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Witness: Paul R. Herbert

Exhibit Type: Direct Sponsoring Party: Missouri-American Water Company

Case No.: WR-2010-XXXX

SR-2010-XXX

Date: October 30, 2009

### MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2010-XXXX CASE NO. SR-2010-XXX

DIRECT TESTIMONY

**OF** 

PAUL R. HERBERT

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

MAUCExhibit No. 109

Date 5-11 10 Reporter 48

File No. We-2010-031

### 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-2010-XXXX CASE NO. SR-2010-XXXX

### 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.

Commonwealth of Pennsylvania **County of Cumberland** SUBSCRIBED and sworn to

Before me this 22 day of Actober 2009.

My commission expires: tehrary do, 2011

COMMONWEALTH OF PENNSYLVANIA

Notariol Scal

Cheryl Ann Rutter, Noracy Public East Pennsboro Lwp., Cumberland County My Commission Expires Feb. 20, 2011

Member, Pennsylvania Association of Notarios

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1 2 3			WITNESS INTRODUCTION AND QUALIFICATIONS AND EXPERIENCE
4	1.	Q.	Please state your name and address.
5		A.	My name is Paul R. Herbert. My business address is 207 Senate Avenue,
6	•		Camp Hill, Pennsylvania.
7	2.	Q.	By whom are you employed?
8		A.	I am employed by Gannett Fleming, Inc.
9	3.	Q.	Please describe your position with Gannett Fleming, Inc. and briefly
10			state your general duties and responsibilities.
11		A.	I am President of the Valuation and Rate Division. My duties and respon-
12			sibilities include the preparation of accounting and financial data for revenue
13			requirement and cash working capital claims, the allocation of cost of service
14			to customer classifications, and the design of customer rates in support of
15			public utility rate filings.
16	4.	Q.	Have you presented testimony in rate proceedings before a regulatory
17			agency?
18 -		A.	Yes. I have testified before the Pennsylvania Public Utility Commission, the
19			New Jersey Board of Public Utilities, the Public Utilities Commission of Ohio,
20			the Public Service Commission of West Virginia, the Kentucky Public Service
21			Commission, the Iowa State Utilities Board, the Virginia State Corporation
22			Commission, the Missouri Public Service Commission, the New Mexico
23			Public Regulation Commission, the Public Utilities Commission of the State of
24			California, the Illinois Commerce Commission, the Arizona Corporation

Commission, the Delaware Public Service Commission, 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 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.

### 8 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) cost of service allocation studies (sometimes called class cost of service studies) and proposed rate designs 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.

Α.

### **COST OF SERVICE ALLOCATION**

14 10. Q. Briefly describe the purpose of your cost allocation studies.

The purpose of the studies was to allocate the district specific cost of service, which is the total revenue requirement, for MAWC water operations to the customer classifications in each operating district. The operating districts include 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. Cost allocation studies were not performed for the sewer districts in Parkville, Cedar Hill and Warren County since these districts are predominantly residential customers.

In the studies, the district specific costs were allocated to the residential, commercial, industrial, other public authorities, sales for resale, private fire protection and public fire protection classifications in accordance with generally accepted principles and procedures. The cost of service allocation studies results in indications of the relative cost responsibilities of each class of customers in each operating district. 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 district specific cost of service for the test year ended June 30, 2009, and proposed customer rates which produce the pro forma revenue requirements, are presented in the studies.

3.

- 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.
- 22 12. Q. Please describe the procedure followed in each of the cost allocation studies.
  - A. Each identified classification of cost in the district specific cost of service 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.

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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.

- 9 13. Q. What was the source of the total cost of service data set forth in column 3 of Schedule B?
- 11 A. The pro forma costs of service were furnished by the Company, and are set
  12 forth in Company accounting exhibits and workpapers. The cost of service
  13 by district used in my allocation studies reflects the revenue contribution
  14 among districts as explained in Mr. William's testimony.
- 15 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 historic Company data for each district.

    Schedule D shows the experienced maximum day ratios for each district 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.
- 23 15. Q. What factors were considered in estimating the maximum day extra

  24 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, field studies of similar service areas in Pennsylvania, and generally-accepted customer class maximum day and maximum hour demand ratios.

### 7 16. Q. Please explain the allocation of small mains in certain districts.

Factor 4, used to allocate distribution mains, was modified to exclude consumption for certain 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?

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A.

A.

In Joplin, five of the six largest industrial customers are connected to mains 12-inch and larger. The sixth customer is served from an 8-inch main, but is located a short distance from 12- and 16-inch mains. The test year consumption for these six customers was excluded from the industrial 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 industrial or Rate J classification, an analysis of the customers was performed to determine the size main each Rate J customer is served from. 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. 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. This results in a factor of 0.0066 for Rate J, which approximates the 0.7%.

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

Yes. The results are summarized in columns 1, 2 and 3 of Schedule A for each district. Column 2 sets forth the total allocated pro forma cost of service

- as of June 30, 2009, for each customer classification identified in column 1.

  Column 3 presents each customer classification's cost responsibility as a percent of the total cost.
- 4 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 for each district 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.
- 23 21. Q. Did management discuss rate design guidelines with you?
  - A. Yes, they did. The guidelines were as follows: (1) Maintain district specific

pricing for each district's rate structure, taking into account a revenue contribution for several small districts as discussed in Mr. William's testimony; (2) Move toward a uniform customer charge across districts other than St. Louis Metro and propose a low-income customer charge; (3) design volumetric rates so that proposed revenues by customer classification move toward or approximate the indicated cost of service in each district; (4) for districts other than St. Louis Metro, use a one-block structure for the residential class (except Parkville) and two- to four-block structures for non-residential classes; and (5) determine the unit cost per public fire hydrant in the St. Louis Metro Area so that public fire protection costs can be recovered from each customer in a similar manner as the current practice in St. Louis County.

### 13 22. Q. Do you agree with these guidelines?

14 A. Yes, I do.

- 15 23. Q. Have you prepared proposed rate schedules for each classification and each District?
- 17 A. The Company has prepared Schedule CAS-14 which shows a comparison of present and proposed rates for each district.
- 19 24. Q. Please explain the proposed minimum charges.
  - A. An analysis of the customer costs in each district was prepared to determine the appropriate monthly minimum charges by meter size. For the seven districts other than the St. Louis Metro Area, the pro forma customer costs for a 5/8-inch meter ranged from \$20.43 to \$11.61 per month and averaged \$15.35 per month. (See Schedule F for each district). Based on this

analysis, the 5/8-inch minimum charge was set at \$15.00 per month for each of the seven districts representing increases/(decreases) ranging from (5%) in Brunswick to 68% in St. Joseph District. The larger increases in certain districts are a result of the existing rates being significantly below the indicated cost of service. 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.

For St. Louis Metro Area, the analysis of pro forma customer costs resulted in a 5/8-inch meter customer cost of \$16.70 per quarter. Since these unit costs would represent a 36% increase over existing rates, the minimum charges were set at \$11.40 per month and \$16.70 per quarter. Minimum charges for the larger meter sizes were developed in a similar manner as in the other districts.

### 14 25. Q. Please explain the 5/8" low income charge.

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A. The Company requested the implementation of a low income customer charge for residential customers with a 5/8" meter. This rate was set at 65% of the full customer charge for a residential 5/8" meter.

### 26. Q. Please explain the volumetric charges.

Generally, for the seven districts other than St. Louis Metro and Parkville Water, a one-block uniform volumetric rate is maintained for the residential classification in each district.

For non-residential customers, a two, three or four block structure is proposed with the first block rate that is the same for each of the non-residential classes and the remaining block rates designed to move revenues

toward or equal to the indicated cost of service by classification within each district.

In St. Louis Metro Area, the same single-block rate structure for Rates A through J is proposed with increases in each rate according to cost of service. For Parkville, a uniform, declining block rate structure was maintained for all classifications.

### 7 27. Q. Please explain private fire charges.

A. In most districts, the existing private fire revenues exceed the indicated cost of service. Therefore, no changes to the private fire line rates are proposed at this time with the exception of Warrensburg and St. Joseph Districts. Private fire rates in those districts were increased in order to equal cost of service.

### 28. Q. Please explain the public fire hydrant charges.

A. The cost of service for public fire protection was established only for the St.

Louis Metro Area. The annual unit cost was determined by dividing the cost of service by the number of public hydrants for the combined service areas.

The public fire hydrant rates will be charged on a per customer basis in each area as a separate charge in a similar manner as the existing practice in St.

Louis County. Public fire costs in the other districts were reallocated to the general service classification to be recovered through general service rates.

### 29. 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-13 and 14, sponsored by Mr. Petry, 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, for each district.

- 7 30. Q. Does this complete your testimony at this time?
- 8 A. Yes, it does.

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### LIST OF CASES IN WHICH PAUL R. HERBERT TESTIFIED

	<u>Year</u>	<u>Jurisdiction</u>	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.	1 <del>9</del> 91	PSC of W. Va.	91-106-W-MA	Clarksburg Water Board	Revenue Requirements (Rute 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. 7.	1994 1994	Pa. PUC Pa. PUC	R-943053 R-943124	The York Water Company City of Bethlehem	Cost Allocation and Rate Design Revenue Requirements, Cost Allocation, Rate Design and Cash Working Capital
8.	19:94	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
<b>1</b> 9.	1999	Pa. PUC	R-994868	Philadelphia Suburban Water Company	Cost Allocation and Rate Design
<b>2</b> 0.	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	ła. St Util Bd	RPU-01-4	lowa-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	Tri Reg. Auth	03-	Tennessee-American Water Company	Cost Allocation and Rate Design
<b>34</b> .	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
4.	2006	Pa. PUC	R-051178	T. W. Phillips Gas and Oil Co.	Cost Allocation and Rate Design
.5.	2006	Pa. PUC	R-061322	The York Water Company	Cost Allocation and Rate Design

### LIST OF CASES IN WHICH PAUL R. HERBERT TESTIFIED

	<u>Year</u>	Jurisdiction	Docket No.	<u>Client/Utility</u>	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 Aliocation and Rate Design
49.	2006	Tn Reg Auth	06-00290	Tennessee American Water Company	Cost Allocation and Rate Design
50.	2007	Ca. PŪC	U-339-W	Suburban Water Systems	.Water Conservation Rate Design
51.	2007	Ca. PUÇ	U-168-W	San Jose Water Company	Water Conservation Rate Design
<b>52</b> .	2007	Pa. PUC	R-00072229	Pennsylvania American Water Company	Cost Allocation and Rate Design
<b>53</b> .	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	II. CC	07-0507	Illinois American Water Company	Customer Class Demand Study
57.	2007	Pa. PUC	R-00072711	Aqua Pennsylvania, Inc.	Cost Allocation and Rate Design
58.	2007	NJ BPU	WR07110866	The Atlantic City Sewerage Company	Cost Allocation and Rate Design
59.	2007	Pa. PUC	R-00072492	City of Bethlehem – Bureau of Water	Revenue Requirements, Cost Allo
<b>6</b> 0.	2007	WV PSC	07-0541-W-MA	Clarksburg Water Board	Cost Allocation and Rate Design
61.	2007	WV PSC	07-0998-W-42T	West Virginia American Water Company	Cost Allocation and Rate Design
62.	2008	NJ BPU	WR08010020	New Jersey American Water Company	Cost Allocation and Rate Design
63.	2008	Va St Corp Com		Virginia American Water Company	Cost Allocation and Rate Design
64.	2008	Tn. Reg. Auth.	08-00039	Tennessee American Water Company	Cost Allocation and Rate Design
65.	2008	Mo PSC	WR-2008-0311	Missouri American Water Company	Cost Allocation and Rate Design
66.	2008	De PSC	08-96	Artesian Water Company, Inc.	Cost Allocation and Rate Design
67.	2008	Pa PUC	R-2008-2032689	Penna, American Water Co. – Coatesville Wastewater	Cost Allocation and Rate Design
68.	2008	AZ Corp. Com.	W-01303A-08-0227 SW-01303A-08-0227	Arizona American Water Co Water - Wastewater	Cost Allocation and Rate Design
<b>9</b> .	2008	Pa PUÇ	R-2008-2023067	The York Water Company	Cost Allocation and Rate Design
<b>O</b> .	2008	WV PSC	08-0900-W-42T	West Virginia American Water Company	Cost Allocation and Rate Design
71.	2008	Ky PSC	2008-00250	Frankfort Electric and Water Plant Board	Cost Allocation and Rate Design
72.	2008	Ky PSC	2008-00427	Kentucky American Water Company	Cost Allocation and Rate Design
73.	2009	PaPUC	2008-2079660	UGI Penn Natural Gas	Cost of Service Allocation
74.	2009	PaPUC	2008-2079675	UGI – Central Penn Gas	Cost of Service Allocation
75.	2009	PaPUC	2009-2097323	Pennsylvania American Water Co.	Cost Allocation and Rate Design
76.	2009	la St Util Bd	RPU-09-	Iowa-American Water Company	Cost Allocation and Rate Design
77.	2009	II CC		Illinois-American Water Company	Cost Allocation and Rate Design
78.	2009	Oh PUC	09-391-WS-AIR	Ohio-American Water Company	Cost Allocation and Rate Design

### MISSOURI-AMERICAN WATER COMPANY ST. LOUIS, MISSOURI

# COST OF SERVICE ALLOCATION STUDY FOR THE TEST YEAR ENDED JUNE 30, 2009

### MISSOURI-AMERICAN WATER COMPANY

St. Louis, Missouri

## COST OF SERVICE ALLOCATION STUDY FOR THE TEST YEAR ENDED JUNE 30, 2009

GANNETT FLEMING, INC. - VALUATION AND RATE DIVISION

Harrisburg, Pennsylvania

Calgary, Alberta

Valley Forge, Pennsylvania



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

October 30, 2009

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

Attention Mr. Frank Kartman, President

### Gentlemen:

Pursuant to your request, we have conducted cost of service allocation studies based on the district specific revenue requirements estimated for the test year ended June 30, 2009.

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

Respectfully submitted,

GANNETT FLEMING, INC. Valuation and Rate Division

PAUL R. HERBERT

President

CONSTANCE E. HEPPENSTALL

Rate Analyst

PRH:krm

Attachment

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PART I. INTRODUCTION

### MISSOURI-AMERICAN WATER COMPANY

### COST OF SERVICE ALLOCATION STUDY FOR THE TEST YEAR ENDED JUNE 30, 2009

### PART I. INTRODUCTION

### PLAN OF REPORT

The report sets forth the results of the cost of service allocation studies based on district specific revenue requirements as of June 30, 2009, 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 district specific 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 for each district.

### BASIS OF STUDY

The purpose of the cost allocation studies was to determine the relative cost of service responsibilities of the several customer classifications within each operating district, based on considerations of quantity of water consumed, variability of rate of consumption, and costs associated with customer metering, billing and accounting. The allocation studies 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 studies 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.

<u>Base Costs</u> 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.

<u>Customer Costs</u> 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.

<u>Fire Protection Costs</u> 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 for each district in Schedule A, Comparison of Pro Forma Cost of Service with Revenues Under Present and Proposed Rates for the Test Year Ended June 30, 2009, constitute the principal results of the cost allocation studies and subsequent rate designs.

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 June 30, 2009, 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 1990 through 2008. Schedule E presents the basis for allocating demand related costs of fire service to private and public fire protection classifications.

PART II. COST OF SERVICE BY CUSTOMER CLASSIFICATION

11-1

BRUNSWICK DISTRICT

### BRU-1

# Schedule A-BRU

### MISSOURI-AMERICAN WATER COMPANY BRUNSWICK DISTRICT

### COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES FOR THE TEST YEAR ENDED JUNE 30, 2009

	Cost of Ser	vice (a)					Proposed	ncrease
Customer	Amount	•	Revenues, Pre	sent Rates	Revenues, Pro	osed Rates	•	Percent
Classification	(Schedule B)	Percent	Amount	Percent	Amount	Percent	Amount	Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	\$ 264,473	70.5%	\$ 196,693	66.0%	\$ 256,945	68.5%	\$ 60,252	30.6%
Commercial	85,284	22.7%	63,074	21.3%	82,652	22.0%	19,578	31.0%
Industrial	1,027	0.3%	1,070	0.4%	1,003	0.3%	(67)	-6.3%
Public Authority	10,250	2.7%	8,951	3.0%	10, <b>44</b> 2	2.8%	1,491	16.7%
Sales for Resale	11,212	3.0%	17,028	5.7%	13,519	3.6%	(3,509)	-20.6%
Private Fire Service	2,991	0.8%	10,567	3.6%	10,567	2.8%	-	0.0%
Public Fire Service	_	0.0%	\$0	0.0%	-	0.0%		0.0%
Total Sales	375,235	100.0%	297,383	100.0%	375,128	100.0%	77,7 <b>4</b> 5	26.1%
Other Revenues	3,982		\$3,202		\$3,982		780	24.4%
Total	\$ 379,217		\$300,585		\$ 379,110		\$ 78,525	26.1%

<sup>(</sup>a) Cost of Service is net of revenue contribution frrom St. Louis Metro District.

# Schedule B-BRU

### MISSOURI-AMERICAN WATER COMPANY BRUNSWICK DISTRICT COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

•	Factor	Cost of	•			Public	Sales for	Fire Pro	tection
Account	Ref.	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OPERATION AND MAINTENANCE EXPENS	ES							•	
SOURCE OF SUPPLY EXPENSES									
Super & Eng Oper SS	2	\$ 2,445	<b>\$</b> 1,633	\$ 619	\$ 4	\$ 74	\$ 100	\$ 1	\$ 13
Labor & Exp Oper SS	2	215	144	55	0	6	9	0	1
Labor & Exp Oper SS	2	281	188	71	0	8	12	0	2
Purchased Water	1	0	0	0	0	0	0	0	0
TOTAL SS EXPENSE - OPERATION		2,941	1,965	745	5	89	121	1	16
Misc Exp Oper SS	2	6,628	4,428	1,680	11	200	272	2	36
Misc Exp Oper SS	2	0	0	0	0	0	0	0.	0
Rents Oper SS	2	0	0	0	0	0	0	Q	0
Super & Eng Maint SS	2	0	0	0	0	0	0	O O	0
Struct & Improve Maint SS	2	0	0	0	0	0	0	0	0
Struct & Improve Maint SS	2	0	0	0	0	0	0	0	0
Collect & Impound Maint SS	2	0	0	0	0	0	0	0	0
Collect & Impound Maint SS	2	0	0	0	0	0	0	0	0
Lake, River & Oth Maint SS	2	0	Ó	0	0	0	0	0	0
Lake, River & Oth Maint SS	2	0	0	0	0	0	0	0	0
Wells & Springs Maint SS	2	. ' 0	0	. 0	0 .	Ö	0 '	Ö	0
Wells & Springs Maint SS	2	0	0	O	Ô	Ó	ò	Ó	0
Infilt Gall & Tunnels Maint SS	2	0	0	Ó	0	Ò	Ô	Ō	Ō
Infilt Gall & Tunnels Maint SS	2	0	0	Ō	0	Õ	Ō	ō	Ô
Supply Mains Maint SS	2	Ō	ō	ō	ō	Õ	ň	ō	Õ
Supply Mains Maint SS	2	Ō	Ŏ	Ō	ō	ō	ő	ō	ō
Misc Plant Maint SS	2	(1)	(1)	(0)	(0)	(0)	(Ö)	(0)	(0)
Misc Plant Maint SS	2.	228	152	58	0	7	9	0	1
TOTAL SS EXPENSE - MAINTENANCE		6,855	4,580	1,737	11	206	282	<del></del>	37
TOTAL SS EXPENSE	•	9,796	6,544	2,482	. 16	295	403	3	53
POWER AND PUMPING EXPENSES									
Super & Eng Oper P	6	0	0	0	0	0	O	0	0
Fuel for Power Prod	1	ŏ	ŏ	ŏ	ő	Ô	Õ	ñ	ő
Labor & Exp Oper Pwr Prod	6	ő	ŏ	ŏ	Ô	n	ñ	å	Õ
Labor & Exp Oper Pwr Prod	6	0	ő	ŏ	Ď	Ď	Ď	ő	0
Purch Fuel/Power for Pump	ĭ	9,881	6.370	2,626	16	311	466	5	86
Labor & Exp Oper Pump	6	37,349	20,901	7,926	49	941	1,285	306	5.942
Labor & Exp Oper Pump	6	0. 0.	20,301	7,520	9	941	1,200	300 0	5,842 0

MISSOURI-AMERICAN WATER COMPANY
BRUNSWICK DISTRICT
COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

	Factor	Cost of				Public	Sales for	Fire Pro	
Account	Ref.	Service	Residential	Commercial	Industrial	_Authorities_	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Expenses Transferred	6	0	0	0	0	0	0	0	0
Misc Exp Oper P	6	1	1	0	0	0	0	0	0
Rents Oper P	6	. 0	0	. 0	0	. 0	0_	0	0_
TOTAL PUMPING EXPENSE - OPERATION	N -	47,231	27,272	10,552	64	1,252	1,751	311	6,028
Super & Eng Maint P	6	144	81	31	0	4	5	1	23
Struct & Improve Maint P	6	0	0	0	0	0	0	0	0
Struct & Improve Maint P	6	- 0	0	0	0	0	0	0	0
Power Prod Equip Maint P	6	0	0	0	0	0	0	0	0
Power Prod Equip Maint P	6	0	0	0	O	0	0	0	0
Pump Equip Maint P	6	26,269	14,700	5,574	34	662	904	215	4,179
Pump Equip Maint P	<b>,</b> 6	452	253	96	1	11_	16	4	. 72
TOTAL PUMPING EXPENSES - MAINTEN	IANCE	26,866	15,034	5,701	35	677	924	220	4,274
TOTAL PUMPING EXPENSES		74,097	42,306	16,253	99	1,929	2,675	532	10,303
WATER TREATMENT									
Super & Eng Oper WT	2	14,641	9,781	3,710	23	441	602	4	79
Chemicals	1	8,033	5,179	2,135	13	253	379	4	70
Labor & Exp Oper WT	2	0	0	0	0	0	0	0	0
Labor & Exp Oper WT	2	6,736	4,500	1,707	11	203	277	2	36
Misc Exp Oper WT	2	660	441	167	1	20	27	0	4
Misc Exp Oper WT	1	6,000	3,868	1,595	10	189	283	3	52
Misc Exp Oper WT	2	1,094	731	277	2	33	45	0	6
Rents Oper WT	2	0	0	0	0	0	0	0	0
TOTAL WT EXPENSE - OPERATION	•	37,164	24,501	9,591	59	1,138	1,613	14	247
Super & Eng Maint WT	2	14,575	9,737	3,693	23	439	599	4	79
Struct & Improve Maint WT	2	0	0	0	0	0	0	0	0
Struct & Improve Maint WT	2	0	0	0	0	0	. 0	0	. 0
WT Equip Maint WT	· 2	0	· 0	0	. 0	0	0	0	0
WT Equip Maint WT	2	2,055	1,373	521	3	62	84	1_	11
TOTAL WT EXPENSE - MAINTENANCE		16,630	11,110	4,214	27	501	683	5	90
TOTAL WT EXPENSE		53,793	35,611	13,805	86	1,639	2,297	19	337
TRANSMISSION AND DISTRIBUTION EX	PENSES		•						
Super & Eng Oper TD	11	2,514	787	286	1	. 33	45	66	1,296
Storage Facility Exp	5	0	0	0	0	0	0	0	0
Storage Facilty Exp	5	Ō	Õ	ō	ō	ō	Ō	Ō	Ō
TD Lines Exp	7	1,835	575	209	0	24	33	48	946
TD Lines Exp	7	311	97	35	ō	4	6	8	160
Meter Expense	9	0	0	0	ō	Ö	ō	ō	0
Meter Expense	·ġ	0	. 0	ō	0	ā	. 0	ò	0

# Schedule B-BRU

MISSOURI-AMERICAN WATER COMPANY
BRUNSWICK DISTRICT
COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

Customer Install Exp	A	Factor	Cost of	O	, Commencial	44	Public	Sales for	Fire Pro	otection Public
Customer Install Exp 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0										
Customer Install Exp   10   0   0   0   0   0   0   0   0	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Mise Exp Oper TD  11	Customer Install Exp	10	0	0	0	0	0	0	. 0	0
MISE EXP OPER TD 11 4338 137 50 0 6 8 8 12 268 100 1953 MISE EXP OPER TD 11 3.788 1188 431 1 49 68 100 1953 MISE EXP OPER TD 11 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Customer Install Exp	10	. 0	0	. 0	0	. 0	0	0	0
Misc Exp Oper TD	Misc Exp Oper TD	11	267	84	30	0	3	5	7	138
Rents Oper TO	Misc Exp Oper TD	11	438	137	50	0	6	8	12	226
Super & Eng Maint TD	Misc Exp Oper TD	11	3,788	1,186	431	1	49	68	100	1,953
Super & Eng Maint TD	Rents Oper TD	11	0	0	0	0	0	0	0	0
Struct & Improve Maint TD	TOTAL T & D EXPENSE OPERATION	-	9,154	2,866	1,043	2	119	164	241	4,720
Struct & Improve Maint TD	Super & Eng Maint TD	12	2,373	743	270	0	31	42	62	1,223
Dist Res Stand Maint TD	Struct & Improve Maint TD	12		0	0	0	0	0	0	0
Dist Res Stand Maint TD	Struct & Improve Maint TD	12	0	0	0	0	0	0	0	0
TD Main Maint TD 7 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		5	0	0	0	0	0	0	0	0
Fire Main Maint TD	TD Main Maint TD	7	0	0	0	0	0	0	0	0
Fire Main Maint TD	TD Main Maint TD	7	0	0	0	G	0	0	0	Ó
Services Maint TD	Fire Main Maint TD	8	0	0	0	0	0	0	0	0
Services Maint TD	Fire Main Maint TD	8	0	0	0	0	0	0	0	0
Meters Maint TD         9         0	Services Maint TD	10	0	0	0	0	0	0	0	0
Meters Maint TD         9         0	Services Maint TD	10	0	0	0	0	0	0	0	0
Hydrants Maint TD	Meters Maint TD	9	0	Q	0	D	0	0	. 0	0
Hydrants Maint TD	Meters Maint TD	9	. 0	C	0	0	0	0	. 0	0
Misc Plant Maint TD         12         1         0         0         0         0         0         0         1           Mat and Sup Maint TD         12         671         210         76         0         9         12         18         346           Misc Maint TD         12         20         6         2         0 <td>Hydrants Maint TD</td> <td>8</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td>	Hydrants Maint TD	8	0	0	0	0	0	0	0	0
Mat and Sup Maint TD         12         671         210         76         0         9         12         18         346           Misc Maint TD         12         20         6         2         0         0         0         1         10           Amort Def Maint TD         5         0 <td></td> <td>8</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td>		8	0	0	0	0	0	0	0	0
Misc Maint TD		12	1	0	0	0	0	0	0	1
Amort Def Maint TD 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Mat and Sup Maint TD	12	671	210	76	0	9	12	18	346
TOTAL T & D EXPENSE - MAINTENANCE 3,065 960 349 1 40 55 81 1,580  TOTAL T & D EXPENSE 12,219 3,826 1,392 2 159 219 321 6,300  CUSTOMER ACCOUNTS  Supervision CA 13 2,445 1,983 368 11 44 16 22 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0 0  Cust Rec & Collection CA 13 195 158 29 1 4 4 1 2 0  Cust Rec & Collection CA 13 1,966 1,595 296 9 35 13 18 0  Uncollectible Accts 13 5,936 4,815 894 27 107 40 53 0		12	20	6	2	0	0	0	1	10
TOTAL T & D EXPENSE 12.219 3.826 1,392 2 159 219 321 6,300  CUSTOMER ACCOUNTS  Supervision CA 13 2,445 1,983 368 11 44 16 22 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0  Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0  Cust Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0  Cust Rec & Collection CA 13 195 158 29 1 4 4 1 2 0  Cust Rec & Collection CA 13 1,966 1,595 296 9 35 13 18 0  Uncollectible Accts 13 5,936 4,815 894 27 107 40 53 0		5	0	0	0	0	0	0	0	0
CUSTOMER ACCOUNTS  Supervision CA  13 2,445 1,983 368 11 44 16 22 0 Meter Reading Exp CA 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	TOTAL T & D EXPENSE - MAINTENANCE	_	3,065	960	349	1	40	55	81	1,580
Supervision CA       13       2,445       1,983       368       11       44       16       22       0         Meter Reading Exp CA       14       0	TOTAL T & D EXPENSE		12,219	3,826	1,392	. 2	159	219	321	6,300
Meter Reading Exp CA         14         0         0         0         0         0         0         0         0           Meter Reading Exp CA         14         0	CUSTOMER ACCOUNTS									
Meter Reading Exp CA       14       0	Supervision CA	13	2,445	1,983	368	11	44	16	22	0
Meter Reading Exp CA       14       0	Meter Reading Exp CA	14	0	0	0	0	0			ō
Meter Reading Exp CA       14       0	Meter Reading Exp CA	14	0	Ó	Ö	Ō	Ō	Õ	-	0
Cust Rec & Collection CA     13     195     158     29     1     4     1     2     0       Cust Rec & Collection CA     13     1,966     1,595     296     9     35     13     18     0       Uncollectible Accts     13     5,936     4,815     894     27     107     40     53     0	Meter Reading Exp CA	14	0	Ō	-	ō	Õ	_		Õ
Cust Rec & Collection CA     13     1,966     1,595     296     9     35     13     18     0       Uncollectible Accts     13     5,936     4,815     894     27     107     40     53     0		13	195	158	29	1	4	1	-	Õ
Uncollectible Accts 13 5,936 4,815 894 27 107 40 53 0	Cust Rec & Collection CA	13				9	35	13		0
Affice Couch Apole From CA	Uncollectible Accts	13								-
	Misc Cust Accts Exp CA	13			67			3		ő

	Factor					Public	Sales for	Fire Protection	
Account	Ref.	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Misc Cust Accts Exp CA	13	0	0	0	0	0	0	0	0
Misc Cust Accts Exp CA	13	4,664	3,783	702	21	84	31	42	0
Cust Serv & Info Exp CA	13	0	. 0	0	0	0	<u> </u>		0
TOTAL CUSTOMER ACCOUNTING EXPENS	E	15,652	12,697	2,357	70	282	105	141	0
ADMINISTRATIVE AND GENERAL EXPENSE	s								
Salaries AG	15	24,616	14,868	5,201	42	618	795	175	2,917
Other Supplies & Exp AG	15	5	3	1	0	0	0	0	1
Other Supplies & Exp AG	15	4,537	2,740	959	8	114	147	32	538
Other Supplies & Exp AG	15	6,755	4,080	1,427	11	170	218	48	800
Mgmt Fees-Admin	15	20,233	12,221	4,275	34	508	654	144	2,398
Mgmt Fees-Customer Service	13	6,716	5,448	1,011	30	121	45	60	0
Mgmt Fees-Belleville Lab	2	834	558	211	1	25	34	0	5
Mgmt Fees- Employee	16	716	421	154	1	18	24	5	93
Outside Services AG	15	1,679	1,014	355	3	42	54	12	199
Outside Services AG	15	61,684	37,257	13,034	105	1,548	1,992	438	7,310
Ins Gen Liab Oper AG	15	2,844	1,718	601	5	71	92	20	337
Ins Work Comp AG	16	1,319	775	284	2	34	45	9	170
Ins Other Oper AG	15	879	531	186	1	22	28	6	104
Property Insurance	15	648	391	137	1	16	21	5	77
Injuries & Damages	16	(40)	(23)	(9)	(0)	(1)	(1)	(0)	(5)
Employee Pension & Benefits	16	34,031	19,983	7,330	51	871 <sup>^</sup>	1,160	238	4,397
Employee Pension & Benefits	16	28,032	16,460	6,038	42	718	956	196	3,622
Employee Pension & Benefits	16	7,083	4,159	1,526	11	181	242	50	915
Reg Commision Exp	19	572	337	115	1	14	17	5	84
Rents AG	15	45	27	9	Ö	1	1	0	5
Goodwill Advertising Exp	15	5	3	1	Ō	0	0	0	1
Misc Exp AG	15	9,539	5,761	2,015	16	239	308	68	1,130
Research & Development	15	0	0	0	Q	0	0	0	0
TOTAL A & G OPERATIONS	, ,	212,732	128,731	44,863	366	5,331	6,833	1,511	25,096
Maint Exp ARO/Net Neg Sal AG	18	(1,187)	(663)	(214)	(2)	(26)	(30)	(12)	(240)
General Plant Maint AG	15	419	253	89	ì	11	14_	3	50
TOTAL A & G EXPENSE - MAINTENANCE		(768)	(410)	(125)	(2)	(15)	(17)	(9)	(191)
TOTAL A & G EXPENSE		211,964	128,322	44,738	365	5,316	6,817	1,502	24,906
Total Operation & Maintenance Expenses		377.521	229,305	81,027	639	9,620	12,515	2,518	41,898

## Schedule B-BRU

Annual	Factor	Cost of	Danid41-4	On		Public	Sales for	Fire Protection Private Public	
Account (1)	Ref	Service (3)	Residential (4)	Commercial (5)	Industrial (6)	Authorities (7)	Resale (8)	Private (9)	(10)
(-)	(-/	(0)	(4)	(9)	(3)	1.7	(0)	(4)	(14)
DEPRECIATION EXPENSE		•		•		•		•	
Organization	17	0	0	0	0	0	0	0	
ranchises	17	0	0	0	O	0	0	0	
Struct & Imp SS	2	588	393	149	1	18	24	0	
Struct & Imp P	6	3,723	2,083	790	5	94	128	31	59
Struct & Imp WT	2	11,313	7,558	2,867	18	341	465	3	6
Struci & Imp TD	7	563	176	64	0	7	10	15	29
Struct & Imp AG	15	4	2	1	0	0	0	0	
Struct & Imp Offices	15	2,303	1,391	487	4	58	74	16	27
Struct & Imp Store, Shop, Gar	15	23	14	5	Q	1	1	0	
Struct & Imp Misc	15	388	234	82	1	10	13	3	4
Collect & Impounding	1	0	0	0	0	0	0	0	
.ake, River & Other Intakes	2	0	0	0	0	0	0	0	
infiltration Galleries & Tunnels	2	32	21	8	0	1	1	0	
Vells & Springs	2	5,094	3,403	1,291	8	153	209	2	2
Supply Mains	2	1,375	919	348	2	41	57	0	
Power Generation Equip	6	31	17	7	0	1	1	0	
Power Generation Equip Othe	6	0	0	0	0	. 0	0	0	
Pump Equip Electric	6	2,471	1,383	524	3	62	85	20	39
ump Equip Other	6	324	181	69	0	8	11	3	5
VT Equip Non-Media	2	5,600	3.741	1,419	9	169	230	2	3
VT Equip Filter Media	2	2,021	1,350	512	3	61	83	ĩ	1
Dist Reservoirs & Standpipe	5	1,333	587	211	Ď	27	29	23	45
levated Tanks & Standpipes	5	608	268	96	Ò	12	13	11	20
Ground Level Facilities	5	0	0	0	Õ	ō	0	Ö	
D Mains Not Classified by	7	3,855	1,207	439	1	50	69	101	1,98
TD Mains 4" & Less	4	894	247	89	Ò	10	14	26	50
D Mains 6 to 8"	4	2,899	802	288	. 0	32	45	. 84	1,64
D Mains 10 to 16"	3	2	1	0	· ŏ	ō	0	0	1,01
D Mains 18" & Grtr	3	1	1	ŏ	ŏ	ő	ő	ŏ	
Services	10	9,743	7,794	1,541	43	193	86	86	
Meters Bronze Case	9	1,257	976	226	8	29	18	0	
Meters Plastic Case	9	0	0	0	ő	0	0	ő	
Meters Other	9	435	338	78	3	10	6	ő	
fleters Other-Rem Rdr Unts	9	246	191	44	2	6	4	Ö	
Neter Installations	9	2,281	1,771	410	14	52	33	ů	
leter Installation Other	9	0	0	0	0	0	0	Ö	
leter Vaults	9	203	158	37	1	5	3	Ö	
lydrants	8	1,808	0	0	'n	0	0	0	1,80
Other P/E Intangible	17	46	26	8	0	1	1	0	1,00
other P/E WT Res Hand Equip	2	0	0	ő	0	'n	0	0	
Other P/E TD	7	0	0	Ö	0	0	0	0	
Other P/E CPS	15	201	121	42	0	· ·	6	v	•
Office Furniture & Equip	15	125	76	42 26	_	5	6	1	2
Surver a minimis or Eduih	13	120	/6	26	0	3	4	1	

MISSOURI-AMERICAN WATER COMPANY
BRUNSWICK DISTRICT
COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

	Factor	Cost of				Public	Sales for	Fire Pro	tection
Account	Ref.	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Comp & Periph Equip	15	3,288	1,986	695	6	83	106	23	390
Computer Software	15	2,463	1,488	520	4	62	80	17	292
Comp Software Personal	15	30	18 `	6	0 .	1	1	0	4
Comp Software Customized	15	2,664	1,609	563	5	67	98	19	316
Comp Software Other	15	709	428	150	1	18	23	5	84
Data Handling Equipment	15	4,008	2,421	847	7	101	129	28	475
Other Office Equipment	15	291	176	61	0	7	9	2	34
Trans Equip Lt Duty Trks	15	846	511	179	1	21	27	6	100
Trans Equip Hvy Duty Trks	15	0	0	0	0	0	0	0	0
Trans Equip Autos	15	10	6	2	0	0	0	0	1
Trans Equip Other	15	0	0	0	0	0	0	0	0
Stores Equipment	15	596	、 360	126	. 1	15	. 19	4	71
Tools Shop Garage Equip	15	2,253	1,361	476	. 4	57	73	16	267
Tools, Shop, Garage Equip Oth	15	0	0	0	0	0	0	0	0
Laboratory Equipment	2	3,895	2,602	987	6	117	160	1	21
Laboratory Equip Other	2	0	0	0	0	0	0	0	0
Power Operated Equipment	15	50	30	11	0	1	2	0	6
Comm Equip Non-Telephone	15	93	56	20	0	2	3	1	11
Remote Control & Instr	15	642	388	136	1	16	21	5	76
Comm Equip Telephone	15	1	1	Q	Q	0	0	0	0
Misc Equipment	15	12,090	7,302	2,555	21	303	391	86	1,433
Other Tangible Property	15	4,568	2,759	965	8	115	148	32	541
Total Depreciation Expense		100,287	60,932	20,458	192	2,445	3,002	676	12,582

# Schedule B-BRU

MISSOURI-AMERICAN WATER COMPANY
BRUNSWICK DISTRICT
COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

	Factor	Cost of		•		Public	Sales for		otection
Account	Ref.	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Amort-Other UP	. 18	99	. 55	18-	0	2.	3	1	. 20
Amort-Intangible Fin	2	27	18	7	0	1	1	0	0
Amort-Property Losses	2	0	0	0	0	0	0	0	0
Taxes Other Than Income									
Utility Reg Assessment Fee	19	2,514	1,480	504	5	60	75	20	371
Property Taxes	18	26,040	14,536	4,695	49	562	661	260	5,276
FUTA	16	100	59	22	0	3	3	1	13
FICA	16	9,274	5,446	1,998	14	237	316	65	1,198
SUTA	16	269	158	58	0	7	9	2	35
Other Taxes & Licenses	15	508	307	107	1	13	16	4	60
Gross Receipts Tax	19	0_	0	0	0	0	0	0	0
Total Taxes, Other Than Income	_	38,705	21,985	7,383	69	882	1,082	351	6,953
Income Taxes	18	76,519	42,713	13,796	145	1,653	1,944	765	15,503
Utility income Available for Return	18	190,910	106,566	34,421	363	4,124	4,849	1,909	38,678
Revenue Contribution	19	(404,851)	(238,336)	(81,132)	(729)	(9,676)	(12,065)	(3,198)	(59,716)
Total Cost of Service	,	379,217	223,239	75,978	680	9,050	11,330	3,022	55,918
Less: Other Water Revenues	19	3,982	2,344	798	7	95	119	31	587
Total Other Water Revenues		3,982	2,344	798	7	95	119	31	587
Total Cost of Service Related to									
Sales of Water		\$ 375,235	\$ 220,895	\$ 75,180	\$ 672	\$ 8,955	\$ 11,212	\$ 2,991	\$ 55,331
Reallocation of Public Fire	20	. 0	43,579	. 10,103	354	. 1,295	00	. 0	(55,331)
Total	-	\$ 375,235	\$ 264,473	\$ 85,284	\$ 1,027	\$ 10,250	\$ 11,212	\$ 2,991	\$ -

#### 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.

•	Average Daily	
Customer	Consumption,	Allocation
Classification	Thousand Gallons	Factor
(1)	(2)	(3)
Residential	41.00	0.6447
Commercial	16.90	0.2658
Industrial	0.10	0.0016
Other Public Authority	2.00	0.0315
Sales for Resale	3.00	0.0472
Private Fire Protection	0.03	0.0005
Public Fire Protection	0.55	0.0087
Total	63.58	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:

	Averag	ge Daily	Maxim	um Day	
	Consu	ımption	Extra C	Capacity	
Customer	Allocation	Weighted	Allocation	Weighted	Allocation
Classification	Factor 1	Factor	Factor	Factor	Factor
(1)	(2)	(3)=(2)x	(4)	(5)=(4)x	(6)=(3)+(5)
		0.6250		0.3750	
Residential	0.6447	0.4030	0.7069	. 0.2651	0.6681
Commercial	0.2658	0.1661	0.2328	0.0873	0.2534
Industrial	0.0016	0.0010	0.0017	0.0006	0.0016
Other Public Authority	0.0315	0.0197	0.0276	0.0104	0.0301
Sales for Resale	0.0472	0.0295	0.0310	0.0116	0.0411
Private Fire Protection	0.0005	0.0003			0.0003
Public Fire Protection	0.0087	0.0054			0.0054
Total	1.0000	0.6250	1.0000	0.3750	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.

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							
•	Average Daily		Rate of Flow,						
Customer	Consumption,		Thousand Gal.	Allocation					
Classification	Thousand Gal.	Factor*	Per Day	Factor					
(1)	(2)	(3)	$(4)=(2)\times(3)$	(5)					
Residential	41.0	1.0	41.0	0.7069					
Commercial	16.9	0.8	13.5	0.2328					
Industrial	0.1	0.5	0.1	0.0017					
Other Public Authority	2.0	8.0	1.6	0.0276					
Sales for Resale	3.0	0.6	· 1.8	0.0310					
Total	63.0		58.0	1.0000					

The weighting of the factors is based on the maximum day ratio of 1.60, based on a review of maximum day ratios experienced during the period 1990 through 2007 (see Schedule D).

	Maximum Day	
	Ratio	Weight
Average Day Maximum Day	1.00	0.6250
Extra Capacity	0.60	0.3750
Total	1.60	1.0000

<sup>\*</sup> Ratio of maximum day to average day minus 1.0.

## Schedule C-BRU

## MISSOURI-AMERICAN WATER COMPANY BRUNSWICK DISTRICT

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.

	7	Average Daily  Consumption		um Day Capacity	Fire Pr		
Customer Classification	Allocation Factor	Weighted Factor	Allocation Factor	Weighted Factor	Allocation Factor	Weighted Factor	Allocation Factor
(1)	(2)	(3)=(2) X 0.5235	(4)	(5)=(4) X 0.3141	(6)	(7)≈(6) X 0.1624	(8)=(3)+(5)+(7)
Residential	0.6447	0.3375	0.7069	0.2221			0.5596
Commercial	0.2658	0.1391	0.2328	0.0731			0.2122
Industrial	0.0016	0.0008	0.0017	0.0005			0.0013
Other Public Authority	0.0315	0.0165	0.0276	0.0087			0.0252
Sales for Resale	0.0472	0.0247	0.0310	0.0097			0.0344
Private Fire Protection	0.0005	0.0003			0.0487	0.0079	0.0082
Public Fire Protection	0.0087	0.0046			0.9513	0.1545	0.1591
Total	1.0000	0.5235	1.0000	0.3141	1.0000	0.1624	1.0000

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 1.60 and the average daily system sendout for 2008 of 0.116 MGD. The system demand for fire protection is 300 Gallons per minute for 2 hours.

		Rate of Flow,	
	Ratio	(GPD)	Weight
Averagė Day Maximum Day	1.00	116,049	0.5235
Extra Capacity	0.60	69,629	0.3141
Subtotal	1.60	185,678	0.8376
Fire Protection		36,000	0.1624
Total		221,678	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).

## chedule C-BRU

## MISSOURI-AMERICAN WATER COMPANY BRUNSWICK DISTRICT

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.

				Maximi	ım Hour		•	
	Averag	e Hourly Const	umption	Extra C	apacity	Fire	Protection	·
Customer	Thousand	Allocation	Weighted	Allocation	Weighted	Allocation	Weighted	Allocation
Classification	Gallons	Factor	Factor	Factor	Factor	Factor	Factor	Factor
(1)	(2)	(3)	(4)=(3) X	(5)	(6)=(5) X	(7)	(8)=(7) X	(9)=(4)+(6)+(8)
			0.1611		0.2425		0.5964	
Residential	1.71	0.6477	0.1044	0.7106	0.1723			0.2766
Commercial	0.70	0.2652	0.0427	0.2325	0.0564			0.0992
Industrial	0.00	0.0000	0.0000	0.0000	0.0000			0.0000
Other Public Authority	0.08	0.0303	0.0049	0.0261	0.0063			0.0112
Sales for Resale	0.13	0.0492	0.0079	0.0308	0.0075			0.0154
Private Fire Protection	0.00	0.0000 -	0.0000			0.0487	0.0290	0.0290
Public Fire Protection	0.02	0.0076	0.0012	Mar III		0.9513	0.5674	0.5686
Total	2.64	1.0000	0.1611	1.0000	0.2425	1,0000	0.5964	1.0000

The maximum hour extra capacity factors in column 5 are determined on the next page.

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 2008 of 0.116 MGD. The system demand for fire protection is 300 gallons per minute.

		•	
	Ratio	(GPM)	Weight
Average Hour Maximum Hour	1.00	. 81	0.1611
Extra Capacity	1.50	122	0.2425
Subtotal	2.50	203	0.4036
Fire Protection		300	0.5964
Total		503	1.0000

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

	Average Hourly	Maximum Hour Extra Capacity					
Customer Classification	Consumption Thousand Gal.	Factor*	1,000 Gallons Per Hour	Allocation Factor			
(1)	(2)	(3)	$(4)=(2)\times(3)$	(5)			
Residential	1.71	3.5	5.99	0.7106			
Commercial	0.70	2.8	1.96	0.2325			
Industrial	0.00	1.5	0.00	0.0000			
Other Public Authority	0.08	2.8	0.22	0.0261			
Sales for Resale	0.13	2.0	0.26	0.0308			
Total	2.62		8.43	1.0000			

<sup>\*</sup> 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).

## Schedule C-BRU

## MISSOURI-AMERICAN WATER COMPANY BRUNSWICK DISTRICT

#### 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.

				Maximi	ım Hour				
	Averag	e Hourly Const	umption	Extra C	Capacity	Fire Pr	otection		
Customer	Thousand	Allocation	Weighted	Allocation	Weighted	Allocation	Weighted	Allocation	
Classification	Gallons	Factor	Factor	Factor	Factor_	Factor	Factor	Factor	
(1)	(2)	(3)	(4)=(3) X	(5)	(6)=(5) X	(7)	(8)=(7) X	(9)=(4)+(6)+(8)	
			0.2560		0.3840		0.3600		
Residential	1.7	0.6538	0.1673	0.7106	0.2729			0.4402	
Commercial	0.7	0.2692	0.0689	0.2325	0.0893			0,1582	
Industrial	0.0	0.0000	0.0000	0.0000	0.0000			0.0000	
Other Public Authority	0.1	0.0385	0.0099	0.0261	0.0100			0.0199	
Sales for Resale	0.1	0.0385	0.0099	0.0308	0.0118			0.0217	
Private Fire Protection	0.0	0.0000	0.0000			0.0487	0.0175	0.0175	
Public Fire Protection	0.0	0.0000	0.0000			0.9513	0.3425	0.3425	
Total	2.6	1.0000	0.2560	1.0000	0.3840	1.0000	0.3600	1.0000	

The weighting of the factors is based on the ratio of the capacity required for a 2 hour demand of fire flow, as related to total storage capacity. The calculation is shown on the following page.

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

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

The weighting of the factors is based on the ratio of the capacity required for a 2 hour demand of fire flow, as related to total storage capacity.

Fire Protection Weight =	300 GF	M X 60 M	=	0.3600	
· ·		100,00			
			•		
General Service Weight =	1.0000	_	0.3600	=	0.6400

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	0.2560		
Extra Capacity  Maximum Hour	1.50	60.00	0.3840		
Total	2.50	100.00	0.6400		

#### 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:

		ım Daily ımption	Maximu Consumpt	•	Maximus Consu		
Customer Classification (1)	Allocation Factor 2 (2)	Weighted Factor (3)=(2)X 0.0000	Allocation Factor 3 (4)	Weighted Factor (5)=(4)X 1.0000	Allocation Factor 4 (6)	Weighted Factor (7)=(6)X 0.0000	Allocation Factor (8)=(3)+ (5)+(7)
Residential	0.6681	0.0000	0.5596	0.5596	0.2766	0.0000	0.5596
Commercial	0.2534 0.0016	0.0000	0.2122 0.0013	0.2122 0.0013	0.0992 0.0000	0.0000	0.2122 0.0013
Industrial Other Public Authority	0.0016	0.0000	0.0013	0.0013	0.0000	0.0000	0.0013
Sales for Resale	0.0411	0.0000	0.0344	0.0344	0.0154	0.0000	0.0344
Private Fire Protection	0.0003	0.0000	0.0082	0.0082	0.0290	0.0000	0.0082
Public Fire Protection	0.0054	0.0000	0.1591	0.1591	0.5686	0.0000	0.1591
Total	1.0000	0.0000	1.0000	1.0000	1.0000	0.0000	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	0	0.0000
Associated with Maximum Day and Fire	110	1.0000
Associated with Maximum Hour	0	0.0000
Total	110	1.0000

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:

		um Daily tion w/ Fire	Maximur Consu			
Customer Classification	Allocation Factor 3	Weighted Factor	Allocation Factor 4	Weighted Factor	Allocation Factor (6)=(3)+(5)	
· (1)	(2)	(3)=(2)X 0.1295	(4)	(5)=(4)X 0.8705		
Residential	0.5596	0.0723	0.2766	0.2408	0.3131	
Commercial	0.2122	0.0275	0.0992	0.0864	0.1139	
Industrial	0.0013	0.0002	0.0000	0.0000	0.0002	
Other Public Authority	0.0252	0.0033	0.0112	0.0097	0.0130	
Sales for Resale	0.0344	0.0045	0.0154	0.0134	0.0179	
Private Fire Protection	0.0082	0.0011	0.0290	0.0252	0.0263	
Public Fire Protection	0.1591	0.0206	0.5686	0.4950	0.5156	
Total	1.0000	0.1295	1.0000	0.8705	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	9,795	0.1295
Distribution Mains	65,858	0.8705
· Total	75,653	1.0000

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

#### FACTOR 8, ALLOCATION OF COSTS ASSOCIATED WITH FIRE HYDRANTS.

Costs are assigned directly to Public Fire Protection.

Customer	Allocation *
Classification	- Factor
(1)	(3)
Public Fire Protection	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	5/8" Dollar	Allocation		
Classification	Equivalents	Factor		
(1)	(2)	(3)		
Residential	371	0.7762		
Commercial	· 86	0.1799		
Industrial	. 3	0.0063		
Other Public Authority	11	0.0230		
Sales for Resale	. 7	0.0146		
Private Fire	0	0.0000		
Total	<u>478</u>	1.0000		

# Schedule C-BRU

### MISSOURI-AMERICAN WATER COMPANY BRUNSWICK DISTRICT

#### BASIS FOR ALLOCATING METER COSTS TO CUSTOMER CLASSIFICATIONS

		•		•		•	•						
	5/8"	Resi	dential	Com	nercial	Indu	strial	Other Pub	lic Authority	Sales fe	or Resale	To	tal
Meter	Dollar	Number of		Number of		Number of		Number of		Number of		Number of	
Size	Equivalent.	Meters	Weighting	Meters	Weighting	Meters	Weighting	Meters	Weighting	Meters	Weighting	Meters	Weighting
(1)	(2)	(3)	(4)=(2)X(3)	(5)	(6)=(2)X(5)	(7)	(8)=(2)X(7)	(9)	(10)≈(2)X(9)	(11)	(12)=(2)X(11)	(13)	(14)
5/8	1.0	358	358	55	55	o	0	7	7	1	1	421	421
3/4	1.3	o	0	0	С	0	o	0	0	0	0	'O	o
1	1.7	0	0	8	14	2	3	0	0	1	2	11	19
1-1/2	3.5	0	0	0	0	0	0	0	0	0	o	0	0
2	4.3	3	13	4	17	0	. 0	1	4	1	4	9	38
3	19.0	O	o.	. 0	0	0	0	Ō	0	0		0	· . o
4	29.3	0	0	0	0	0	0	0	0	0	0	0	0
6	48.4	٥	0	0	0	0	0	0	0	0	0	0	0
8	112.9	0	0	0	0	0	0	0	0	0	0	0	0
Tótal		361	. 371	67	. 86	2	3	8	11	. 3	7	441	478

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	3/4" Dollar	Allocation		
Classification	Equivalents	Factor		
(1)	(2)	(3)		
Residential	364	0.8000		
Commercial	72	0.1582		
Industrial	2	0.0044		
Other Public Authority	9	0.0198		
Sales for Resale	4	0.0088		
Private Fire Protection	· 4	0.0088		
Total	455	1.0000		

#### BASIS FOR ALLOCATING SERVICE COSTS TO CUSTOMER CLASSIFICATIONS

		3/4".	Resid	dential	Comm	nercial	Indu	strial	Other Publ	ic Authority	Sales fo	r Resale	Private Fire	Protection	To	otal
	Service Size	Dollar Equivalent	Number of Services	Weighting	Number of Services	Weighting	Number of Services	Weighting	Number of Services	Weighting						
	(1)	(2)	(3)	(4)=(2)X(3)	(5)	(6)=(2)X(5)	(7)	(8)=(2)X(7)	(9)	(10)=(2)X(9)	(11)	(12)=(2)X(11)	(13)	(14)=(2)X(11)	(15)	(16)
	3/4 .	1.00	358	358	55	55	0	0	7	7	1	1	0	0	421	421
	1	1.17	. 0	0	8	9	2	2	0	0	1	1	0	0	11	12
	1-1/2	1.58	o	0	0	o	0	0	0	0	0	0	0	0	o	0
	2	2.04	3	6	4	8	0	0	1	2	1	2	0	0	9 -	18
BRU-	3	2.73	0	0	0	. 0	0	0	0	0	o	0	0	0	0	0
22	4	2.88	0	.0	0	0		0	. 0	O	0	0	0	. 0	0	0
	6 .	4.24	0	0	0	0	0	0	0	0	0	0	1	4	1	4
	8	6.98	. 0	0	0	0	0	o	0	0	0	0	0	0	0	o
	10	9.50	0	0	0	0	0	0	0	0	0	0	0	0	Q	0
	12	12.16	0	0	<u>0</u>	0		0	0	0	0	0	. 0	0	. 0	0
	Γotal		361	364	67	72	2	2	8	9	3	4	1	4	442	455

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:

Cuatamas	Transmission & Distribution	Allogation	
Customer	Operating	Allocation	
Classification	Expenses	Factor	
(1)	(2)	(3)	
Residential	\$ 672	0.3131	
Commercial	. 244	0.1139	
Industrial	0	0.0002	
Other Public Authority	28	0.0130	
Sales for Resale	38	0.0179	
Private Fire Protection	56	0.0263	
Public Fire Protection	1,107	0.5156	
Total	2,146	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, however, due to no expenses in these categories, Factor 7 is used as follows:

Customer	Transmission & Distribution Maintenance	Factor 7 Allocation
Classification	Expenses	Factor
(1)	(2)	(3)
Residential	\$ -	0.3131
Commercial	_	0.1139
Industrial	-	0.0002
Other Public Authority	- · · · · · · · · · · · · · · · · · · ·	0.0130
Sales for Resale	-	0.0179
Private Fire Protection	<u></u>	0.0263
Public Fire Protection	_	0.5156
Total .	\$0	1.0000

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 customers.

Customer Classification	Total Customers	Allocation Factor
(1)	(2)	(3)
Residential	361	0.8112
Commercial	67	0.1506
Industrial	2	0.0045
Other Public Authority	8	0.0180
Sales for Resale	3	0.0067
Private Fire Protection	4	0.0090
Public Fire Protection	0	0.0000
Total	445	1.0000

#### FACTOR 14. ALLOCATION OF METER READING COSTS.

Factors are based on the number of metered customers.

Customer Classification	Total Metered Customers	Allocation Factor
(1)	(2)	(3)
Residential	361	0.8187
Commercial *	67	0.1519
Industrial	2	0.0045
Other Public Authority	8	0.0181
Sales for Resale	3	0.0068
Total .	441	1.0000

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.

	Operation &	
Customer	Maintenance	Allocation
Classification	Expenses	Factor
(1)	(2)	(3)
Residential	\$85,566	0.6040
Commercial	29,933	0.2113
Industrial	236	0.0017
Other Public Authority	3,550	. 0.0251
Sales for Resale	4,569	0.0323
Private Fire Protection	1,004	0.0071
Public Fire Protection	16,784	0.1185
Total	\$141,642	1.0000

#### FACTOR 15A. ALLOCATION OF CASH WORKING CAPITAL

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

	Operation &	
Customer	Maintenance	Allocation
Classification	Expenses	Factor
(1)	(2)	(3)
Residential	\$229,378	0.6073
Commercial	81,038	0.2145
Industrial	639	0.0017
Other Public Authority	9,621	0.0255
Sales for Resale	12,514	0.0331
Private Fire Protection	2,522	- 0.0067
Public Fire Protection	42,004	0.1112
Total	\$377,717	1.0000

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	Direct Labor	Allocation		
Classification	Expense	Factor		
(1)	(2)	(3)		
Residential	\$76,537	0.5872		
Commercial	28,070	0.2154		
Industrial	· 191	0.0015		
Other Public Authority	3,331	0.0256		
Sales for Resale	· 4,444	0.0341		
Private Fire Protection	919	0.0070		
Public Fire Protection	16,838	0.1292		
Total	\$130,329	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:

Original		
Cost Less	Allocation Factor	
Depreciation		
(2)	(3)	
\$1,245,583	0.5566	
400,468	. 0.1789	
4,170	0.0019	
47,897	0.0214	
56,236	0.0251	
22,645	0.0101	
461,083	0.2060	
\$2,238,083	1.0000	
	Cost Less Depreciation (2) \$1,245,583 400,468 4,170 47,897 56,236 22,645 461,083	

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.

	Original		
Customer	Cost Measure	Allocation	
Classification	of Value	Factor	
(1)	(2)	(3)	
Residential	\$1,196,180	0.5582	
Commercial	386,369	0.1803	
Industrial	3,967	0.0019	
Other Public Authority	46,197	0.0216	
Sales for Resale	54,528	0.0254	
Private Fire Protection	21,407	0.0100	
Public Fire Protection	434,000	0.2026	
Total	<b>\$2</b> ,142,648	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	Total Cost	Allocation		
Classification	of Service	Factor		
(1)	(2)	(3)		
Residential	\$459,758	0.5887		
Commercial	156,492	0.2004		
Industrial	1,403	0.0018		
Other Public Authority	18,652	0.0239		
Sales for Resale	23,303	0.0298		
Private Fire Protection	6,196	0.0079		
Public Fire Protection	115,179	0.1475		
Total	\$780,982	1.0000		

# Schedule C-BRU

Account	Factor Ref.	Cost of Service	Residential	Commercial	Industrial	Public Authorities	Sales for Resale	Fire Pr	otection Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
RATE BASE									
Organization	17	°\$ 192	\$ 107	\$ 34	\$ 0	\$ 4	\$ 5	<b>\$</b> 2	\$ 40
Franchises	17	1,092	608	195	2	23	27	11	225
Land & Ld Rights SS	2	11,981	8,004	3,036	19	361	492	4	65
Land & Ld Rights P	6	0	Đ	- 0	0	0	0	0	0
Land & Ld Rights WT	2	1,468	981	372	2	44	60	. 0	8
Land & Ld Rights TD	7	575	180	65	0	7	10	15	296
Land & Land Rights AG	15	0	0	. 0	0	- 0	0	0	0
Struct & Imp SS	2	19,307	12,899	4,892	31	581	7 <del>94</del>	6	104
Struct & Imp P	6	50,271	28,131	10,667	65	1,267	1,729	412	7,998
Struct & Imp Pump Boosters	6	0	0	0	0	0	. 0	0	0
Struct & Imp WT	2	201,670	134,735	51,103	323	6,070	8,289	61	1,089
Struct & Imp TD	7	20,697	6,480	2,357	4	269	370	544	10,671
Struct & Imp TD Spec Cross	7	0	0	0	0	0	0	0	0
Struct & Imp AG	7	159	50	18	D	2	3	4	82
Struct & Imp Offices	15	94,902	57,321	20,053	161	2,382	3,065	674	11,246
Gen Structures HVAC	15	0	0	0	0	0	Q	0	0
Struct & Imp Leasehold	15	0	0	0	0	0	0	. 0	0
Struct & Imp Leasehold	15	0	0	0	0	0	0	. 0	0
Struct & Imp Store, Shop, Gar	15	434	262	92	• 1	11	· 14	3	51
Struct & Imp Misc	15	16,373	9,889	3,460	28	411	529	116	1,940
Collect & Impounding	1	0	0	0	0	0	Q	0	0
ake, River & Other Intakes	2	Ō	Ó	0	0	0	0	0	0
Infiltration Galleries & Tunnels	2	1,736	1,160	440	3	52	71	1	9
Wells & Springs	2	155,033	103,578	39,285	248	4,667	6,372	47	837
Supply Mains	2	46,211	30,874	11,710	74	1,391	1,899	14	250
Power Generation Equip	6	1,250	700	265	2	32	43	10	199
Power Generation Equip Othe	6	0	0	0	0	0	0	0	0
Boiler Plant Equipment P	6	. 0	0	. 0	Ō	0 .	0	. 0	. 0
Pump Equip Steam	. 6	Ď	. 0	o.	Ō	o .	ā	C	0
Pump Equip Electric	6	68,480	38,322	14,531	89	1,726	2,356	562	10,895
Pump Equip Elec Boosters Po	6	00,400	00,000	0	0	0	0	0	0.000
Pump Equip Diesel	6	ñ	0	ŏ	õ	Ď	Õ	ŏ	Ö
Pump Equip Hydraulic	6	Ô	ņ	ő	ŏ	ő	ō	ō	ň
Pump Equip Other	6	18,319	10,252	3,887	24	462	630	150	2,915
Pump Equip WT	6	10,515	0	0,007	Õ	0	0	0	2,310
Pump Equip TD	6	Ů	Õ	Ö	ŏ	ŏ	ő	ő	Ö
WT Equip Non-Media	2	94,698	63,268	23,996	152	2,850	3,892	28	511
WT Equip Fifter Media	2	68,115	45,508	17,260	109	2,050	2,800	20	368
Dist Reservoirs & Standpipe	5	31,432	13,837	4,973	0	626	682	550	10,766
Elevated Tanks & Standpipes	5	20,946	9,220	3,314	0	417	455	367	7,174
Ground Level Facilities	5	20,946	9,220	3,31 <del>4</del> 0	0	717	433	0	7,174
TD Mains Not Classified by	7	129,183	40,447	14,714	26	1,679	2,312	3,398	66,607
TD Mains Not Classified by TD Mains 4" & Less	, A	52,911	14,635	5,249	0	593	2,312 815	1,534	30,085
	7			34,029	0	3,842	5,283	•	
TD Mains 6 to 8"	4	343,036	94,884	34,029	U	3,042	5,263	9,948	195,050

	Factor	Cost of				Public	Sales for	Fire Pro	
Account	Ref.	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
TD Mains 10 to 16"	3	145	81	31	0	4	5	1	23
TD Mains 18" & Grtr	3	83	46	18	0	2	3	1	13
Fire Mains	8	.0	0	. 0	0	, O	0	0	. 0
Services	10	291,212	232,969	46,070	1,281	5,766	2,563	2,563	0
Meters Bronze Case	9	54,215	42,082	9,753	342	1,247	792	0	0
Meters Plastic Case	9	0	0	0	0	0	0	0	0
Meters Other	9	3,612	2,804	650	23	83	53	0	0
Meters Other-Rem Rdr Unts	9	10,802	8,385	1,943	68	248	158	0	0
Meter Installations	9	98,636	76,561	17,745	621	2,269	1,440	0	0
Meter Installation Other	9	0	0	0	0	0	0	0	0
Meter Vaults	9	9,151	7,103	1,646	58	210	134	0	0
Hydrants	8	74,905	0.	0	0.	0	0.	0	74,905
Other P/E Intangible	17	3,147	1,752	563	6	67	· 79	32	648
Other P/E WT Res Hand Equip	2	0	0	0	0	0	0	0	0
Other P/E TD	7	0	0	0	0	0	0	0	0
Other P/E CPS	15	7,288	4,402	1,540	12	183	235	52	864
Office Furniture & Equip	15	2,003	1,210	423	3	50	65	14	237
Comp & Periph Equip	15	8,652	5,226	1,828	15	217	279	61	1,025
Computer Software	15	3,834	2,316	810	7	96	124	27	454
Comp Software Personal	15	44	27	9	0	1	1	0	5
Comp Software Customized	15	7,157	4,323	1,512	12	180	231	51	848
Comp Software Other	15	1,931	1,166	408	3	48	62	14	229
Data Handling Equipment	15	33,445	20,201	7,067	57	839	1,080	237	3,963
Other Office Equipment	15	1,786	1,079	377	3	45	58	13	212
Trans Equip Lt Duty Trks	15	12,664	7,649	2,676	22	318	409	90	1,501
Trans Equip Hvy Duty Trks .	15	0	0	0	0	0	0	0	O
Trans Equip Autos	15	12	7	3	0	0	0	0	1
Trans Equip Other	15	(12,484)	(7,540)	(2,638)	(21)	(313)	(403)	(89)	(1,479)
Stores Equipment	15	13,409	8.099	2,833	23	337	433	95	1,589
Tools,Shop,Garage Equip	15	29,243	17,663	6,179	50	734	945	208	3,465
Tools, Shop, Garage Equip Oth	15	0	0	0	Ö	0	0	O	0
Laboratory Equipment	2	19,824	13,244	5,023	32	597	815	6	107
Laboratory Equip Other	2	0	0	0	0	0	0	0	0
Power Operated Equipment	15	2.635	1,591	557	4	66	85	19	312
Comm Equip Non-Telephone	15	3,331	2,012	704	6	84	108	24	395
Remote Control & Instr	15	8,463	5.112	1,788	14	212	273	60	1,003
Comm Equip Telephone	15	(3,037)	(1,834)	(642)	(5)	(76)	(98)	(22)	(360)
Misc Equipment	15	105,935	63,985	22,384	180	2,659	3,422	752	12,553
Other Tangible Property	17	16,783	9,341	3,002	32	359	421	170	3,457
Total Utility Plant in Service		2,259,297	1,257,391	404,264	4,210	48,351	56,769	22,859	465,453

## **BRU-30**

# Schedule C-BRU

•	Factor	Cost of		•		Public	Sales for	Fire Protection	
Account	Ref.	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Other Rate Base Items									
Add: ·		•		•		•		,	
Other Utility Plant Adjustments	17	0	0	Q	0	0	0	0	0
Cash Working Capital	15A	56,000	34,009	12,012	95	1,428	1,854	375	6,227
Materials and Supplies	15	1,359	821	287	2	34	44	10	161
Prepayments	15	1,338	808	283	2	34	43	9	159
OPEB's Contributed to External Fund	16	28,201	16,560	6,074	42	722	962	197	3,644
Pension / OPEB Tracker	16	1,584	930	341	2	41	54	11	205
Regulatory Deferrals	17	14,322	7,972	2,562	27	306	359	145	2,950
l.ess:									
Accumulated Deferred ITC (3%)	17	0	0	0	0	0	0	0	0
Deferred Income Taxes	17	(214,124)	(119,181)	(38,307)	(407)	(4,582)	(5,375)	(2,163)	(44,110)
Pensions	16	(5,329)	(3,129)	(1,148)	(8)	(136)	(182)	(37)	(689)
Total Other Rate Base Elements		(116,649)	(61,211)	(17,895)	(243)	(2,154)	(2,240)	(1,452)	(31,453)
Total Original Cost Measure of Value	2	\$ 2,142,648	\$ 1,196,180	\$ 386,369	\$ 3,967	\$ 46,197	\$ 54,528	\$ 21,407	\$ 434,000

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	5/8" Dollar	Allocation
Classification	Equivalents	Factor
(1)	(2)	(3)
Residential	371	0.7876
Commercial	. 86	0.1826
Industrial	3	0.0064
Other Public Authority	. 11	0.0234
Sales for Resale	0	0.0000
Private Fire	0	0.0000
Total	471	1.0000

## SUMMARY OF AVERAGE DAILY SEND OUT AND MAXIMUM DAILY USAGE FOR THE YEARS 1990-2008

	Average Daily		Maximum Daily U	Jse
	Send out		Ratio to	Highest
Year	(MGD)	MGD ,	Average	Use Day
(1)	(2)	(3)	(4)	(5)
1990	0.179	0.275	1.53	12/28/1990
1991	0.208	0.315	1.51	4/6/1991
1992	0.180	0.266	1.47	8/26/1992
1993	0.154	0.299	1.94	7/29/1993
1994	0.154	0.225	1.46	9/24/1994
1995	0.151	0.204	1.35	7/5/1995
1996	0.151	0.242	1.60	2/7/1996
19 <del>9</del> 7	0.149	0.236	1.58	4/2/1997
1998	0.140	0.200	1.43	5/23/1998
1999	0.145	0.238	1.64	5/27/1999
2000	0.147	0.228	1.55	8/27/2000
2001	0.134	0.207	1.54	11/1/2001
2002.	0.135	0.192	1.42	6/13/2002
2003	0.127	0.223	1.76	2/2/2003
2004	0.128	0.203	1.58	2/19/2004
2005	0.144	0.197	1.37	8/30/2005
2006	0.133	0.199	1.50	6/27/2006
2007	0.129	0.240	1.86	7/24/2007
2008	0.116	0.221	1.90	10/22/2008

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

Descriptio	n	Restrictive Diameters Squared	Quantity	Relative Demand*	Allocation Factor
(1)	···	(2)	(3)	$(4)=(2)\times(3)$	(5)
PRIVATE FIRE PROTECTION					
Fire Lines					
2 -inch	•	4.00	0.00	0	
3 -inch		9.00	0.00	0	
4 -inch		16.00	0.00	0	
6 -inch		36.00	1.00	<b>3</b> 6·	
8 -inch	•	64.00	0.00	0	
10 -inch		100.00	0.00	. 0	
12 -inch		144.00	0.00	0	
Private Hydrants		6.25	3.00	19	
Total Private Fire Protection			4.00	55	0.0487
PUBLIC FIRE PROTECTION					
Hydrant	Nozzle Sizes				
5 1/4" Valve	1-2 1/2" &1- 4 1/2"	26.5	20	530	
4 1/2" Valve	1-2 1/2" &1- 4 1/2"	20.3	17	344	
5 1/2" Valve	1-2 1/2" &1- 4 1/2"	26.5	1	27	
4 1/2" Valve	1-2 1/2"	6.3	12	75	
4 1/4" Valve	1-2 1/2"	6.3	13	81	
4 1/4" Valve	1-2 1/2" &1- 4 1/2"	18.1	1	18	
Total Public Fire Protect	ition		64	1,075	0.9513
Total Fire Protection	•		68	1,130	1.0000

#### CALCULATION OF CUSTOMER CHARGE

(1) Cost Related to Meters	68,124	
(2) Meter Equivalents X 12	5,736	
(3) Cost per Bill - Meter related		\$ 11,88
(4) Cost Related to Services	22,061	
(5) Service Equivalents X 12	5,460	
(6) Cost per Bill - Services related	•	\$ 4.04
(7) Cost Related to Billing and Collecting	24,121	
(8) Number of Customers X 12	5,340	
(9) Cost per Bill - Billing and Collecting		\$ 4.52
(10) Total Customer Charge (3)+(6)+(9)		\$ 20.43

JEFFERSON CITY DISTRICT

# Schedule A-JFC

### MISSOURI-AMERICAN WATER COMPANY JEFFERSON CITY DISTRICT

### COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES FOR THE TEST YEAR ENDED JUNE 30, 2009

•	Cost of Se	ervice ·		•			Proposed	ncrease
Customer	Amount		Revenues, Pre	sent Rates	Revenues, Prop	osed Rates		Percent
Classification	(Schedule B)	_Percent_	Amount	Percent	Amount	Percent	Amount	<u>Increase</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	\$ 3,843,502	57.3%	\$ 3,301,906	53.4%	\$ 3,731,076	55.6%	\$ 429,170	13.0%
Commercial	1,736,050	25.9%	1,653,655	26.9%	1,744,477	26.0%	90,822	5.5%
Industrial	558,482	8.3%	571,210	9.4%	572,798	8.5%	1,588	0.3%
Public Authority	<b>4</b> 71,577	7.0%	452,549	7.4%	487,168	7.3%	34,619	7.6%
Sales for Resale		0.0%	• .	0.0%	·	0.0%		0.0%
Private Fire Service	102,170	1.5%	175,942	2.9%	175,942	2.6%	-	0.0%
Public Fire Service		0.0%	\$0	0.0%	_	0.0%	-	0.0%
Total Sales	6,711,781	100.0%	6,155,262	100.0%	6,711,461	100.0%	556,199	9.0%
Other Revenues	47,963		38,121		47,963	•	9,842	25.8%
Total	\$ 6,759,744		\$ 6,193,383		\$ 6,759,424		\$ 566,041	9.1%

MISSOURI-AMERICAN WATER COMPANY

#### JEFFERSON CITY DISTRICT COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

	Factor	Cost of				Public	Sales for	Fire Prote	
Account	Ref.	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
OPERATION AND MAINTENANCE EXPENSES	S								
SOURCE OF SUPPLY EXPENSES									
Super & Eng Oper SS	2	\$	\$ -	\$	\$ -	\$	\$ -	\$	\$-
Labor & Exp Oper SS - Labor	2	C	0	0	. 0	0	0	0	. 0
Łabor & Exp Oper SS	2	4,720	2,230	1,487	600	388	0	2	12
Purchased Water	1	8,413	3,665	2,720	1,279	703	0	8	38
TOTAL SS EXPENSE - OPERATION		13,133	5,895	4,207	1,879	1,092	0	10	50
Misc Exp Oper SS	2	0	D	0	0	0	0	0	0
Misc Exp Oper SS	2	0	0	0	0	0	ð	0	0
Rents Oper \$S	2	0	0	0	0	0	0	0	0
Super & Eng Maint SS - Labor	2	0	0	0	0	0	0	0	0
Struct & Improve Maint SS - Labor	2	0	0	0	0	0	0	0	D
Struct & Improve Maint SS	2	. 0	o`	. 0	Q	· 0	0	. 0	0
Collect & Impound Maint SS - Labor	2	0	0	C C	0	0	0	0	0
Collect & Impound Maint \$5	2	0	0	D	0	0	0	0	0
Lake, River & Oth Maint SS - Labor	2	0	O	0	0	O.	0	0	0
Lake, River & Oth Maint SS	2	0	0	0	0	0	0	0	0
Wells & Springs Maint SS - Labor	2	0	0	0	0	0	0	0	0
Wells & Springs Maint SS	2	0	0	0	0	0	0	0	0
Infilt Gall & Tunnels Maint SS - Labor	2	0	0	0	0	D	0	0	0
Infilt Gall & Tunnels Maint SS	2	0	0	0	0	0	0	0	0
Supply Mains Maint SS - Labor	2	0	0	. 0	0	0	0	0	0
Supply Mains Maint SS	2	0	0	0	0	0	0	0	0
Misc Plant Maint SS - Labor	2	94	44	29	12	8	0	0	0
Misc Plant Maint SS	2	(48)	(23)	(15)	(6)	(4)	0	(0)	(0)
TOTAL SS EXPENSE - MAINTENANCE		46	22	14	6	-4	0	0	0
TOTAL SS EXPENSE		13,178	5,917	4,221	1,884	1,096	0	10	50
POWER AND PUMPING EXPENSES									
Super & Eng Oper P - Labor	6	0	0	0	0	0	0	0	0
Fuel for Power Prod	1	0	0	0	0	Q	0	0	0
Labor & Exp Oper Pwr Prod - Labor	6	0	. 0	0	0	0	0 .	0	0
Labor & Exp Oper Pwr Prod	6	0	0	0	0	0	0	0	0
Purch Fuel/Power for Pump	1	244,797	106,658	79,143	37,209	20,465	0	220	1,102
Labor & Exp Oper Pump - Labor	6	1,091	505	337	136	B8	0	4	21
Labor & Exp Oper Pump	6	0	0	0	0	0	D	0	0
Misc Exp Oper P	6	9	4	3	1	1	Q	0	0
Rents Oper P	6	. 0	ò	. 0	ò	· o	ō	. 0	0
TOTAL PUMPING EXPENSE - OPERATION		245,897	107,167	79,482	37,346	20,554	0	224	1,123

# Schedule B-JFC

MISSOURI-AMERICAN WATER COMPANY

#### JEFFERSON CITY DISTRICT COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

A 4	Factor	Cost of		•		Public	Sales for	Fire Protection	
Account	Ref.	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Super & Eng Maint P	6	0	0	0	0	0	0	. 0	
Struct & Improve Maint P - Labor	6	0	0	. 0	o	· 0	0	0	
Struct & Improve Maint P	6	0	0	0	Ô	0	0	0	
Power Prod Equip Maint P - Labor	6	D	0	0	0	0	0	0	
ower Prod Equip Maint P	6	. 0	0	0	0	0	0	0	
Pump Equip Maint P - Labor	6	0	0	0	a	0	0	0	
Pump Equip Maint P	6	0	0	D	0	0	0	0	
OTAL PUMPING EXPENSES - MAINTENA	NCE	0	0	0	0	0	0	0	_
OTAL PUMPING EXPENSES		245,897	107,167	79,482	37,346	20,554	0	224	1,13
ATER TREATMENT									
iuper & Eng Oper WT	2	33,037	15,607	10,410	4,199	2,719	0	17	
Chemicals	1	305,617	133,157	98,806	46,454	25,550	0	275	1,3
abor & Exp Oper WT - Labor	2	300,022	141,731	94,537	38,133	24,6 <del>92</del>	0	150	7
abor & Exp Oper WT	2	19,883	9,393	6,265	2,527	1,636	0	10	
lisc Exp Oper WT	2	0	0	0	0	0	0	0	
lisc Exp Oper WT	1	0	0	0	٥	0	0	0	
fisc Exp Oper WT	2	2,454	1,159	773	312	202	0	1	
Rents Oper WT	2	0	0	0	0	0	0	0	
OTAL WT EXPENSE - OPERATION	_	661,013	301,046	210,791	91,625	54,799	0	453	2,2
Super & Eng Maint WT	2	76,366	36,075	24,063	9,706	6,285	0	38	1:
truct & Improve Maint WT - Labor	2	0	0	0	O	0	0	0	
truct & Improve Maint WT	2	0	0	0	0	0	0	0	
VT Equip Maint WT	2	0	0	0	0	0	0	0	
VT Equip Maint WT	2	56,604	26,740	17,836 -	7,194	4,659	0_	28	1-
OTAL WT EXPENSE - MAINTENANCE	_	132,970	62,815	41,899	16,900	10,943	0	66	3
OTAL WT EXPENSE		793,983	363,861	252,690	108,525	65,742	0	519	2,64
RANSMISSION AND DISTRIBUTION EXPE	NSES		,						•
uper & Eng Oper TD	11	0	0	0	0	0	0	0	
torage Facilty Exp - Labor	5	0	0	Q.	0	0	O	0	
torage Facilty Exp	5	0	0	0	0	0	O	0	
D Lines Exp - Labor	7	17,251	5,734	3,719	1,370	975	0	890	4,5
D Lines Exp	7	7,986	2,655	1,722	634	451	0	412	2,1
leter Expense - Labor	9	3,260	2,279	677	25	280	0	0	
leter Expense	9	0	0	0	0	0	0	0	
Customer Install Exp - Labor	10	2	2	0	0	0	0	0	
customer Install Exp	10	0	0	0	0	0	O	0	
lisc Exp Oper TD - Labor	11	0	0	, 0	o	0	0	0	
fisc Exp Oper TD	11	0	Ó	0_	0	0	0	0	

#### MISSOURI-AMERICAN WATER COMPANY

#### JEFFERSON CITY DISTRICT

#### COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

	Factor	Cost of	Residential	Commercial		Public	Sales for	Fire Protection	
Account	Ref.	Service			Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Misc Exp Oper TD	11	13,075	4,894	2,807	931	783	0	598	3,063
Rents Oper TD	11	158	59	34	11	9	0	7	3
TOTAL T & D EXPENSE OPERATION	-	41,732	15,622	8,959	2,971	2,498	0	1,907	9,774
Super & Eng Maint TD	12	35,405	23,244	5,806	786	, 1,554	0	1,554	2,46
Struct & Improve Maint TD - Labor	12	0	0	0	0	0	0	0	
Struct & Improve Maint TD	12	0	0	0	0	0	0	0	
Dist Res Stand Maint TD - Labor	5	0	0	0	0	0	O-	0	
TD Main Maint TD - Labor	7	21,532	7,157	4,642	1,710	1,217	0	1,111	5,69
TD Main Maint TD	7	0	0	0	G	0	0	0	
Fire Main Maint TD - Labor	8	0	0	0	0	0	0	0	
Fire Main Maint TD	8	0	0	0	0	0	0	0	
Services Maint TD - Labor	10	60,707	46,848	8,845	115	2,398	Ð	2,501	
Services Maint TD	10	0	0	0	0	0	. 0	0	
Meters Maint TD - Labor	9	0	` . 0	0	. 0	0	0	0	
Meters Maint TD	9	0	0	0	0	0	0	0	
Hydrants Maint TD - Labor	8	Ó	0	0	0	0	0	0	
Hydrants Maint TD	8	20	0	o O	Ô	0	0	0	2
Labor Maint TD - Labor	12	87,538	57.469	14,356	1,943	3,843	0	3,843	6,08
Mat and Sup Maint TD	12	37,584	24,674	6,164	834	1,650	0	1,650	2,61
Misc Maint TD	12	2,228	1,463	365	49	98	0	98	15
Amort Def Maint TD	5	560	224	144	52	38	0	17	ε
Permits TD	12	3,150	2,068	517	70	138	0	138	21
TOTAL T & D EXPENSE - MAINTENANCE		248,725	163,146	40,840	5,560	10,936	0	10,912	17,33
TOTAL T & D EXPENSE		290,458	178,769	49,799	8,531	13,434	0	12,819	27,10
CUSTOMER ACCOUNTS									
Supervision CA	13	D	0	0	0	0	0	0	
Meter Reading Exp CA - Labor	14	70,557	59,239	9,321	78	1,919	0	0	
Meter Reading Exp CA	14	0	0	0	0	0	0	0	
Meter Reading Exp CA	14	0	0	0	0	Q	0	O	
Cust Rec & Collection CA - Labor	13	81,736	67,694	10,650	90	2,191	0	1,112	
Cust Rec & Collection CA	13	46,527	38,533	6,062	51	1,247	0	633	
Uncollectible Accts	13	59,768	49,500	7,788	<sup>'</sup> 66	1,602	· 0	_ 813	
Misc Cust Acets Exp CA - Labor	13	96	79	12	0	3	0	1	
Misc Cust Accts Exp CA	13	0	0	0	0	0	0	0	
Misc Cust Accts Exp CA	13	17,410	14,419	2,269	19	467	0	237	
Cust Serv & Info Exp CA	13	0	0	0	0	0	0	0	
TOTAL CUSTOMER ACCOUNTING EXPENS	SE .	276,093	229,465	38,102	304	7,428	ò	2,795	

# Schedule B-JFC

## MISSOURI-AMERICAN WATER COMPANY JEFFERSON CITY DISTRICT COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

•	Factor ·	Cost of				· Public	Sales for	· Fire Pro	
Account	Ref.	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ADMINISTRATIVE AND GENERAL EXPENSE	s								
Salaries AG	15	213,854	129,339	48,716	14,435	12,404	0	3,208	5,753
Other Supplies & Exp AG '	15	' 41	25	, 8	3	¹ 2	0	· 1	1
Other Supplies & Exp AG	15	76,130	46,043	17,342	5,139	4,416	0	1,142	2,048
Other Supplies & Exp AG	15	61,250	37,044	13,953	4, 134	3,553	Q	919	1,648
Mgmt Fees-Admin	15	483,579	292,469	110,159	32,642	28,048	a	7,254	13,008
Mgmt Fees-Customer Service	13	160,505	132,930	20,914	177	4,302	0	2,183	0
Mgmt Fees-Belleville Lab	2	19,944	9,422	6,284	2,535	1,641	0	10	52
Mgmt Fees- Employee	16	17,117	10,126	4,031	1,241	1,034	0	246	438
Outside Services AG	15	30,858	18,663	7,029	2,083	1,790	0	463	830
Outside Services AG	15	74,188	44,869	16,900	5,008	4,303	0	1,113	1,996
Ins Gen Liab Oper AG	15	67,966	41,106	15,483	4,588	3,942	0	1,019	1,828
tns Work Comp AG	16	31,639	18,717	7,451	2,294	1,911	0	456	810
ins Other Oper AG	15	21,011	12,707	4,786	1,418	1,219	0	315	565
Property Insurance	15	6,553	3,963	1,493	442	380	0	98	176
Injuries & Damages	16	(300)	(177)	(71)	(22)	(18)	0	(4)	(8
Employee Pension & Benefits	16	268,745	158,990	63,289	19,484	16,232	0	3,870	6,880
Employee Pension & Benefits	16	207,206	122,583	48,797	15.022	12,515	0	2,984	5,304
Employee Pension & Benefits	16	34,130	20,192	8,038	2,474	2,061	0	491	874
Reg Commission Exp	19	13,672	7,172	3,341	1,131	880	0	208	939
Rents AG	15	5,104	3,087	1,163	344	296	0	77	137
Goodwill Advertising Exp	15	2,341	1,416	533	158	136	0	35	63
Misc Exp AG	15	82,333	49,795	18,755	5,557	4,775	0	1,235	2,215
Research & Development	15	0	0	0	0	0	ò	0	
TOTAL A & G OPERATIONS	-	1,877,866	1,160,481	418,398	120,288	105,821	0	27,322	45,558
General Plant Maint AG	15	992	600	226	67	58	٥	15	27
Maint Exp ARO/Net Neg Sal AG	18	0	0	0	0	0	0	0	(
General Plant Maint AG	15	7,647	4,625	1,742	516	444	0	115	20€
TOTAL A & G EXPENSE - MAINTENANCE	-	8,639	5,225	1,968	583	501	0	130	232
TOTAL A & G EXPENSE	_	1,886,505	1,165,705	420,365	120,871	106,322	0	27,451	45,790
Total Operation & Maintenance Expenses	•	3,506,114	2,050,884	842,661	277,461	214,575	0	43,819	76,714

## MISSOURI-AMERICAN WATER COMPANY JEFFERSON CITY DISTRICT COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor	Cost of				Public	Sales for	Fire Pro	tection
	Ref.	Service	Residential	Commercial	Industrial	Authorities	Resate	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
DEPRECIATION EXPENSE									
Struct & Imp SS	2	1,479	699	466	188	122	0	1	4
Struct & Imp P	6	39,958	18,493	12,335	4,975	3,221	0	152	783
Struct & Imp WT	2	79,806	37,700	. 25,147	10,143	6,568	0	. 40	207
Struct & Imp TD	7	4,245	1,411	915	337	240	0	219	1,123
Struct & Imp AG	15	54	33	12	4	3	0	1	1
Struct & Imp Offices	15	6,082	3,678	1,385	411	353	0	91	164
Struct & Imp Store Shop, Gar	15	0	D	0	0	0	. 0	0	0
Struct & Imp Misc	15	0	0	0	D	0	0	0	0
Callect & Impaunding	1	Ò	, р	0	0	0	Ö	0	0
Lake, River & Other Intakes	2	20,507	9,688	6.462	2,606	1,688	0	10	53
Wells & Springs	2	0	0	0	0	0	0	Õ	-0
Supply Mains	2	. 0	ō	0	ā	0	ō	0	Ō
Power Generation Equip	6	12,958	5.997	4,000	1,613	1.044	Ö	49	254
Power Generation Equip Othe	6	, 2,000 D	0	0	· . 0	0	· . o	0	0.
Pump Equip Electric	6	35,219	16,299	10,872	4,385	2,839	ő	134	690
Pump Equip Diesel	6	00,210	10,233	0,012	4,555	2,459	ñ	0	0,30
Pump Equip Oresei	6	0	Ô	n	D	0	Ö	Ö	ŏ
Pump Equip Other	6	669	310	207	83	54	0	3	13
WT Equip Non-Media	2	82,501	38,973	25,996	10,486	6.790	o o	41	215
WT Equip Filter Media	2	4,194	1,981	1,322	533	345	Ď	2	11
Dist Reservoirs & Standpipe	5	1,116	447	288	103	75	0	33	170
Elevated Tanks & Standpipes	5	25,059	10,031	6,463	2,315	1.691	0	744	3,814
Ground Level Facilities	5	25,059 161	10,031	6,463 42	2,315 15	1,091	٥	5	3,514
TO Mains Not Classified by	7	38,283	12.725	8,254	3,040	2,163	0	1. <del>9</del> 75	10,126
TD Mains 4 & Less "	4	1.026			•		0	,	
	-	.,	322	207	74	54	-	60	309
TD Mains 6 to 8" "	4	13,960	4,375	2,819	1,011	738	. 0	819	4,198
TD Mains 10 to 16" "	3	19,401	8,404	5,609	2,262	1, <b>46</b> 5	0	272	1,389
TD Mains 18 & Grtr "	3	12	5	4	1	1	0	0	1
TD Mains Ct <10 1900-28 (S"	4	166	52	34	12	. 9	Ō	10	50
Services	10	15,628	12,060	2,277	30	617	0	644	0
Meters Bronze Case	9	21,976	15,359	4,560	171	1,886	0	0	0
Meters Plastic Case	9	0	0	0	0	0	0	0	D
Meters Other	9	14,600	10,204	3,030	114	1,253	0	0	٥
Meters Other-Rem Rdr Unts	. 9	213	149	44	. 2	18	. 0	O	. 0
Meter Installations	9	7,253	5,069	1,505	57	622	0	C	0
Meter Installation Other	9	0	Q	0	0	0	0	0	0
Hydrants	8	20,133	0	0	0	0	0	0	20,133
Other P/E Intangible	17	304	134	75	26	21	0	6	41
Other P/E TD	7	0	0	0	0	0	D	ũ	Q
Other P/E CPS	· 15	5,682	3,436	1,294	`384	330	Ö	85	153
Office Furniture & Equip	15	3,550	2,147	809	240	206	0	53	95
Comp & Periph Equip	15	63,400	38,344	14,443	4,280	3,677	0	951	1,705
Computer Software	15	37,636	22,762	8,573	2,540	2,183	0	565	1,012

## MISSOURI-AMERICAN WATER COMPANY JEFFERSON CITY DISTRICT COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor	Cost of	Danida 11 - 1	Comercial.	المشتقد بالمسلمة	Public	' Sales for	Fire P	rotection
Account (1)	Ref(2)	Service (3)	Residential	Commercial	Industrial (6)	Authorities (7)	Resale (8)	(9)	Public (10)
(1)	(2)	(3)	(4)	(5)	(0)	(7)	(0)	(8)	(10)
Comp Software Personal	15	707	428	161	48	41	0	11	19
Data Handling Equipment	15	0	0	0	0	0	0	0	Ø
Other Office Equipment	· 15	0	. 0	0	. 0	0	` 0	0	Ö
Trans Equip Lt Duty Trks	15	2,914	1,762	664	197	169	0	44	78
Trans Equip Hvy Duty Trks	15	0	0	0	0	O O	0	· 0	0
Trans Equip Autos	15	3,805	2,301	867	257	221	0	57	102
Trans Equip Other	15	8	5	2	1	0	0	0	ø
Stores Equipment	15	118	71	27	8	7	0	2	3
Tools,Shop,Garage Equip	15	13,125	7,938	2,990	886	761	σ	197	353
Tools,Shop,Garage Equip Oth	15	0	0	Q	0	0	0	0	0
Laboratory Equipment	2	7,978	3,769	2,514	1,014	657	0	4	21
Laboratory Equip Other	2	792	374	250	101	65	0	0	2
Power Operated Equipment	15	1,873	1,133	427	126	109	0	28	50
Comm Equip Non-Telephone	15	4,195	2,537	956	283	243	0	63	113
Remote Control & Instr	15	796	481	181	54	46	0	12	21
Comm Equip Telephone	15	31	19	7	2	2	0	0	1
Misc Equipment	15	23,704	14,336	5,400	1,600	1,375	0	356	638
Total Depreciation Expense		637,278	316,508	163,891	57,016	43,982	0	7,739	48,142
Amort-Other UP	18	2,362	1,049	584	204	160	0	47	316
Amort-Intangible Fin	2	647	306	204	82	53	ō	o.	2
Amort-Property Losses	2	0	0	0	0	Ō	. 0	0	. 0
Taxes Other Than Income									
Utility Reg Assessment Fee	19	51,795	27,172	12,659	4,283	3,336	0	787	3,558
Property Taxes	18	341,939	151,855	84,527	29,509	23,183	Ō	6,805	46,059
FUTA	16	957	566	225	69	58	ò	14	24
FICA	16	70,772	41,869	16,667	5,131	4,275	Ō	1.019	1,812
SUTA	16	2,750	1,627	648	199	166	0	40	70
Other Taxes & Licenses	15	12,142	7,343	2,766	820	704	0	182	327
Gross Receipts Tax	19	0	0	0	0	0	0	. 0	0
Total Taxes, Other Than Income		480,355	230,432	.117,492	40,012	31 722	0	8,846	51,851
								40.000	
Income Taxes	18	614,201	272,767	151,830	53,008	41,643	0	12,223	82,733
Utility Income Available for Return	18	1,518,787	674,493	375,444	131,071	102,974	0	30,224	204,581
Tatal Cost of Service		6,759,744	3,546,439	1,652,106	558,853	435,109	0	102,899	464,340
Less; Other Water Revenues	19	47,963	25,161	11,722	3,967	3,089	0	729	3,295
Revenue Contribution	19		0	0	0	0	0_	0	0
Total Other Water Revenues		47,963	25,161	11,722	3,967	3,089	0	729	3,295
Total Cost of Service Related to									
Sales of Water		\$ 6,711,781	\$ 3,521,278	\$ 1,640,384	\$ 554,886	\$ 432,020	<u>\$</u>	\$ 102,170	\$ 461,045
Realfocation of Public Fire	20	0	322,224	95,667	3,596	39,558	0	0	(461,045)
Total		¢ 6711791	<b>4</b> 3 942 600	• 1.73¢ 050	* 550 400	A74 677		e 400 475	
lotal		\$ 6,711,781	\$ 3,843,502	\$ 1,736,050	\$ 558,482	\$ 471,577	\$	\$ 102,170	\$ -

#### 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.

	Average Daily	
Customer	Consumption,	Allocation
Classification	Thousand Gallons	Factor
(1)	(2)	(3)
Residential	1,427	0.4357
Commercial	1,059	0.3233
Industrial	498	0.1520
Other Public Authority	274	0.0836
Sales for Resale	0	0.0000
Private Fire Protection	3	0.0009
Public Fire Protection	15	0.0045
Total	3,276	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:

		ge Daily Imption	Maxim Extra 0		
Classification (1)	Allocation Factor 1 (2)	Weighted Factor (3)=(2)x 0.5882	Allocation Factor (4)	Weighted Factor (5)=(4)x 0.4118	Allocation Factor (6)=(3)+(5)
Residential Commercial Industrial Other Public Authority Sales for Resale	0.4357 0.3233 0.1520 0.0836 0.0000	0.2563 0.1902 0.0894 0.0492 0.0000	0.5247 0.3033 0.0915 0.0805 0.0000	0.2161 0.1249 0.0377 0.0331 0.0000	0.4724 0.3151 0.1271 0.0823 0.0000
Private Fire Protection Public Fire Protection	0.0009 0.0045	0.0005 0.0026			0.0005
Total	1.0000	0.5882	1.0000	0.4118	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.

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.

		Max	imum Day Extra Capa	acity
	Average Daily		Rate of Flow,	
Customer	Consumption,		Thousand Gal.	Allocation
Classification	Thousand Gal.	Factor*	Per Day	Factor
(1)	(2)	(3)	$(4)=(2)\times(3)$	(5)
Residential	1,427	1.0	1,427	0.5247
Commercial	1,032	0.8	825	0.3033
Industrial	498	0.5	249	0.0915
Other Public Authority	274	0.8	219	0.0805
Total	3,231		2,720	1.0000

The weighting of the factors is based on the maximum day ratio of 1.70, based on a review of maximum day ratios experienced during the period 1999 through 2007 (see Schedule D).

	Maximum Day Ratio	Weight
Average Day Maximum Day	1.00	0.5882
Extra Capacity	0.70	0.4118
Total .	1.70	1.0000

<sup>\*</sup> Ratio of maximum day to average day minus 1.0.

## Schedule C-JFC

## MISSOURI-AMERICAN WATER COMPANY JEFFERSON CITY DISTRICT

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.

	Averaç	ge Daily	Maxim	um Day				
· '	Consumption		Extra Capacity		Fire Protection			
Customer	Allocation	Weighted	Allocation	Weighted	Allocation	Weighted	Allocation	
Classification	Factor	Factor	Factor	Factor	Factor	Factor	Factor	
(1)	(2)	(3)=(2) X	(4)	(5)=(4) X	(6)	(7)=(6) X	(8)=(3)+(5)+(7)	
		0.5396		0.3777		0.0827		
Residential	0.4357	0.2351	0.5247	0.1981			0.4332	
Commercial	0.3233	0.1745	0.3033	0.1146			0.2891	
Industrial	0.1520	0.0820	0.0915	0.0346			0.1166	
Other Public Authority	0.0836	0.0451	0.0805	0.0304			0.0755	
Sales for Resale	0.0000	0.0000	0.0000	0.0000			0.0000	
Private Fire Protection	0.0009	0.0005	•		0.1634	0.0135	0.0140	
Public Fire Protection	0.0045	0.0024			0.8366	0.0692	0.0716	
Total	1.0000	0.5396	1.0000	0.3777	1.0000	0.0827.	1.0000	

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 1.70 and the average daily system sendout for 2008 of 3.52 MGD. The system demand for fire protection is 3,000 Gallons per minute for 3 hours.

, -	Ratio	Rate of Flow, (GPD)	Weight
Average Day Maximum Day	1.00	3,523,000	0.5396
Extra Capacity	0.70	2,466,100	0.3777
Subtotal	1.70	5,989,100	0.9173
Fire Protection		540,000	0.0827
Total		6,529,100	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).

# Schedule C-JFC

## MISSOURI-AMERICAN WATER COMPANY JEFFERSON CITY DISTRICT

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.

				Maximu	ım Hour			
•	Averag	e Hourly Consu	umption	Extra C	Capacity	Fire	Protection	•
Customer	Thousand	Allocation	Weighted	Allocation	Weighted	Allocation	Weighted	Allocation
Classification	Gallons	Factor	Factor	Factor	Factor	Factor	Factor	Factor
(1)	(2)	(3)	(4)=(3) X	(5)	(6)=(5) X	(7)	(8)=(7) X	(9)=(4)+(6)+(8)
			0.2919		0.3502		0.3579	
Residential	59.5	0.4359	0.1272	0.5317	0.1862			0.3134
Commercial	44.1	0.3231	0.0943	0.3073	0.1076			0.2019
Industrial	20.8	0.1524	0.0445	0.0796	0.0279			0.0724
Other Public Authority	11.4	0.0835	0.0244	0.0814	0.0285			0.0529
Sales for Resale	0.0	0.0000	0.0000	0.0000	0.0000			0.0000
Private Fire Protection	0.1	0.0007	0.0002			0.1634	0.0585	0.0587
Public Fire Protection	0.6	0.0044	0.0013	· · · · · · · · · · · · · · · · · · ·		0.8366	0.2994	0.3007
Total	136.5	1.0000	0.2919	1.0000	0.3502	1.0000	0.3579	1.0000

The maximum hour extra capacity factors in column 5 are determined on the next page.

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 2.20 and the average daily system sendout for 2008 of 3.52 MGD. The system demand for fire protection is 3,000 gallons per minute.

		Rate of Flow,	•
	Ratio	(GPM)	Weight
Average Hour	1.00	2,447	0.2919
Extra Capacity	1.20	2,936	0.3502
Subtotal	2.20	5,383	0.6421
Fire Protection		3,000	0.3579
Total .		8,383	1.0000

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

•	Average Hourly	· Maxin	num Hour Extra Cap	acity
Customer	Consumption		1,000 Gallons	Allocation
Classification	Thousand Gal.	Factor*	Per Hour	<u>Factor</u>
(1)	(2)	(3)	(4)=(2)x(3)	(5)
Residential	59.5	3.5	208.3	0.5317
Commercial	43.0	2.8	120.4	0.3073
Industrial	20.8	1.5	31.2	0.0796
Other Public Authority	11.4	2.8	31.9	0.0814
Sales for Resale	0.0	2.0	0.0	0.0000
Total	134.7		391.8	1.0000

<sup>\*</sup> 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).

## chedule C-JFC

## MISSOURI-AMERICAN WATER COMPANY JEFFERSON CITY DISTRICT

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.

	Maximum Hour											
	Averag	e Hourly Const	umption	Extra C	Capacity	Fire Pro						
Customer	Thousand	Allocation	Weighted	Allocation	Weighted	Allocation	Weighted	Allocation				
Classification	Gallons	Factor	Factor	Factor	Factor	Factor	Factor	Factor				
(1)	(2)	(3)	(4)=(3) X	(5)	(6)=(5) X	(7)	(8)=(7) X	(9)=(4)+(6)+(8)				
			0.3727		0.4473		0.1800					
Residential	59.5	0.4359	0.1625	0.5317	0.2378			0.4003				
Commercial	44.1		0.1204	0.3073	0.1375			0.2579				
Industrial	20.8	0.1524	0.0568	0.0796	0.0356			0.0924				
Other Public Authority	11.4	0.0835	0.0311 0.0000	0.0814	0.0364			0.0675				
Sales for Resale	0.0	0.0000		0.0000	0.0000			0.0000				
Private Fire Protection	rate Fire Protection 0.1 0,0007 0.0003				0.1634	0.0294	0.0297					
Public Fire Protection	0.6	0.0044	0.0016			0.8366	0.1506	0.1522				
Total	136.5	1.0000	0.3727	1.0000	0.4473	1.0000	0.1800	1.0000				

The weighting of the factors is based on the ratio of the capacity required for a 3 hour demand of fire flow, as related to total storage capacity. The calculation is shown on the following page.

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

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

The weighting of the factors is based on the ratio of the capacity required for a 3 hour demand of fire flow, as related to total storage capacity.

Fire Protection Weight =	3,000 GF	=	0.1800		
		3,000,00	00 Gailons		
General Service Weight =	1.0000	-	0.1800	=	0.8200

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	45.45	. 0.3727
Extra Capacity Maximum Hour	1.20	54.55	0.4473
Total	2.20	100.00	0.8200

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:

		um Daily Imption	Maximu Consumpt	m Daily ion w/ Fire	Maximu Consu			
Customer Classification	Allocation Factor 2	Weighted Factor	Allocation Factor 3	Weighted Factor	Allocation Factor 4	Weighted Factor	Allocation Factor (8)=(3)+ (5)+(7)	
(1)	(2)	(3)=(2)X 0.7545	(4)	(5)=(4)X 0.2455	(6)	(7)=(6)X 0.0000		
Residential	0.4724	0.3564	0.4332	0.1064	0.3134	0.0000	0.4628	
Commercial	0.3151	0.2377	0.2891	0.0710	0.2019	0.0000	0.3087	
Industrial	0.1271	0.0959	0.1166	0.0286	0.0724 0.0529	0.0000 0.0000 0.0000	0.1245	
Other Public Authority	0.0823	0.0621	0.0755	0.0185			0.0806	
Sales for Resale	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	
Private Fire Protection	0.0005	0.0004	0.0140	0.0034	0.0587	0.0000	0.0038	
Public Fire Protection	0.0026	0.0020	0.0716	0.0176	0.3007	0.0000	0.0196	
Total	1.0000	0.7545	1.0000	0.2455	1.0000	0.0000	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	1,160	0.7545
Associated with Maximum Day and Fire	378	0.2455
Associated with Maximum Hour	0	0.0000
Total	1,538	1.0000

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:

	Maximi	um Daily	Maximu			
	Consump	tion w/ Fire	Consu			
Customer	Allocation	Weighted,	Allocation	Weighted	Allocation	
Classification	Factor 3	Factor	Factor 4	Factor	Factor	
(1)	(2)	(3)=(2)X	(4)	(5)=(4)X	(6)=(3)+(5)	
		0.1578		0.8422		
Residential	0.4332	0.0684	0.3134	0.2640	0.3324	
Commercial	0.2891	0.0456	0.2019	0.1700	0.2156	
Industrial	0.1166	0.0184	0.0724	0.0610	0.0794	
Other Public Authority	0.0755	0.0119	0.0529	0.0446	0.0565	
. Sales for Resale	0.0000	0.0000	0.0000	0.0000	0.0000	
Private Fire Protection	0.0140	0.0022	0.0587	0.0494	0.0516	
Public Fire Protection	0.0716	0.0113	0.3007	0.2532	0.2645	
Total	1.0000	0.1578	1.0000	0.8422	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	123,963	0.1578
Distribution Mains	661,444	0.8422
Total	<u>785,407</u>	1.0000

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

#### FACTOR 8. ALLOCATION OF COSTS ASSOCIATED WITH FIRE HYDRANTS.

Costs are assigned directly to Public Fire Protection.

Customer	Allocation
Classification	Factor
(1)	(3)
Public Fire Protection	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)		
Residential	9,074	0.6989		
Commercial	2,694	0.2075		
Industrial	101	0.0078		
Other Public Authority	1,114	0.0858		
Sales for Resale	. 0	0.0000		
Total	12,983	1.0000		

# Schedule C-JFC

## MISSOURI-AMERICAN WATER COMPANY JEFFERSON CITY DISTRICT

#### BASIS FOR ALLOCATING METER COSTS TO CUSTOMER CLASSIFICATIONS

•	5/8" Residential		dential	Comn	nercial	Industrial		Other Pub	lic Authority	Sales fo	or Resale	Total		
Meter	Dollar	Number of		Number of		Number of		Number of		Number of		Number of		
Size	Equivalent	Meters	Weighting	Meters	Weighting	Meters	Weighting	Meters	Weighting	Meters	Weighting	Meters	Weighting	
(†)	(2)	(3)	(4)=(2)X(3)	(5)	(6)=(2)X(5)	(7)	(8)=(2)X(7)	(9)	(10)=(2)X(9)	(11)	(12)=(2)X(11)	(13)	(14)	
5/8	1.0	8,812	8,812	874	874	3	3	60	60	0	0	9,749	9,749	
3/4	1.3	o	0	0	0	0	0	0	0	0	0	0	0	
1	1.7	137	233	285	485	2	3	76	129	0	0	500	850	
1-1/2	3.5	2	7	71	249	0	0	30	105	0	0	103	361	
2	4.3	5	22	163	701	4	17	108	464	0	0	280	1,204	
,3	19.0	, <b>0</b> .	0	10	. 190	1	19	11	209	. 0	o	. 22	418	
4	29.3	0	0	5	147	2	59	5	147	0	0	12	353	
6	48.4	0	0	1	48	0	Ô	0	o	0	O	1	48	
8	112.9	0	0	0	0	0	0	0	0	0	0	0	0	
Total		8,956	9,074	1,409	2,694	12	101	290	1,114	. 0	0	10,667	12,983	

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	3/4" Dollar	Allocation		
Classification	Equivalents	Factor		
(1)	(2)	(3)		
Residential	8,985	0.7717		
Commercial	1,697	0.1457		
Industrial	22	0.0019		
Other Public Authority	460	0.0395		
Sales for Resale	0	0.0000		
Private Fire Protection	480	0.0412		
Total	11,644	1.0000		

#### BASIS FOR ALLOCATING SERVICE COSTS TO CUSTOMER CLASSIFICATIONS

		3/4"	3/4" Residential Commercial Industrial		strial	Other Public Authority Sales for Resate			Private Fir	e Protection	Total					
	Service	Dollar	Number of		Number of		Number of		Number of		Number of		Number of		Number of	
	Sze	Equivalent	Services	Weighting	Services	Weighting	Services	Weighting	Services	Weighting	Services	Weighting	Services	Weighting	Services	Weighting
	(1)	(2)	(3)	(4)=(2)X(3)	(5)	(6)=(2)X(5)	(7)	(8)=(2)X(7)	(9)	(10)=(2)X(9)	(11)	(12)=(2)X(11)	(13)	(14)=(2)X(11)	(15)	(16)
	3/4	1.00	8,812	8,812	874	874	3	3	60	60	0	0	0	0	9,749	9,749
	1	1.17	137	160	285	333	2	2	76	89	0	0	0	٥	500	584
	1-1/2	1.58	2	3	71	112	0	0	30	47	0	0	0	0	103	162
_	2	2.04	5	10	163	333	4	8	108	220	o	0	8	16	288	587
FC	3	2.73	0	0	10	27	1	3	11	30	0	0	1	3	23	63
<u>\</u> 2	4	2.88	0	0	5	14	. 2	6	5	14	0	0	26	75	38	109
•	6	4.24	. 0	0	1	4	. 0		0	. 0	0	. 0	49	208	50	212
	8	6.98	0	0	0	0	0	0	0	0	0	0	20	140	20	140
	10	9.50	Q	0	0	0	0	0	0	0	0	0	4	38	4	38
	12	12.16	0	<u>C</u>	0	0	0	0	0	0	0	<u> </u>	. 0	0	0	0
	Total		8,956	8,985	1,409	1,697	12	22	290	460	. 0	0	108	480	10,775	11,644

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)
Residential	\$ 10,669	0.3743
Commercial	6,118	0.2147
Industrial	2,029	0.0712
Other Public Authority	1,706	0.0599
Sales for Resale	· -	0.0000
Private Fire Protection	1,302	0.0457
Public Fire Protection	6,675	0.2342
Total	28,500	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 (1)  Residential Commercial Industrial Other Public Authority	Transmission	
	& Distribution	
Customer	Maintenance	Allocation
Classification	Expenses	Factor
(1)	(2)	(3)
Residential	\$ 54,005	0.6565
Commercial	13,487	0.1640
Industrial	1,825	0.0222
Other Public Authority	3,615	0.0439
Sales for Resale	-	0.0000
Private Fire Protection	3,612	0,0439
Public Fire Protection	5,715	0.0695
Total	\$82,259	1.0000

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 customers.

Customer	Total	Allocation
Classification	Customers	Factor
(1)	(2)	(3)
Residential	8,956	. 0.8282
Commercial	1,409	0.1303
Industrial	12	0.0011
Other Public Authority	290	0.0268
Sales for Resale	0	0.0000
Private Fire Protection	147	0.0136
Public Fire Protection	0.	0.0000
Total	10,814	1.0000

#### FACTOR 14. ALLOCATION OF METER READING COSTS.

Factors are based on the number of metered customers.

Customer	Total Metered	Allocation
Classification	Customers	Factor
(1)	(2)	(3)
Residential	8,956	0.8396
Commercial	1,409 <sup>-</sup>	0.1321
Industrial	12	0.0011
Other Public Authority	290	0.0272
Sales for Resale	0	0.0000
Total	10,667	1.0000

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.

	Operation &	•
Customer	Maintenance	Allocation
Classification	Expenses	Factor
(1)	(2)	(3)
Residential	\$641,698	0.6048
Commercial	241,627	0.2278
Industrial	71,649	0.0675
Other Public Authority	61,535	0.0580
Sales for Resale	. 0	0.0000
Private Fire Protection	15,865	0.0150
Public Fire Protection	28,409	0.0269
Total	\$1,060,783	1,0000

### FACTOR 15A. ALLOCATION OF CASH WORKING CAPITAL

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

	Operation &	
Customer	Maintenance	Allocation
Classification	Expenses	Factor
(1)	(2)	(3)
Residential	\$2,050,884	0.5849
Commercial	842,661	0.2403
Industrial	277,461	0.0791
Other Public Authority	214,575	0.0612
Sales for Resale	0	0.0000
Private Fire Protection	43,819	0.0125
Public Fire Protection	76,714	. 0.0219
Total	\$3,506,114	0.9999

### 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	Direct Labor	Allocation		
Classification	Expense	Factor		
(1)	(2)	(3)		
Residential	<b>\$593,646</b>	0.5916		
Commercial	236,348	0.2355		
Industrial	72,805	0.0725		
Other Public Authority	60,631	0.0604		
Sales for Resale	. 0	0.0000		
Private Fire Protection	14,444	0.0144		
Public Fire Protection	25,668	0.0256		
Total	\$1,003,542	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:

Original	•
Cost Less	Allocation
Depreciation	Factor
(2)	(3)
\$8,285,221	0.4422
4,635,654	0.2474
1,620,624	0.0865
1,271,907	0.0679
· o	0.0000
373,413	0.0199
2,551,075	0.1361
\$18,737,894	1.0000
	Cost Less Depreciation (2)  \$8,285,221 4,635,654 1,620,624 1,271,907 0 373,413 2,551,075

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.

	Original	
Customer	Cost Measure	Allocation
Classification	of Value	Factor
(1)	(2)	(3)
Residential	\$7,571,157	0.4441
Commercial	4,213,657	0.2472
Industrial	1,471,133	0.0863
Other Public Authority	1,155,047	0.0678
Sales for Resale	0	0.0000
Private Fire Protection	338,412	- 0.0199
Public Fire Protection	2,296,453	0.1347
Total	\$17,045,858	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	Total Cost	Allocation
Classification	of Service	Factor
(1)	(2)	(3)
Residential	\$3,512,095	0.5246
Commercial	1,636,106	0.2444
Industrial	553,438	0.0827
Other Public Authority	430,893	0.0644
Sales for Resale	0	0.0000
Private Fire Protection	101,904	0.0152
Public Fire Protection	459,842	0.0687
Total	\$6,694,278	1.0000

# Schedule C-JFC

MISSOURI-AMERICAN WATER COMPANY
JEFFERSON CITY DISTRICT
COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

	Factor	Cost of	Marian et l	0	·	Public	Sales for		rotection
Account (1)	Ref. (2)	Service (3)	Residential (4)	Commercial (5)	Industrial (6)	Authorities (7)	Resale (8)	Private (9)	Public (10)
\''	(2)	(0)	(=)	(0)	(0)	07	(-)	(4)	(10)
RATE BASE									
Organization	· 17	\$ 5,368	<b>\$</b> 2,374	\$ 1,328	\$ ' 464	\$ 364	\$ -	\$ 107	\$ 731
Franchises	17	0	0	0	0	0	0	0	0
Land & Ld Rights SS	2	0	0	0	0	0	0	0	0
Land & Ld Rights P	6	944	437	291	118	76	0	4	19
Land & Ld Rights WT	2	70,255	33,188	22,137	8,929	5,782	0	35	. 183
Land & Ld Rights TD	7	100,364	33,361	21,638	7,969	5,671	0	5,179	26,546
Land & Land Rights AG	15	7,181	4,343	1,636	485	417	0	108	193
Struct & Imp SS	2	57,825	27,317	18,221	7,350	4,759	0	29	150
Struct & Imp P	6	515,092	238,385	159,009	64,129	41,516	0	1,957	10,096
Struct & Imp Pump Boosters	6	٥	0	0	0	0	0	0	0
Struct & Imp WT	2	1,923,118	908,481	605,974	244,428	158,273	0	962	5,000
Struct & Imp TD	7	180,547	60,014	38,926	14,335	10,201	0	9,316	47,755
Struct & Imp TD Spec Cross	7	0	0	Q	O	0	0	Ó	0
Struct & Imp AG	7	2,263	752	488	180	128	0	117	599
Struct & Imp Offices	15	141,414	85,527	32,214	9,545	8,202	0	2,121	3,804
Gen Structures HVAC	15	0	0	0	0	a	0	Ō	0
Struct & Imp Leasehold	15	11	7	3	1	1	0	0	0
Struct & Imp Leasehold	15	0	0	0	0	٥	0	0	0
Struct & Imp Store, Shop, Gar	15	Q	0	0	O	0	0	0	0
Struct & Imp Misc	15	Ò	Ó	0	<b>o</b> ,	0	0	. 0	. 0
Collect & Impounding	. 1	0	. 0	0	. 0	0	. 0	0	, 0
Lake, River & Other Intakes	2	317,022	149,761	99,894	40,293	26,091	0	159	824
Wells & Springs	2	0	0	0	0	0	0	0	0
Supply Mains	2	o o	0	0	0	0	0	0	0
Power Generation Equip	6	619,203	286,567	191,148	77,091	49,908	0	2,353	12,136
Power Generation Equip Othe	6	0	0	0	0	0	Q	0	0
Boiler Plant Equipment P	6	0	Q	0	0	0	0	0	0
Pump Equip Steam	6	0	0	Q	0	0	0	0	0
Pump Equip Electric	6	1,133,995	524,813	350,064	141,182	91,400	a	4,309.	22,226
Pump Equip Elec Boosters Po	6	0	0	0	0	Đ	0	. 0	0
Pump Equip Diesel	6 .	. 0	0.	. 0	0	0	0	0.	0
Pump Equip Hydraulic	6	30,608	14,165	9,449	3,811	2,467	0	116	600
Pump Equip Other	6	31,450	14,555	9,709	3,916	2,535	0	120	616
Pump Equip WT	6	0	0	0	0	0	0	0	0
Pump Equip TD	6	Ð	0	0	0	0	0	0	0
WT Equip Non-Media	2	1,592,522	752,307	501,804	202,409	131,065	0	796	4,141
WT Equip Filter Media	2	144,672	68,343	45,586	18,388	11,906	0	72	376
Dist Reservoirs & Standpipe	5	41,601	16,653	10,729	3,844	2,808	0	1,236	8,332
Elevated Tanks & Standpipes	5	873,088	349,497	225,170	80,673	58,933	0	25,931	132,884
Ground Level Facilities	5	4,376	1,752	1,129	404	295	0	130	666
TD Mains Not Classified by	7	3,169,368	1,053,498	683,316	251,648	179,069	0	163,539	838,298
TD Mains 4" & Less	4	101,941	31,948	20,582	7,381	5,393	0	5,984	30,654
TD Mains 6 to 8"	4	1,484,131	465,127	299,646	107,451	78,511	0	87,119	446,278
TD Mains 10 to 16"	3	2,056,740	890,980	594,604	239,816	155,284	0	28,794	147,263
TD Mains 18" & Grtr	3	1,326	575	383	155	100	ō	19	95

MISSOURI-AMERICAN WATER COMPANY

### JEFFERSON CITY DISTRICT COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor	Cost of	_			Public	Sales for	Fire Pro	
	Ref	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
FD Mains Cf <10 1900-28 (S*	4	0	0	0	0	0	0	0	0
FD Mains Cl <10 1929-56 (S"	4	0	0	0	٥	0	0	0	0
TD Mains CI <10 1957-93 (S"	4	17,963	5,630	3,627	1,301	950	0	1,054	5,401
Fire Mains	. 8	0	. 0	0	. 0	0	. 0	0	. 0
Services	10	435,074	335,746	63,390	827	17,185	0	17,925	Q
Meters Bronze Case	9	1,008,419	704,784	209,247	7,866	86,522	0	0	0
Meters Plastic Case	9	(9,838)	(6,876)	(2,041)	{77}	(844)	0	0	C
Vieters Other	9	614,026	429,142	127,410	4,789	52,683	0	0	0
Meters Other-Rem Rdr Unts	9	9,421	6,584	1,955	73	808	0	0	0
Meter Installations	9	313,128	218,845	64,974	2,442	26,866	0	٥	0
Meter Installation Other	9	0	0	0	0	0	0	0	0
Meter Vaults	9	0	0	0	0	0	0	0	0
Hydrants	8	782,893	0	0	0	0	0	0	782,893
Other P/E Intangible	17	22,227	9,829	5,499	1,923	1,509	0	442	3,025
Other P/E WT Res Hand Equip	2	. 0	0	· o	0	0	0	. 0	C
Other P/E TD	7	0	0	0	0	0	0	0	(
Other P/E CPS	15	208,052	125,830	47,394	14,044	12,067	0	3,121	5,597
Office Furniture & Equip	15	(16,969)	(10.263)	(3,866)	(1,145)	(984)	0	(255)	(456
Comp & Periph Equip	15	339,801	205,512	77,407	22,937	19,708	0	5,097	9,141
Computer Software	15	22,566	13,648	5,141	1,523	1,309	0	338	607
Comp Software Personal	15	1,039	628	237	70	<del>5</del> 0	0	16	28
Comp Software Other	15	· 0	0	0	0	0	0	0	(
Data Handling Equipment	15	0	0	0	0	0	0	0	(
Other Office Equipment	15	103	62	23	7	6	0	2	:
Trans Equip Lt Duty Trks	15	4,926	2,979	1,122	332	286	0	74	133
Frans Equip Hvy Duty Trks	15	26,918	16,280	6,132	1,817	1,561	0	404	724
Frans Equip Autos	15	24,459	14,793	5,572	1,651	1,419	0	367	658
Trans Equip Other	15	1,320	798	301	89	77	0	20	35
Stores Equipment	15	2,303	1,393	525	155	134	0	35	62
Tools,Shop,Garage Equip	15	93,373	56,472	21,270	6,303	5,416	0	1,401	2,512
Tools Shop Garage Equip Oth	15	0	0	· o	0	0	0	0	
Laboratory Equipment	2	33,594	15,870	10,585	4,270	2,765	. 0	17	8
aboratory Equip Other	2	4,735	2,237	1,492	602	390	0	2	1.2
Power Operated Equipment	15	(26,216)	(15,856)	(5,972)	(1,770)	(1,521)	0	(393)	(70)
Comm Equip Non-Telephone	15	12,426	7,515	2,831	839	721	0	186	334
Remote Control & Instr	15	11,574	7.000	2.637	781	671	0	174	31
Comm Equip Telephone	15	342	207	78	23	20	Ō	5	:
Misc Equipment	15	221,409	133.908	50,437	14,945	12,842	Ō	3,321	5,95
Other Tangible Property	17	0	0	0_	0	0	0	0	
Total Utility Plant in Service		18,765,489	8,297,423	4,642,481	1,623,011	1,273,780	0	373,963	2,554,83

#### MISSOURI-AMERICAN WATER COMPANY

### JEFFERSON CITY DISTRICT COST OF SERVICE FOR THE TWELVE MONTHS ENDED JUNE 30, 2009, ALLOCATED TO CUSTOMER CLASSIFICATIONS

	Factor	Cost of				Public	Sales for	Fire P	rotection
Account	Ref	Service	Residential	Commercial	Industrial	Authorities	Resale	Private	Public
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Other Rate Base Items									
Add:		•				•		•	
Other Utility Plant Adjustments	17	0	0	0	o	0	0	0	0
Cash Working Capital	15A	126,000	73,697	30,278	9,967	7,711	ō	1,575	2,759
Materials and Supplies	15	149,711	90,545	34,104	10,105	8,683	ō	2,246	4.027
Prepayments	15	31,976	19,339	7,284	2,158	1,855	Ö	480	860
OPEB's Contributed to External Fund	16	0	0	0	0	0	Ô	0	0
Pension / OPEB Tracker	16	37,859	22,397	8,916	2,745	2,287	Ŏ	545	969
Regulatory Deferrals	17	107,415	47,499	26,574	9,291	7,293	ō	2.138	14,619
Less:								2,	
Accumulated Deferred (TC (3%)	17	0	0	0	0	0	0	O	0
Deferred Income Taxes	17	(2,045,205)	(904,390)	(505,984)	(176,910)	(138,869)	ō	(40,700)	(278,352)
Pensions	16	(127,374)	(75,354)	(29,997)	(9,235)	(7,693)	0	(1,834)	(3,261)
Total Other Rate Base Elements		(1,719,618)	(726,266)	(428,824)	(151,878)	(118,734)	0	(35,551)	(258,378)
Total Original Cost Measure of Value		\$ 17,045,871	\$ 7,571,157	\$ 4,213,657	\$1,471,133	\$ 1,155,047	<u> </u>	\$ 338,412	\$ 2,296,453

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	5/8" Dollar	Allocation Factor		
Classification	Equivalents			
(1)	(2)	(3)		
Residential	9,074	0.6989		
Commercial	2,694	0.2075		
Industrial	. 101	0.0078		
Other Public Authority	1,114	0.0858		
Sales for Resale	0	0.0000		
Private Fire	0	0.0000		
Total	12,983	1.0000		

### SUMMARY OF AVERAGE DAILY SEND OUT AND MAXIMUM DAILY USAGE FOR THE YEARS 1999-2008

	Average Daily	Maximum Daily Use				
Year	Send out (MGD)	MGD	Ratio to Average	Highest Use Day		
(1)	(2)	(3)	(4)	(5)		
1999	3.810	6.500	1.71	7/22/1999		
2000	4.101	5.690	1.39	7/11/2000		
2001	3.739	5.240	1.40	8/21/2001		
2002	3.861	5.980	1:55	8/5/2002		
2003	4.171	6.990	1.68	8/17/2003		
2004	. 4.042	5.760	1.42	7/22/2004		
2005	4.270	6.348	1.49	8/2/2005		
2006	4.040	6.830	1.69	8/1/2006		
2007	3.840	6.260	1.63	8/9/2007		
2008	3.523	5.199	1.48	7/21/2008		

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

Description (1)	Restrictive Diameters Squared (2)	Quantity (3)	Relative Demand* (4)=(2)x(3)	Allocation Factor (5)
PRIVATE FIRE PROTECTION				
Fire Lines				
2 -inch	4.00	8	32	
3 -inch	9.00	1	9	
4 -inch	16.00	26	416	
6 -inch	36.00	49	1,764	
8 -inch	64.00	20	1,280	
10 -inch	100.00	4	400	
12 -inch	144.00	0	0	
Private Hydrants	26.50	39	1,028	
Total Private Fire Protection		146.8	4,929	0.1634
PUBLIC FIRE PROTECTION				
Hydrant Nozzle Sizes			•	•
5 1/4" Valve 2- 2-1/2" & 1- 4.5	5" 26.50	947	25,096	
4 1/2" Valve 1- 2-1/2"	12.50	11	138	
Total Public Fire Prorection	958	25,234	0.8366	
Total Fire Protection		1,105	30,163	1.0000