,704	23	98
Rents Oper WT	2	7,115	6,073	344	675	4	18
TOTAL WT EXPENSE - OPERATION		14,346,884	11,749,830	762,011	1,757,923	14,438	62,683
Super & Eng Maint WT	2	1,404,261	1,198,677	67,966	133,264	843	3,511
Struct & Improve Maint WT - Labor	2	222	190	11	21	0	1
Struct & Improve Maint WT	2	0	0	0	0	0	0
WT Equip Maint WT - Labor	2	8,238	7,032	399	782	5	21
WT Equip Maint WT	2	1,098,112	937,349	53,149	104,211	659	2,745
TOTAL WT EXPENSE - MAINTENANCE		2,510,833	2,143,247	121,524	238,278	1,507	6,277
TOTAL WT EXPENSE		16,857,718	13,893,077	883,535	1,996,201	15,944	68,960
TRANSMISSION AND DISTRIBUTION EXPENSES							
Super & Eng Oper TD	11	955,112	859,219	6,686	26,361	22,159	40,688
Storage Facilty Exp - Labor	5	19,661	14,803	812	1,514	552	1,980
Storage Facilty Exp	5	20	15	1	2	1	2
TD Lines Exp - Labor	7	1,878,861	1,648,513	17,661	68,391	31,565	112,732
TD Lines Exp	7	1,349,905	1,184,407	12,689	49,137	22,678	80,994
Meter Expense - Labor	9	869,097	852,758	695	6,084	9,560	0
Meter Expense	9	2,228	2,186	2	16	25	0
Customer Install Exp - Labor	10	478,365	434,355	239	1,674	42,096	0
Customer Install Exp	10	1,057	960	1	4	93	0
Misc Exp Oper TD - Labor	11	972,642	874,989	6,808	26,845	22,565	41,435
Misc Exp Oper TD	11	131,861	118,622	923	3,639	3,059	5,617
Misc Exp Oper TD	11	452,787	407,327	3,170	12,497	10,505	19,289
Rents Oper TD	11	7,559	6,800	53	209	175	322
TOTAL T & D EXPENSE OPERATION		7,119,155	6,404,953	49,740	196,371	166,033	303,058

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Super & Eng Maint TD	12	76,169	59,161	480	1,843	1,600	13,086
Struct & Improve Maint TD - Labor	12	36,096	28,036	227	874	758	6,201
Struct & Improve Maint TD	12	0	0	0	0	0	0
Dist Res Stand Maint TD - Labor	5	39,962	30,087	1,650	3,077	1,123	4,024
TD Main Maint TD - Labor	7	471,014	413,268	4,428	17,145	7,913	28,261
TD Main Maint TD	7	1,243,959	1,091,449	11,693	45,280	20,899	74,638
Fire Main Maint TD - Labor	8	63	0	0	0	0	63
Fire Main Maint TD	8	0	0	0	0	0	0
Services Maint TD - Labor	10	291,349	264,545	146	1,020	25,639	0
Services Maint TD	10	0	0	0	0	0	0
Meters Maint TD - Labor	9	437,687	429,459	350	3,064	4,815	0
Meters Maint TD	9	12,018	11,792	10	84	132	0
Hydrants Maint TD - Labor	8	188,652	0	0	0	0	188,652
Hydrants Maint TD	8	199,782	0	0	0	0	199,782
Misc Plant Maint TD - Labor	12	4,157,337	3,229,004	26,191	100,608	87,304	714,231
Mat and Sup Maint TD	12	2,154,654	1,673,520	13,574	52,143	45,248	370,170
Misc Maint TD	12	4,051	3,147	26	98	85	696
Amort Def Maint TD	5	1,593,653	1,199,861	65,818	122,711	44,782	160,481
Permits TD	12	59,279	46,042	373	1,435	1,245	10,184
TOTAL T & D EXPENSE - MAINTENANCE		10,965,727	8,479,371	124,966	349,381	241,541	1,770,468
TOTAL T & D EXPENSE		18,084,881	14,884,324	174,706	545,751	406,574	2,073,526
CUSTOMER ACCOUNTS							
Supervision CA	13	63,722	62,173	13	83	1,453	0
Meter Reading Exp CA - Labor	14	2,017,834	2,014,807	404	2,623	0	0
Meter Reading Exp CA	14	12,889	12,870	3	17	0	0
Meter Reading Exp CA	14	7,419	7,408	1	10	0	0
Cust Rec & Collection CA - Labor	13	934,745	912,031	187	1,215	21,312	0
Cust Rec & Collection CA	13	2,553,794	2,491,737	511	3,320	58,227	0
Uncollectible Accts	13	2,803,095	2,734,980	561	3,644	63,911	0
Misc Cust Accts Exp CA - Labor	13	51,233	49,988	10	67	1,168	0
Misc Cust Accts Exp CA	13	2,094	2,043	0	3	48	0
Misc Cust Accts Exp CA	13	123,983	120,971	25	161	2,827	0
Cust Serv & Info Exp CA	13	0	0	0	0	0	0
TOTAL CUSTOMER ACCOUNTING EXPENSE		8,570,808	8,409,007	1,714	11,142	148,945	0

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ADMINISTRATIVE AND GENERAL EXPENSES							
Salaries AG	15	6,144,912	5,330,097	111,223	253,170	95,246	355,176
Other Supplies & Exp AG	15	13,649	11,839	247	562	212	789
Other Supplies & Exp AG	15	1,777,008	1,541,377	32,164	73,213	27,544	102,711
Other Supplies & Exp AG	15	1,025,245	889,298	18,557	42,240	15,891	59,259
Mgmt Fees-Admin	15	24,015,296	20,830,868	434,677	989,430	372,237	1,388,084
Mgmt Fees-Customer Service	13	6,230,994	6,079,581	1,246	8,100	142,067	0
Mgmt Fees-Belleville Lab	2	181,340	154,792	8,777	17,209	109	453
Mgmt Fees- Employee	16	1,337,407	1,158,462	24,608	56,706	19,526	78,105
Outside Services AG	15	1,687,050	1,463,347	30,536	69,506	26,149	97,512
Outside Services AG	15	2,512,557	2,179,392	45,477	103,517	38,945	145,226
Ins Gen Liab Oper AG	15	2,366,271	2,052,503	42,830	97,490	36,677	136,770
Ins Work Comp AG	16	823,802	713,577	15,158	34,929	12,028	48,110
Ins Other Oper AG	15	785,326	681,191	14,214	32,355	12,173	45,392
Property Insurance	15	295,080	255,952	5,341	12,157	4,574	17,056
Injuries & Damages	16	15,312	13,263	282	649	224	894
Employee Pension & Benefits	16	7,424,820	6,431,379	136,617	314,812	108,402	433,609
Employee Pension & Benefits	16	4,296,523	3,721,648	79,056	182,173	62,729	250,917
Employee Pension & Benefits	16	1,448,443	1,254,642	26,651	61,414	21,147	84,589
Reg Commision Exp	19	552,410	467,836	13,203	30,327	7,126	33,918
Rents AG	15	309,858	268,771	5,608	12,766	4,803	17,910
Goodwill Advertising Exp	15	64,729	56,146	1,172	2,667	1,003	3,741
Misc Exp AG	15	1,802,540	1,563,523	32,626	74,265	27,939	104,187
Research & Development	15	0	0	0	0	0	0
TOTAL A & G OPERATIONS		65,110,572	57,119,484	1,080,269	2,469,660	1,036,750	3,404,408
General Plant Maint AG - Labor	15	163	142	3	7	3	9
Maint Exp ARO/Net Neg Sal AG	18	0	0	0	0	0	0
General Plant Maint AG	15	390,012	338,296	7,059	16,068	6,045	22,543
TOTAL A & G EXPENSE - MAINTENANCE		390,175	338,438	7,062	16,075	6,048	22,552
TOTAL A & G EXPENSE		65,500,747	57,457,922	1,087,331	2,485,736	1,042,798	3,426,960
Total Operation & Maintenance Expenses		124,115,568	107,073,354	2,934,088	6,811,787	1,636,392	5,659,947

Schedule B

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DEPRECIATION EXPENSE							
Struct & Imp SS	2	342,263	292,155	16,566	32,481	205	856
Struct & Imp P	6	195,848	165,119	9,283	18,273	666	2,507
Struct & Imp Pumps (STL)	6	92,320	77,835	4,376	8,613	314	1,182
Struct & Imp Pump Boosters	6	63,225	53,305	2,997	5,899	215	809
Struct & Imp WT	2	847,168	723,142	41,003	80,396	508	2,118
Struct & Imp WT Nth Plt (ST	2	169,351	144,558	8,197	16,071	102	423
Struct & Imp WT Ctrl Plt 1	2	53,420	45,599	2,586	5,070	32	134
Struct & Imp WT Ctrl Plt 3	2	401,081	342,363	19,412	38,063	241	1,003
Struct & Imp WT Sth Plt (ST	2	76,026	64,896	3,680	7,215	46	190
Struct & Imp WT Meramec (ST	2	178,939	152,742	8,661	16,981	107	447
Struct & Imp TD	7	254,486	223,286	2,392	9,263	4,275	15,269
Struct & Imp TD Spec Cross	7	6,417	5,630	60	234	108	385
Struct & Imp AG	15	93,081	80,739	1,685	3,835	1,443	5,380
Struct & Imp Offices	15	98,858	85,749	1,789	4,073	1,532	5,714
Gen Structures HVAC	15	4,798	4,162	87	198	74	277
Struct & Imp Leasehold	15	910	789	16	37	14	53
Struct & Imp Leasehold	15	17,316	15,020	313	713	268	1,001
Struct & Imp Store,Shop,Gar	15	31,761	27,549	575	1,309	492	1,836
Struct & Imp Misc	15	126,723	109,919	2,294	5,221	1,964	7,325
Collect & Impounding	1	1,408	1,142	76	181	2	7
Lake, River & Other Intakes	2	205,468	175,387	9,945	19,499	123	514
Wells & Springs	2	161,963	138,251	7,839	15,370	97	405
Infiltration Galleries & Tunnels	2	30	26	1	3	0	0
Supply Mains	2	271,425	231,688	13,137	25,758	163	679
Supply Mains Nth Plt (STL)	2	4,690	4,003	227	445	3	12
Supply Mains Ctrl Plt (STL)	2	72,362	61,768	3,502	6,867	43	181
Supply Mains Sth Plt (STL)	2	6,055	5,169	293	575	4	15
Supply Mains Meramec Plt (S	2	23,503	20,062	1,138	2,230	14	59
Power Generation Equip	6	71,854	60,580	3,406	6,704	244	920
Power Generation Equip Othe	6	0	0	0	0	0	0
Boiler Plant Equipment P	6	8	7	0	1	0	0
Pump Equip Steam	6	383	323	18	36	1	5
Pump Equip Electric	6	693,436	584,636	32,869	64,698	2,358	8,876
Pump Equip Elec Pre46 (STL)	6	22,903	19,310	1,086	2,137	78	293
Pump Equip Elec Post46 (STL	6	732,566	617,626	34,724	68,348	2,491	9,377
Pump Equip Elec Boosters Po	6	39,221	33,067	1,859	3,659	133	502
Pump Equip Diesel	6	14,334	12,085	679	1,337	49	183
Pump Equip Diesel Stratman\	6	0	0	0	0	0	0
Pump Equip Diesel Ctrl Plt	6	49,980	42,138	2,369	4,663	170	640
Pump Equip Hydraulic	6	7,346	6,193	348	685	25	94
Pump Equip Other	6	15,599	13,151	739	1,455	53	200
Pump Equip WT	6	17,611	14,848	835	1,643	60	225
Pump Equip TD	6	0	0	0	0	0	0
WT Equip Non-Media	2	2,011,347	1,716,886	97,349	190,877	1,207	5,028

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WT Equip Non-Med North (STL	2	245,640	209,678	11,889	23,311	147	614
WT Equip Non Media Ctrl 1 &	2	68,899	58,812	3,335	6,539	41	172
WT Equip Non Media Ctrl 3 (	2	688,315	587,546	33,314	65,321	413	1,721
WT Equip Non Media Sth (STL	2	203,141	173,401	9,832	19,278	122	508
WT Equip Non Media Mer (STL	2	332,040	283,429	16,071	31,511	199	830
WT Equip Filter Media	2	86,517	73,851	4,187	8,210	52	216
Dist Reservoirs & Standpipe	5	273,513	205,928	11,296	21,061	7,686	27,543
Elevated Tanks & Standpipes	5	164,971	124,207	6,813	12,703	4,636	16,613
Ground Level Facilities	5	217,200	163,530	8,970	16,724	6,103	21,872
Below Ground Facilities	5	966	727	40	74	27	97
Clearwells	5	3,388	2,551	140	261	95	341
TD Mains Not Classified by	7	918,659	806,032	8,635	33,439	15,433	55,120
TD Mains 4" & Less	4	120,567	107,739	0	2,725	2,206	7,897
TD Mains 6 to 8"	4	396,733	354,520	0	8,966	7,260	25,986
TD Mains 6 to 10in (TN)"	4	101	90	0	2	2	7
TD Mains 10 to 16"	3	909,015	740,029	41,996	82,266	9,726	34,997
TD Mains 18" & Grtr	3	326,590	265,877	15,088	29,556	3,495	12,574
TD Mains AC 4" (STL)	4	28,713	25,658	0	649	525	1,881
TD Mains CI <10" 1900-28	4	30,117	26,913	0	681	551	1,973
TD Mains CI <10" 1929-56	4	166,161	148,482	0	3,755	3,041	10,884
TD Mains CI <10" 1957-93	4	563,878	503,881	0	12,744	10,319	36,934
TD Mains CI 12" (STL)	3	146,386	119,173	6,763	13,248	1,566	5,636
TD Mains CI 16" (STL)	3	213,795	174,051	9,877	19,348	2,288	8,231
TD Mains DI 6-8" (STL)	4	3,488,359	3,117,198	0	78,837	63,837	228,488
TD Mains DI 12" (STL)	3	931,818	758,593	43,050	84,330	9,970	35,875
TD Mains DI 16" & >(STL)	3	1,445,521	1,176,798	66,783	130,820	15,467	55,653
TD Mains Galve 1" (STL)	4	518	463	0	12	9	34
TD Mains LJ 20" (STL)	3	49,024	39,910	2,265	4,437	525	1,887
TD Mains PL 6-8in (STL)	4	511,261	456,863	0	11,555	9,356	33,488
TD Mains PL 12in (STL)	3	26,096	21,245	1,206	2,362	279	1,005
TD Mains DI 4in (STL) "	4	20,244	18,090	0	458	370	1,326
TD Mains DI 10in (STL) "	3	845	688	39	77	9	33
Fire Mains	8	9,267	0	0	0	0	9,267
Services	10	785,989	713,678	393	2,751	69,167	0
Meters Bronze Case	9	377,637	370,537	302	2,643	4,154	0
Meters Plastic Case	9	2,457	2,411	2	17	27	0
Meters Other	9	1,101,510	1,080,802	881	7,711	12,117	0
Meters Other-Rem Rdr Unts	9	101,212	99,309	81	708	1,113	0
Meter Installations	9	407,027	399,375	326	2,849	4,477	0
Meter Installation Other	9	248,095	243,431	198	1,737	2,729	0
Meter Vaults	9	18,480	18,133	15	129	203	0
Hydrants	8	1,045,479	0	0	0	0	1,045,479
Other P/E Intangible	17	0	0	0	0	0	0
Other P/E SS	2	305	260	15	29	0	1
Other P/E WT Res Hand Equip	2	49,340	42,117	2,388	4,682	30	123
Other P/E TD	7	637	559	6	23	11	38

Schedule B

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Other P/E CPS	15	0	0	0	0	0	0
Office Furniture & Equip	15	92,921	80,600	1,682	3,828	1,440	5,371
Comp & Periph Equip	15	1,212,009	1,051,297	21,937	49,935	18,786	70,054
Computer Software	15	1,737,000	1,506,674	31,440	71,564	26,924	100,399
Comp Software Personal	15	52,018	45,120	942	2,143	806	3,007
Comp Software Customized	15	13,433	11,652	243	553	208	776
Comp Software Other	15	3,932	3,411	71	162	61	227
Data Handling Equipment	15	23,083	20,022	418	951	358	1,334
Other Office Equipment	15	26,886	23,321	487	1,108	417	1,554
Trans Equip Lt Duty Trks	15	117,547	101,960	2,128	4,843	1,822	6,794
Trans Equip Hvy Duty Trks	15	498,552	432,444	9,024	20,540	7,728	28,816
Trans Equip Autos	15	215,302	186,753	3,897	8,870	3,337	12,444
Trans Equip Other	15	41,638	36,117	754	1,715	645	2,407
Stores Equipment	15	18,512	16,057	335	763	287	1,070
Tools,Shop,Garage Equip	15	281,742	244,383	5,100	11,608	4,367	16,285
Tools,Shop,Garage Equip Oth	15	173,893	150,835	3,147	7,164	2,695	10,051
Laboratory Equipment	2	124,218	106,032	6,012	11,788	75	311
Laboratory Equip Other	2	20,329	17,353	984	1,929	12	51
Power Operated Equipment	15	128,451	111,418	2,325	5,292	1,991	7,424
Comm Equip Non-Telephone	15	96,567	83,762	1,748	3,979	1,497	5,582
Remote Control & Instr	15	125,560	108,910	2,273	5,173	1,946	7,257
Comm Equip Telephone	15	14,907	12,930	270	614	231	862
Misc Equipment	15	148,179	128,530	2,682	6,105	2,297	8,565
Other Tangible Property	17	45,488	37,841	1,083	2,502	569	3,493
Total Depreciation Expense		29,416,071	24,606,891	743,588	1,642,786	368,209	2,054,597

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Amort-Other UP	18	115,462	96,157	2,748	6,327	1,455	8,775
Amort-Intangible Fin	2	210,962	180,077	10,211	20,020	127	527
Amort-Property Losses	2	158,892	135,630	7,690	15,079	95	397
Taxes Other Than Income							
Utility Reg Assessment Fee	19	1,790,176	1,516,100	42,785	98,281	23,093	109,917
Property Taxes	18	14,082,836	11,728,186	335,171	771,739	177,444	1,070,296
FUTA	16	27,206	23,566	501	1,154	397	1,589
FICA	16	1,967,051	1,703,859	36,194	83,403	28,719	114,876
SUTA	16	86,910	75,282	1,599	3,685	1,269	5,076
Other Taxes & Licenses	15	446,692	387,460	8,085	18,404	6,924	25,819
Gross Receipts Tax	19	0	0	0	0	0	0
Total Taxes, Other Than Income		18,400,871	15,434,453	424,335	976,665	237,846	1,327,571
Income Taxes	18	30,314,001	25,245,500	721,473	1,661,207	381,956	2,303,864
Utility Income Available for Return	18	74,335,471	61,906,580	1,769,184	4,073,584	936,627	5,649,496
Total Cost of Service		277,067,296	234,678,641	6,613,318	15,207,455	3,562,707	17,005,174
Less: Other Water Revenues	19	3,445,571	2,918,054	82,349	189,162	44,448	211,558
Contract Sales	19	3,656,073	3,096,328	87,380	200,718	47,163	224,483
Total Other Water Revenues		7,101,644	6,014,382	169,729	389,880	91,611	436,041
Total Cost of Service Related to Sales of Water		$ 269,965,653	$ 228,664,259	$ 6,443,588	$ 14,817,575	$ 3,471,096	$ 16,569,134
Reallocation of Public Fire	20	0	16,451,493	0	117,641	0	(16,569,134)
Total		$ 269,965,653	$ 245,115,752	$ 6,443,588	$ 14,935,216	$ 3,471,096	$ -

Schedule C

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS

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

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

Customer Classification	Average Daily Consumption, Thousand Gallons	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	128,080	0.8110
Rate B - Sales for Resale	8,559	0.0542
Rate J - Large User	20,351	0.1289
Rate F - Private Fire	167	0.0011
Public Fire	764	0.0048
Total	157,921	1.0000

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

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

	Average Daily Consumption		Maximum Day Extra Capacity		
Customer Classification	Allocation Factor 1	Weighted Factor	Allocation Factor	Weighted Factor	Allocation Factor
(1)	(2)	(3)=(2)x 0.5263	(4)	(5)=(4)x 0.4737	(6)=(3)+(5)
Rate A - Res/Com/Ind/OPA	0.8110	0.4269	0.9007	0.4267	0.8536
Rate B - Sales for Resale	0.0542	0.0285	0.0421	0.0199	0.0484
Rate J - Large User	0.1289	0.0678	0.0572	0.0271	0.0949
Rate F - Private Fire	0.0011	0.0006			0.0006
Public Fire	0.0048	0.0025			0.0025
Total	1.0000	0.5263	1.0000	0.4737	1.0000

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

Schedule C

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

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

		Maximum Day Extra Capacity		
Customer Classification	Average Daily Consumption, Thousand Gal.	Factor*	Rate of Flow, Thousand Gal. Per Day	Allocation Factor
(1)	(2)	(3)	(4)=(2)x(3)	(5)
Rate A - Res/Com/Ind/OPA	128,080	1.0	128,080	0.9007
Rate B - Sales for Resale	8,559	0.7	5,991	0.0421
Rate J - Large User	20,351	0.4	8,140	0.0572
	156,990		142,211	1.0000

The weighting of the factors is based on the maximum day ratio of 1.90, based on a review of maximum day ratios experienced during the period 1999 through 2010 (see Schedule D).

	Maximum Day Ratio	Weight
Average Day	1.00	0.5263
Maximum Day Extra Capacity	0.90	0.4737
Total	1.90	1.0000

* Ratio of maximum day to average day minus 1.0.

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

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

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

	Average Daily Consumption		Maximum Day Extra Capacity		Fire Protection		
Customer Classification	Allocation Factor	Weighted Factor	Allocation Factor	Weighted Factor	Allocation Factor	Weighted Factor	Allocation Factor
(1)	(2)	(3)=(2) X 0.5020	(4)	(5)=(4) X 0.4518	(6)	(7)=(6) X 0.0462	(8)=(3)+(5)+(7)
Rate A - Res/Com/Ind/OPA	0.8110	0.4071	0.9007	0.4070			0.8141
Rate B - Sales for Resale	0.0542	0.0272	0.0421	0.0190			0.0462
Rate J - Large User	0.1289	0.0647	0.0572	0.0258			0.0905
Rate F - Private Fire	0.0011	0.0006			0.2188	0.0101	0.0107
Public Fire	0.0048	0.0024			0.7812	0.0361	0.0385
Total	1.0000	0.5020	1.0000	0.4518	1.0000	0.0462	1.0000

Schedule C

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

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

The weighting of the factors is based on the potential demand of general and fire protection service. The bases for the potential demand of general service are the maximum day ratio of 1.90 and the average daily system sendout for 2010 of 195.539 MGD. The system demand for fire protection is 30,000 Gallons per minute for 10 hours.

	Ratio	Rate of Flow, (GPD)	Weight
Average Day	1.00	195,539,621	0.5020
Maximum Day Extra Capacity	0.90	175,985,659	0.4518
Subtotal	1.90	371,525,280	0.9538
Fire Protection		18,000,000	0.0462
Total		389,525,280	1.0000

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

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

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

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

Customer Classification	Average Hourly Consumption			Maximum Hour Extra Capacity		Fire Protection		Allocation Factor
	Thousand Gallons	Allocation Factor	Weighted Factor	Allocation Factor	Weighted Factor	Allocation Factor	Weighted Factor	
(1)	(2)	(3)	(4)=(3) X 0.3675	(5)	(6)=(5) X 0.5513	(7)	(8)=(7) X 0.0812	(9)=(4)+(6)+(8)
Rate A - Res/Com/Ind/OPA	5,336.7	0.9560	0.3513	0.9837	0.5423			0.8936
Rate B - Sales for Resale	0.0	0.0000	0.0000	0.0000	0.0000			0.0000
Rate J - Large User	206.4	0.0370	0.0136	0.0163	0.0090			0.0226
Rate F - Private Fire	7.0	0.0013	0.0005			0.2188	0.0178	0.0183
Public Fire	31.8	0.0057	0.0021			0.7812	0.0634	0.0655
Total	5,581.9	1.0000	0.3675	1.0000	0.5513	1.0000	0.0812	1.0000

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

Schedule C

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

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

The weighting of the factors is based on the potential demand of general and fire protection service. The bases for the potential demand of general service are the maximum hour ratio of 2.5 and the average daily system sendout for 2010 of 195.539 MGD. The system demand for fire protection is 30,000 gallons per minute.

	Ratio	Rate of Flow, (GPM)	Weight
Average Hour	1.00	135,791	0.3675
Maximum Hour Extra Capacity	1.50	203,687	0.5513
Subtotal	2.50	339,478	0.9188
Fire Protection		30,000	0.0812
Total		369,478	1.0000

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

Customer Classification	Average Hourly Consumption Thousand Gal.	Maximum Hour Extra Capacity Factor*	Maximum Hour Extra Capacity 1,000 Gallons Per Hour	Allocation Factor
(1)	(2)	(3)	(4)=(2)x(3)	(5)
Rate A	5,336.7	3.5	18,678.5	0.9837
Rate B	0.0	2.5	0.0	0.0000
Rate J	206.4	1.5	309.6	0.0163
Total	5,543.1		18,988.1	1.0000

* Ratio of Maximum Hour To Average Hour Minus 1.0.

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

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

FACTOR 5. ALLOCATION OF COSTS ASSOCIATED WITH STORAGE FACILITIES.

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

	Average Hourly Consumption			Maximum Hour Extra Capacity		Fire Protection		
Customer Classification	Thousand Gallons	Allocation Factor	Weighted Factor	Allocation Factor	Weighted Factor	Allocation Factor	Weighted Factor	Allocation Factor
(1)	(2)	(3)	(4)=(3) X 0.3493	(5)	(6)=(5) X 0.5240	(7)	(8)=(7) X 0.1267	(9)=(4)+(6)+(8)
Rate A - Res/Com/Ind/OPA	5,336.7	0.8110	0.2833	0.8962	0.4696			0.7529
Rate B - Sales for Resale	356.6	0.0542	0.0189	0.0428	0.0224			0.0413
Rate J - Large User	848.0	0.1289	0.0450	0.0610	0.0320			0.0770
Rate F - Private Fire	7.0	0.0011	0.0004			0.2188	0.0277	0.0281
Public Fire	31.8	0.0048	0.0017			0.7812	0.0990	0.1007
Total	6,580.1	1.0000	0.3493	1.0000	0.5240	1.0000	0.1267	1.0000

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

Schedule C

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

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

Schedule C

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

Fire Protection Weight = $\frac{30{,}000 \text{ GPM X } 60 \text{ Min. X } 10 \text{ Hrs.}}{142{,}079{,}773 \text{ Gallons}} = 0.1267$

General Service Weight = 1.0000 - 0.1267 = 0.8733

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

	Maximum Hour Ratio	Percent	Weight
Average Hour	1.00	40.00	0.3493
Extra Capacity Maximum Hour	1.50	60.00	0.5240
Total	2.50	100.00	0.8733

Customer Classification	Average Hourly Consumption Thousand Gal.	Maximum Hour Extra Capacity Factor*	Maximum Hour Extra Capacity 1,000 Gallons Per Hour	Allocation Factor
(1)	(2)	(3)	(4)=(2)x(3)	(5)
Rate A - Res/Com/Ind/OPA	5,336.7	3.5	18,678.5	0.8962
Rate B - Sales for Resale	356.6	2.5	891.5	0.0428
Rate J - Large User	848.0	1.5	1,272.0	0.0610
	6,541.3		20,842.0	1.0000

* Ratio of maximum day to average day minus 1.0.

Schedule C

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

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

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

	Maximum Daily Consumption		Maximum Daily Consumption w/ Fire		Maximum Hourly Consumption		
Customer Classification	Allocation Factor 2	Weighted Factor	Allocation Factor 3	Weighted Factor	Allocation Factor 4	Weighted Factor	Allocation Factor
(1)	(2)	(3)=(2)X 0.7215	(4)	(5)=(4)X 0.2715	(6)	(7)=(6)X 0.0070	(8)=(3)+ (5)+(7)
Rate A - Res/Com/Ind/OPA	0.8536	0.6159	0.8141	0.2210	0.8936	0.0062	0.8431
Rate B - Sales for Resale	0.0484	0.0349	0.0462	0.0125	0.0000	0.0000	0.0474
Rate J - Large User	0.0949	0.0685	0.0905	0.0246	0.0226	0.0002	0.0933
Rate F - Private Fire	0.0006	0.0004	0.0107	0.0029	0.0183	0.0001	0.0034
Public Fire	0.0025	0.0018	0.0385	0.0105	0.0655	0.0005	0.0128
Total	1.0000	0.7215	1.0000	0.2715	1.0000	0.0070	1.0000

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

	Horsepower of Pumps	Weight
Associated with Maximum Day	57,942	0.7215
Associated with Maximum Day and Fire	21,800	0.2715
Associated with Maximum Hour	561	0.0070
Total	80,303	1.0000

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MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

FACTOR 7. ALLOCATION OF COSTS ASSOCIATED WITH TRANSMISSION AND DISTRIBUTION MAINS.

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

	Maximum Daily Consumption w/ Fire		Maximum Hourly Consumption		
Customer Classification	Allocation Factor 3	Weighted Factor	Allocation Factor 4	Weighted Factor	Allocation Factor
(1)	(2)	(3)=(2)X 0.2032	(4)	(5)=(4)X 0.7968	(6)=(3)+(5)
Rate A - Res/Com/Ind/OPA	0.8141	0.1654	0.8936	0.7120	0.8774
Rate B - Sales for Resale	0.0462	0.0094	0.0000	0.0000	0.0094
Rate J - Large User	0.0905	0.0184	0.0226	0.0180	0.0364
Rate F - Private Fire	0.0107	0.0022	0.0183	0.0146	0.0168
Public Fire	0.0385	0.0078	0.0655	0.0522	0.0600
Total	1.0000	0.2032	1.0000	0.7968	1.0000

The weighting of the factors is based on the total footage of mains, designated as either transmission mains or distribution mains, as follows:

	Total Footage of Mains	Weight
Transmission Mains	6,722,809	0.2032
Distribution Mains	26,356,782	0.7968
Total	33,079,591	1.0000

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MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

FACTOR 8. ALLOCATION OF COSTS ASSOCIATED WITH FIRE HYDRANTS.

Costs are assigned directly to Rate E.

Customer Classification	Allocation Factor
(1)	(3)
Rate E - Public Fire	1.0000
Total	1.0000

FACTOR 9. ALLOCATION OF COSTS ASSOCIATED WITH METERS.

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

Customer Classification	5/8" Dollar Equivalents	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	541,148	0.9812
Rate B - Sales for Resale	452	0.0008
Rate J - Large User	3,858	0.0070
Rate F - Private Fire	6,079	0.0110
Public Fire	0	0.0000
Total	551,537	1.0000

MISSOURI-AMERICAN WATER COMPANY
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BASIS FOR ALLOCATING METER COSTS TO CUSTOMER CLASSIFICATIONS

Meter Size	5/8" Dollar Equivalent	Rate A Number of Meters	Rate A Weighting	Rate B Number of Meters	Rate B Weighting	Rate J Number of Meters	Rate J Weighting	Rate F Number of Meters	Rate F Weighting	Total Number of Meters	Total Weighting
(1)	(2)	(3)	(4)=(2)X(3)	(5)	(6)=(2)X(5)	(7)	(8)=(2)X(7)	(13)	(14)=(2)X(11)	(15)	(16)
5/8	1.0	408,270	408,270	1	1	5	5	129	129	408,405	408,405
3/4	2.1	24,940	52,374	0	0	2	4	2,780	5,838	27,722	58,216
1	2.0	13,739	27,478	2	4	14	28	24	48	13,779	27,558
1-1/2	3.5	1,845	6,458	0	0	8	28	1	4	1,854	6,490
2	4.3	5,234	22,506	22	95	91	391	14	60	5,361	23,052
3	7.0	354	2,478	7	49	36	252		0	397	2,779
4	10.5	258	2,709	7	74	83	872		0	348	3,655
6	16.8	194	3,259	6	101	48	806		0	248	4,166
8	64.0	195	12,480	2	128	16	1,024		0	213	13,632
10	64.0	49	3,136	0	0	7	448		0	56	3,584
12	64.0	0	0	0	0	0	0		0	0	0
Total		455,078	541,148	47	452	310	3,858	2,948	6,079	458,383	551,537

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MISSOURI-AMERICAN WATER COMPANY
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FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 10. ALLOCATION OF COSTS ASSOCIATED WITH SERVICES.

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

Customer Classification	3/4" Dollar Equivalents	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	518,021	0.9080
Rate B - Sales for Resale	293	0.0005
Rate J - Large User	2,018	0.0035
Rate F - Private Fire	50,224	0.0880
Total	570,556	1.0000

MISSOURI-AMERICAN WATER COMPANY
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BASIS FOR ALLOCATING SERVICE COSTS TO CUSTOMER CLASSIFICATIONS

Service Size	3/4" Dollar Equivalent	Rate A Number of Services	Rate A Weighting	Rate B Number of Services	Rate B Weighting	Rate J Number of Services	Rate J Weighting	Rate F Number of Services	Rate F Weighting	Total Number of Services	Total Weighting
(1)	(2)	(3)	(4)=(2)X(3)	(5)	(6)=(2)X(5)	(7)	(8)=(2)X(7)	(13)	(14)=(2)X(11)	(15)	(16)
3/4	1.00	433,210	433,210	1	1	7	7	0	0	433,218	433,218
1	2.94	13,739	40,393	2	6	14	41	0	0	13,755	40,440
1-1/2	4.02	1,845	7,417	0	0	8	32	0	0	1,853	7,449
2	5.55	5,234	29,049	22	122	91	505	181	1,005	5,528	30,681
3	5.55	354	1,965	7	39	36	200	3	17	400	2,221
4	6.37	258	1,643	7	45	83	529	730	4,650	1,078	6,867
6	9.92	194	1,924	6	60	48	476	2,678	26,566	2,926	29,026
8	9.92	195	1,934	2	20	16	159	1,617	16,041	1,830	18,154
10	9.92	49	486	0	0	7	69	87	863	143	1,418
12 and above	12.16	0	0	0	0	0	0	89	1,082	89	1,082
Total		455,078	518,021	47	293	310	2,018	5,385	50,224	460,820	570,556

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MISSOURI-AMERICAN WATER COMPANY
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FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 11. ALLOCATION OF TRANSMISSION AND DISTRIBUTION OPERATION SUPERVISION AND ENGINEERING AND MISCELLANEOUS EXPENSES.

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

Customer Classification	Transmission & Distribution Operating Expenses	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	$ 4,137,996	0.8996
Rate B - Sales for Resale	32,100	0.0070
Rate J - Large User	126,820	0.0276
Rate F - Private Fire	106,570	0.0232
Public Fire	195,708	0.0426
Total	4,599,194	1.0000

FACTOR 12. ALLOCATION OF TRANSMISSION AND DISTRIBUTION MAINTENANCE SUPERVISION AND ENGINEERING, STRUCTURES AND IMPROVEMENTS, AND OTHER EXPENSES.

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

Customer Classification	Transmission & Distribution Maintenance Expenses	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	$ 2,240,601	0.7767
Rate B - Sales for Resale	18,277	0.0063
Rate J - Large User	69,670	0.0242
Rate F - Private Fire	60,520	0.0210
Public Fire	495,420	0.1718
Total	$2,884,487	1.0000

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MISSOURI-AMERICAN WATER COMPANY
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FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 13. ALLOCATION OF BILLING AND COLLECTING COSTS.

Factors are based on the total number of bills.

Customer Classification	Total Customers	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	2,762,534	0.9757
Rate B - Sales for Resale	564	0.0002
Rate J - Large User	3,720	0.0013
Rate F - Private Fire	64,620	0.0228
Public Fire	0	0.0000
Total	2,831,438	1.0000

FACTOR 14. ALLOCATION OF METER READING COSTS.

Factors are based on the number of metered bills.

Customer Classification	Total Metered Customers	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	2,762,534	0.9985
Rate B - Sales for Resale	564	0.0002
Rate J - Large User	3,720	0.0013
	2,766,818	1.0000

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MISSOURI-AMERICAN WATER COMPANY
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FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 15. ALLOCATION OF ADMINISTRATIVE AND GENERAL EXPENSES

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

Customer Classification	Operation & Maintenance Expenses	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	$31,944,910	0.8674
Rate B - Sales for Resale	665,817	0.0181
Rate J - Large User	1,517,506	0.0412
Rate F - Private Fire	569,627	0.0155
Public Fire	2,128,402	0.0578
Total	$36,826,262	1.0000

FACTOR 15A. ALLOCATION OF CASH WORKING CAPITAL

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

Customer Classification	Operation & Maintenance Expenses	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	$107,073,354	0.8627
Rate B - Sales for Resale	2,934,088	0.0236
Rate J - Large User	6,811,787	0.0549
Rate F - Private Fire	1,636,392	0.0132
Public Fire	5,659,947	0.0456
Total	$124,115,568	1.0000

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MISSOURI-AMERICAN WATER COMPANY
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FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 16. ALLOCATION OF LABOR RELATED TAXES AND BENEFITS.

Factors are based on the allocation of direct labor expense.

Customer Classification	Direct Labor Expense	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	$23,031,539	0.8662
Rate B - Sales for Resale	490,304	0.0184
Rate J - Large User	1,128,602	0.0424
Rate F - Private Fire	388,565	0.0146
Public Fire	1,551,609	0.0584
Total	$26,590,619	1.0000

FACTOR 17. ALLOCATION OF ORGANIZATION, FRANCHISES AND CONSENTS, MISCELLANEOUS INTANGIBLE PLANT AND OTHER Rate Base ELEMENTS.

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

Customer Classification	Original Cost Less Depreciation	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	$790,045,998	0.8319
Rate B - Sales for Resale	22,639,833	0.0238
Rate J - Large User	52,213,257	0.0550
Rate F - Private Fire	11,899,099	0.0125
Public Fire	72,902,428	0.0768
Total	$949,700,615	1.0000

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MISSOURI-AMERICAN WATER COMPANY
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FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

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

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

Customer Classification	Original Cost Measure of Value	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	$699,481,441	0.8328
Rate B - Sales for Resale	19,984,363	0.0238
Rate J - Large User	46,046,100	0.0548
Rate F - Private Fire	10,594,917	0.0126
Public Fire	63,841,891	0.0760
Total	$839,948,712	1.0000

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

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

Customer Classification	Total Cost of Service	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	$232,694,705	0.8469
Rate B - Sales for Resale	6,557,330	0.0239
Rate J - Large User	15,078,848	0.0549
Rate F - Private Fire	3,532,488	0.0129
Public Fire	16,861,340	0.0614
Total	$274,724,710	1.0000

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rate Base							
Organization	17	$ 258,799	$ 215,295	$ 6,159	$ 14,234	$ 3,235	$ 19,876
Franchises	17	43,698	36,352	1,040	2,403	546	3,356
Land & Ld Rights SS	2	1,728,609	1,475,540	83,665	164,045	1,037	4,322
Land & Ld Rights P	6	367,016	309,431	17,397	34,243	1,248	4,698
Land & Ld Rights WT	2	2,296,779	1,960,531	111,164	217,964	1,378	5,742
Land & Ld Rights TD	7	5,545,451	4,865,579	52,127	201,854	93,164	332,727
Land & Land Rights AG	15	390,161	338,426	7,062	16,075	6,047	22,551
Struct & Imp SS	2	9,841,290	8,400,525	476,318	933,938	5,905	24,603
Struct & Imp P	6	9,172,769	7,733,562	434,789	855,819	31,187	117,411
Struct & Imp Pumps (STL)	6	2,327,791	1,962,560	110,337	217,183	7,914	29,796
Struct & Imp Pump Boosters	6	2,484,906	2,095,024	117,785	231,842	8,449	31,807
Struct & Imp WT	2	36,071,715	30,790,816	1,745,871	3,423,206	21,643	90,179
Struct & Imp WT Nth Plt (ST	2	6,994,421	5,970,437	338,530	663,771	4,197	17,486
Struct & Imp WT Ctrl Plt 1	2	799,501	682,454	38,696	75,873	480	1,999
Struct & Imp WT Ctrl Plt 3	2	11,793,816	10,067,201	570,821	1,119,233	7,076	29,485
Struct & Imp WT Sth Plt (ST	2	2,953,746	2,521,318	142,961	280,311	1,772	7,384
Struct & Imp WT Meramec (ST	2	5,742,240	4,901,576	277,924	544,939	3,445	14,356
Struct & Imp TD	7	6,689,622	5,869,475	62,882	243,502	112,386	401,377
Struct & Imp TD Spec Cross	7	(108,380)	(95,092)	(1,019)	(3,945)	(1,821)	(6,503)
Struct & Imp AG	7	3,539,872	3,105,883	33,275	128,851	59,470	212,392
Struct & Imp Offices	15	3,519,146	3,052,508	63,697	144,989	54,547	203,407
Gen Structures HVAC	15	179,208	155,445	3,244	7,383	2,778	10,358
Struct & Imp Leasehold	15	70,128	60,829	1,269	2,889	1,087	4,053
Struct & Imp Leasehold	15	(179,368)	(155,584)	(3,247)	(7,390)	(2,780)	(10,367)
Struct & Imp Store,Shop,Gar	15	1,165,655	1,011,089	21,098	48,025	18,068	67,375
Struct & Imp Misc	15	2,252,582	1,953,889	40,772	92,806	34,915	130,199
Collect & Impounding	1	22,902	18,574	1,241	2,952	25	110
Lake, River & Other Intakes	2	12,991,686	11,089,703	628,798	1,232,911	7,795	32,479
Wells & Springs	2	5,914,003	5,048,193	286,238	561,239	3,548	14,785
Infiltration Galleries & Tunnels	2	1,684	1,437	81	160	1	4
Supply Mains	2	12,270,930	10,474,466	593,913	1,164,511	7,363	30,677
Supply Mains Nth Plt (STL)	2	76,232	65,072	3,690	7,234	46	191
Supply Mains Ctrl Plt (STL)	2	1,832,707	1,564,399	88,703	173,924	1,100	4,582
Supply Mains Sth Plt (STL)	2	(9,271)	(7,914)	(449)	(880)	(6)	(23)
Supply Mains Meramec Plt (S	2	518,168	442,308	25,079	49,174	311	1,295
Power Generation Equip	2	3,253,867	2,777,500	157,487	308,792	1,952	8,135
Power Generation Equip Othe	6	0	0	0	0	0	0
Boiler Plant Equipment P	6	319	269	15	30	1	4
Pump Equip Steam	6	14,123	11,907	669	1,318	48	181
Pump Equip Electric	6	20,303,807	17,118,140	962,400	1,894,345	69,033	259,889
Pump Equip Elec Pre46 (STL)	6	763,910	644,053	36,209	71,273	2,597	9,778
Pump Equip Elec Post46 (STL	6	12,677,901	10,688,739	600,933	1,182,848	43,105	162,277
Pump Equip Elec Boosters Po	6	(362,135)	(305,316)	(17,165)	(33,787)	(1,231)	(4,635)
Pump Equip Diesel	6	461,628	389,198	21,881	43,070	1,570	5,909
Pump Equip Diesel Stratman\	6	60,383	50,909	2,862	5,634	205	773

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MISSOURI-AMERICAN WATER COMPANY
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COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pump Equip Diesel Ctrl Plt	6	381,262	321,442	18,072	35,572	1,296	4,880
Pump Equip Hydraulic	6	287,443	242,343	13,625	26,818	977	3,679
Pump Equip Other	6	346,543	292,171	16,426	32,332	1,178	4,436
Pump Equip WT	6	604,490	509,645	28,653	56,399	2,055	7,737
Pump Equip TD	6	(7,590)	(6,399)	(360)	(708)	(26)	(97)
WT Equip Non-Media	2	47,420,652	40,478,269	2,295,160	4,500,220	28,452	118,552
WT Equip Non-Med North (STL	2	3,905,228	3,333,503	189,013	370,606	2,343	9,763
WT Equip Non Media Ctrl 1 &	2	(91,073)	(77,740)	(4,408)	(8,643)	(55)	(228)
WT Equip Non Media Ctrl 3 (	2	11,783,038	10,058,002	570,299	1,118,210	7,070	29,458
WT Equip Non Media Sth (STL	2	4,411,586	3,765,730	213,521	418,660	2,647	11,029
WT Equip Non Media Mer (STL	2	5,913,391	5,047,671	286,208	561,181	3,548	14,783
WT Equip Filter Media	2	2,374,447	2,026,828	114,923	225,335	1,425	5,936
Dist Reservoirs & Standpipe	5	7,477,976	5,630,168	308,840	575,804	210,131	753,032
Elevated Tanks & Standpipes	5	5,523,663	4,158,766	228,127	425,322	155,215	556,233
Ground Level Facilities	5	3,789,785	2,853,329	156,518	291,813	106,493	381,631
Below Ground Facilities	5	39,842	29,997	1,645	3,068	1,120	4,012
Clearwells	5	144,690	108,937	5,976	11,141	4,066	14,570
TD Mains Not Classified by	7	49,815,007	43,707,687	468,261	1,813,266	836,892	2,988,900
TD Mains 4" & Less	4	4,119,472	3,681,160	0	93,100	75,386	269,825
TD Mains 6 to 8"	4	32,736,259	29,253,121	0	739,839	599,074	2,144,225
TD Mains 10 to 16"	3	40,712,424	33,143,985	1,880,914	3,684,474	435,623	1,567,428
TD Mains 18" & Grtr	3	17,340,322	14,116,756	801,123	1,569,299	185,541	667,602
TD Mains AC 4" (STL)	4	1,247,768	1,115,006	0	28,200	22,834	81,729
TD Mains CI <10" 1900-28	4	895,653	800,356	0	20,242	16,390	58,665
TD Mains CI <10" 1929-56	4	2,256,311	2,016,240	0	50,993	41,290	147,788
TD Mains CI <10" 1957-93	4	12,720,135	11,366,713	0	287,475	232,778	833,169
TD Mains CI 12" (STL)	3	5,084,382	4,139,196	234,898	460,137	54,403	195,749
TD Mains CI 16" (STL)	3	6,273,335	5,107,122	289,828	567,737	67,125	241,523
TD Mains DI 6-8" (STL)	4	185,195,259	165,490,484	0	4,185,413	3,389,073	12,130,289
TD Mains DI 12" (STL)	3	49,249,068	40,093,667	2,275,307	4,457,041	526,965	1,896,089
TD Mains DI 16" & >(STL)	3	75,788,346	61,699,293	3,501,422	6,858,845	810,935	2,917,851
TD Mains Galve 1" (STL)	4	(27,131)	(24,245)	0	(613)	(497)	(1,777)
TD Mains LJ 20" (STL)	3	1,821,042	1,482,510	84,132	164,804	19,485	70,110
TD Mains PL 6-8in (STL)	4	31,138,106	27,825,012	0	703,721	569,827	2,039,546
TD Mains PL 12in (STL)	3	1,556,049	1,266,779	71,889	140,822	16,650	59,908
TD Mains DI 4in (STL)	4	1,236,864	1,105,261	0	27,953	22,635	81,015
TD Mains DI 10in (STL)	3	52,688	42,893	2,434	4,768	564	2,028
Fire Mains	8	487,367	0	0	0	0	487,367
Services	10	20,453,209	18,571,514	10,227	71,586	1,799,882	0
Meters Bronze Case	9	16,004,882	15,703,990	12,804	112,034	176,054	0
Meters Plastic Case	9	122,526	120,222	98	858	1,348	0
Meters Other	9	36,670,615	35,981,207	29,336	256,694	403,377	0
Meters Other-Rem Rdr Unts	9	2,134,825	2,094,690	1,708	14,944	23,483	0
Meter Installations	9	11,118,469	10,909,442	8,895	77,829	122,303	0
Meter Installation Other	9	5,576,908	5,472,063	4,462	39,038	61,346	0
Meter Vaults	9	707,645	694,341	566	4,954	7,784	0

MISSOURI-AMERICAN WATER COMPANY
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COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Hydrants	8	38,929,500	0	0	0	0	38,929,500
Other P/E Intangible	17	(303,165)	(252,203)	(7,215)	(16,674)	(3,790)	(23,283)
Other P/E SS	2	6,859	5,855	332	651	4	17
Other P/E WT Res Hand Equip	2	1,204,338	1,028,023	58,290	114,292	723	3,011
Other P/E TD	7	25,059	21,987	236	912	421	1,504
Other P/E CPS	15	1,174,799	1,019,021	21,264	48,402	18,209	67,903
Office Furniture & Equip	15	454,209	393,981	8,221	18,713	7,040	26,253
Comp & Periph Equip	15	3,985,286	3,456,837	72,134	164,194	61,772	230,350
Computer Software	15	(992,186)	(860,622)	(17,959)	(40,878)	(15,379)	(57,348)
Comp Software Other	15	44,562	38,653	807	1,836	691	2,576
Comp Software Customized	15	30,868	26,775	559	1,272	478	1,784
Comp Software Personal	15	9,532	8,268	173	393	148	551
Data Handling Equipment	15	194,191	168,441	3,515	8,001	3,010	11,224
Other Office Equipment	15	195,071	169,205	3,531	8,037	3,024	11,275
Trans Equip Lt Duty Trks	15	483,394	419,296	8,749	19,916	7,493	27,940
Trans Equip Hvy Duty Trks	15	647,974	562,052	11,728	26,697	10,044	37,453
Trans Equip Autos	15	226,625	196,574	4,102	9,337	3,513	13,099
Trans Equip Other	15	365,174	316,752	6,610	15,045	5,660	21,107
Stores Equipment	15	699,953	607,139	12,669	28,838	10,849	40,457
Tools,Shop,Garage Equip	15	3,324,032	2,883,265	60,165	136,950	51,522	192,129
Tools,Shop,Garage Equip Oth	15	1,146,250	994,257	20,747	47,225	17,767	66,253
Laboratory Equipment	2	746,909	637,562	36,150	70,882	448	1,867
Laboratory Equip Other	2	92,081	78,601	4,457	8,739	55	230
Power Operated Equipment	15	239,363	207,624	4,332	9,862	3,710	13,835
Comm Equip Non-Telephone	15	465,675	403,927	8,429	19,186	7,218	26,916
Remote Control & Instr	15	1,524,801	1,322,612	27,599	62,822	23,634	88,133
Comm Equip Telephone	15	(5,186)	(4,499)	(94)	(214)	(80)	(300)
Misc Equipment	15	1,263,640	1,096,082	22,872	52,062	19,586	73,038
Other Tangible Property	17	457,043	380,214	10,878	25,137	5,713	35,101
Total Utility Plant In Service		950,163,850	790,431,511	22,651,027	52,239,009	11,904,808	72,937,495

Schedule C

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010 ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large User Rate J	Fire Protection Rate F	Fire Protection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Other Rate Base Items							
Add:							
Other Utility Plant Adjustments	17	0	0	0	0	0	0
Cash Working Capital	15A	13,921,000	12,009,647	328,536	764,263	183,757	634,798
Materials and Supplies	15	4,239,206	3,677,087	76,730	174,655	65,708	245,026
Prepayments	15	1,406,444	1,219,950	25,457	57,945	21,800	81,292
OPEB's Contributed to External Fund	16	1,346,175	1,166,057	24,770	57,078	19,654	78,617
Pension / OPEB Tracker	16	(1,593,487)	(1,380,278)	(29,320)	(67,564)	(23,265)	(93,060)
Regulatory Deferrals	17	488,215	406,146	11,620	26,852	6,103	37,495
Tank Painting Tracker	5	1,686,208	1,269,546	69,640	129,838	47,382	169,801
Less: Accumulated Amortization	17	0	0	0	0	0	0
Accumulated Deferred ITC (3%)	17	(21,263)	(17,689)	(506)	(1,169)	(266)	(1,633)
Deferred Income Taxes	17	(138,988,190)	(115,624,275)	(3,307,919)	(7,644,350)	(1,737,352)	(10,674,293)
Pensions	16	7,300,554	6,323,740	134,330	309,543	106,568	426,352
Total Other Rate Base Elements		(110,215,138)	(90,950,070)	(2,666,664)	(6,192,909)	(1,309,891)	(9,095,604)
Total Original Cost Measure of Value		$ 839,948,712	$ 699,481,441	$ 19,984,363	$ 46,046,100	$ 10,594,917	$ 63,841,891

Schedule C

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

FACTOR 20. REALLOCATION OF PUBLIC FIRE

Factors are based on the relative cost of meters by size and customer classification.

Customer Classification	5/8" Dollar Equivalents	Allocation Factor
(1)	(2)	(3)
Rate A - Res/Com/Ind/OPA	541,148	0.9929
Rate B - Sales for Resale	0	0.0000
Rate J - Large User	3,858	0.0071
Rate F - Private Fire	0	0.0000
Total	545,006	1.0000

Schedule D

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS EXCEPT NEW ACQUISTIONS

SUMMARY OF AVERAGE DAILY SEND OUT AND MAXIMUM DAILY USAGE
FOR THE YEARS 1999-2010

Year	Average Daily Send out (MGD)	Maximum Daily Use	
		MGD	Ratio to Average
(1)	(2)	(3)	(4)
1999	213.572	395.838	1.85
2000	204.770	333.278	1.63
2001	208.905	346.848	1.66
2002	213.175	389.341	1.83
2003	205.553	383.625	1.87
2004	209.006	324.891	1.55
2005	224.851	393.318	1.75
2006	222.755	384.467	1.73
2007	230.937	416.607	1.80
2008	196.586	330.180	1.68
2009	188.216	324.997	1.73
2010	195.540	320.392	1.64

Schedule E

MISSOURI-AMERICAN WATER COMPANY
ALL DISTRICTS

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

Description	Restrictive Diameters Squared	Quantity	Relative Demand	Allocation Factor
(1)	(2)	(3)	(4)=(2)x(3)	(5)
PRIVATE FIRE PROTECTION				
Fire Lines				
2 -inch	4.00	181	724	
3 -inch	9.00	3	27	
4 -inch	16.00	730	11,680	
6 -inch	36.00	2,678	96,408	
8 -inch	64.00	1,617	103,488	
10 -inch	100.00	87	8,700	
12 -inch	144.00	88	12,672	
20 -inch	400.00	1	400	
Private Hydrants	20.25	146	2,954	
Total Rate F		5,531	237,053	0.2188
PUBLIC FIRE PROTECTION				
Hydrant Nozzle Sizes				
5 1/4 Valve 1- 2-1/2" & 1- 4 1/2"	26.50	2,273	60,235	
4 1/2" Valve 1- 2-1/2" & 1- 4 1/2"	20.25	34,538	699,395	
4 3/4" Valve 1- 2-1/2" & 1- 4 1/2"	22.56	158	3,565	
5" Valve 1- 2-1/2" & 1- 4 1/2"	25.00	471	11,775	
4 1/2" Valve 1-2 1/2"	6.25	948	5,925	
4 1/4" Valve 2- 2-1/2" & 1- 4.5"	18.06	1,117	20,176	
6" Valve 2- 2-1/2" & 1- 4.5"	32.75	292	9,563	
6" Valve 2- 2-1/2"	12.50	2,800	35,000	
5 1/2 Valves 1- 2-1/2" & 1- 4 1/2"	26.50	4	106	
2" Valve 2- 2-1/2" & 1- 4 1/2"	4.00	1	4	
2 1/4" Valve 2- 2-1/2" & 1- 4 1/2"	5.06	1	5	
3" Valve 2- 2-1/2" & 1- 4 1/2"	9.00	1	9	
3 1/4" Valve 2- 2-1/2" & 1- 4 1/2"	10.56	1	11	
5 1/4 Valve 2-1/2"	6.25	21	131	
4 1/4 Valve 2 1/2"	6.25	115	719	
Total Rate E		42,741	846,617	0.7812
Total Fire Protection		48,272	1,083,670	1.0000

MISSOURI AMERICAN WATER COMPANY

CALCULATION OF THE 5/8-INCH CUSTOMER COSTS PER MONTH
INCLUDING THE UNRECOVERED PUBLIC FIRE COSTS

Cost Function	Cost of Service	Number of Units	Unit Cost Per Month	Unit Cost Per Quarter
Meters	$ 19,217,272	545,458 5/8 Equivalents	$ 2.94	$ 8.82
Services	7,638,426	520,332 3/4 Equivalents	1.22	3.66
Billing/Collecting	29,136,971	2,766,816 Bills	10.53	10.53
Subtotal	55,992,669		14.69	23.01
Unrecovered Public Fire	16,569,134	545,458 5/8 Equivalents	2.53	7.59
Total	$ 72,561,803		$ 17.22	$ 30.60