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Exhibit No.:
Issues: Cost Allocation and Rate Design
Witness: Paul R. Herbert
Exhibit Type: Rebuttal
Sponsoring Party: Missouri-American Water Company
Case No.: WR-2015-0301
SR-2015-0302
Date: February 19, 2016

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2015-0301
CASE NO. SR-2015-0302

REBUTTAL TESTIMONY

OF

Paul R. Herbert

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

MAWC Exhibit No. 9
Date 3-21-16 Reporter TM
File No. WR-2015-0301

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)	CASE NO. WR-2015-0301
RATES FOR WATER AND SEWER)	CASE NO. SR-2015-0302
SERVICE)	

AFFIDAVIT OF PAUL R. HERBERT

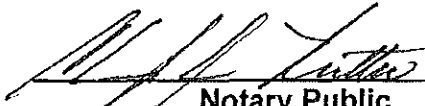
Paul R. Herbert, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Rebuttal Testimony of Paul R. Herbert"; that said testimony and schedules were prepared by him and/or under his direction and supervision; that if inquiries were made as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



Paul R. Herbert

Commonwealth of Pennsylvania
County of Cumberland

SUBSCRIBED and sworn to
Before me this 2nd day of February 2016.



Notary Public

My commission expires:

COMMONWEALTH OF PENNSYLVANIA NOTARIAL SEAL Cheryl Ann Rutter, Notary Public East Pennsboro Twp., Cumberland County My Commission Expires Feb. 20, 2019 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES
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REBUTTAL TESTIMONY
Paul R. Herbert
MISSOURI-AMERICAN WATER COMPANY
CASE NO. WR-2015-0301
CASE NO. SR-2015-0302

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REBUTTAL TESTIMONY

Paul R. Herbert

I. INTRODUCTION

1

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

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

5

6 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS
7 PROCEEDING?**

8 A. Yes, I have submitted direct and supplemental testimony in this proceeding.

9

10 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

11 A. I will address the cost of service allocation and rate design issues in the Staff
12 Report on Class Cost of Service and Rate Design and the direct testimony
13 and exhibits of Staff witness James A. Busch, Missouri Industrial Energy
14 Consumers (MIEC) witness Brian Collins, Missouri Department of Economic
15 Development – Division of Energy (DE) witness Martin Hyman, and Office of
16 the Public Counsel (OPC) witness Ralph Smith.

17

18

19 **II. REBUTTAL OF STAFF WITNESS JAMES BUSCH**

20 **Q. PLEASE SUMMARIZE THE ISSUES IN THE TESTIMONY OF STAFF
21 WITNESS JAMES BUSCH.**

22 A. Mr. Busch proposes to consolidate water rates into three water districts (1, 2,
23 3) although his water districts include different, existing individual districts
24 than the Company's proposed three rate zones. His water districts are
25 organized by the operating characteristics, such as source of supply and
26 treatment methods, and geographic location. The Company's proposed rate

1 zones were organized more in line with the level of rates so that Zone 1 would
2 have the lowest rates, Zone 3 would have the highest rates and Zone 2 would
3 be in between Zones 1 and 3.

4 The Staff's rate structure proposed for each water district is based on
5 Staff's proposed revenue requirement and class cost of service studies
6 prepared by Mr. Curtis Gateley. The proposed rates for each district include
7 a customer charge that varies with the size of meter and a single block
8 consumption charge for each classification. Staff's customer charges reflect
9 an overall decrease from existing customer charges.

10
11 **Q. PLEASE COMMENT ON STAFF'S PROPOSED WATER DISTRICTS.**

12 A. The Company does not oppose Staff's three water districts based on
13 operational characteristics and geographic location. The Company believes
14 this consolidation is an appropriate step to further reduce the number of rate
15 areas.

16
17 **Q. PLEASE COMMENT ON STAFF'S PROPOSED RATE STRUCTURE
18 REGARDING VOLUMETRIC RATES.**

19 A. The Company's proposal was for a single block (Rate A) for residential and
20 small commercial, industrial and other public authority (OPA) classes with a
21 single block (Rate J) for large customers and a single block (Rate B) for Sales
22 for Resale. The Company does not oppose Staff's proposed volumetric
23 structure that includes a separate single block rate for residential,
24 commercial, industrial, OPA and resale classes. However, the Company
25 would prefer and would recommend to combine Staff's proposed rates for
26 commercial and OPA into one volumetric rate since the rates are very close
27 to one another in each of Staff's water districts. This would eliminate a
28 separate classification for OPA as these customers are very similar in usage
29 quantities and patterns as the commercial class.

30
31 **Q. PLEASE COMMENT ON STAFF'S PROPOSED CUSTOMER CHARGES.**

1 A. Staff's proposed customer charges represent a significant decrease from
2 existing customer charges. This is not acceptable and not logical. Customer
3 costs simply have not gone down since the last case. Staff's recommended
4 customer charges are based on a flawed customer cost analysis which
5 resulted in costs that do not fully reflect the proper level of customer costs
6 that should be recovered in customer charges.

7
8 **Q. WHY ARE STAFF'S CUSTOMER COST ANALYSES FLAWED?**

9 A. Staff did not properly identify certain costs as customer costs and therefore
10 are not included in Staff's customer charges. The major omissions are listed
11 below:

- 12 • Staff's allocation did not properly identify customer-related
13 management fees and instead allocated all management fees
14 on an A&G factor. Costs associated with the call center are
15 recovered through the management fees and should be
16 allocated exclusively to customer costs.
- 17 • Staff's allocation did not properly identify computer software as
18 customer information systems (CIS) which is exclusively related
19 to customer costs. Staff used an A&G factor for all computer
20 software which allocates a majority of the costs to volumetric
21 charges.
- 22 • Staff incorrectly allocated contributions in aid of construction
23 (CIAC) using an A&G factor. This created a negative rate base
24 for the billing and collecting function, resulting in a much lower
25 cost for this function than what should properly be included in
26 customer charges. My study correctly allocates CIAC based on
27 the type of plant contributed, such as mains, services, meters
28 and hydrants. None of the CIAC should be deducted from
29 billing and collecting costs.
- 30 • Staff did not include costs related to public fire in customer
31 costs. The Company does not have public fire hydrant rates so
32 the costs associated with public fire must be recovered from
33 other classes. Since public fire costs are fixed costs and do not
34 vary at all with water usage, these costs must be recovered
35 through customer charges. My study allocated public fire based
36 on meter equivalents so that customers with larger meters will
37 pay more for public fire and recognizes that customers with
38 larger meters generally have higher property values.

39
40 **Q. WHAT DO YOU RECOMMEND?**

1 A. I recommend that customer charges reflect the proper allocation of customer
2 costs presented in my Schedule No. PRH-2, which would be applicable in all
3 three of Staff's water districts, state-wide. The costs used in my customer
4 cost analysis are based on the Company's revenue requirement and would
5 result in a 5/8-inch customer charge of \$17.40 per month or \$31.00 quarterly.
6 The level of the customer charges would be amended based on the final
7 revenue requirement allowed in this case.

8 As an alternative, I also prepared Schedule No. PRH-3, which
9 calculates separately, the proper level of customer charges for Staff's Water
10 Districts 1, 2, and 3, respectively.

11

12 **Q. WHY DO YOU RECOMMEND CUSTOMER CHARGES BE UNIFORM**
13 **STATE-WIDE?**

14 A. While I will acknowledge there are operational and investment differences in
15 the costs for volumetric charges, there is little difference in the costs
16 associated with customer costs. All customers have a similar service line and
17 meter, all have their meter read for billing either monthly or quarterly, all are
18 billed from a centralized billing facility, and all receive customer service from a
19 shared call center. Since there is no compelling difference in customers'
20 individual facilities, billing cost, and other customer-related costs, there also
21 should be no difference in customer charges.

22

23 **Q. IF YOUR PROPOSAL FOR STATE-WIDE CUSTOMER CHARGES IS NOT**
24 **ACCEPTED, WHAT DO YOU PROPOSE?**

25 A. I would proposed to have customer charges as reflected in Schedule No.
26 PRH-3 for Water Districts 1, 2, and 3. For Water District 1, the 5/8-inch
27 charge would be \$18.67 per month, for Water District 2, \$16.27 per month,
28 and for Water District 3, \$16.93 per month.

29

30 **Q. STAFF BASED ITS PROPOSED RATE DESIGN ON CLASS COST OF**
31 **SERVICE STUDIES PREPARED FOR EACH THE THREE WATER**
32 **DISTRICTS. DO YOU AGREE WITH THOSE STUDIES?**

1 A. No, I do not. As I have demonstrated above, there are many problems with
2 Staff's allocation of customer costs and those same problems exist, as well as
3 others, in Staff's class cost of service studies for each district. So, I have
4 aggregated the individual district class cost of service studies found in my
5 original Schedule No. PRH-1 into the same three Water Districts
6 recommended by Staff. The only exception was the study for St. Louis Metro
7 which was amended to break down the Rate A classification into residential,
8 commercial and OPA classes. The revised summary schedule for St. Louis
9 Metro is attached as Schedule No. PRH-7.

10 The summary tables for the three Water Districts are presented in
11 Schedule No. PRH-4, attached to my rebuttal testimony. The class cost of
12 service indicated for the three Water Districts in Schedule No. PRH-4 should
13 be used to determine the ultimate rate design for Water Districts 1, 2 and 3 in
14 this case.

15

16 **Q. PLEASE COMMENT ON STAFF'S PROPOSED SEWER RATE**
17 **STRUCTURE.**

18 A. Unfortunately, since Staff's recommended revenue requirement for sewer
19 operations reflects only a small increase over existing rates, Staff
20 recommended no change in existing sewer rates which they group into 5
21 sewer rate districts. The Company would hope that under a higher revenue
22 requirement ultimately allowed in this case, a movement toward consolidating
23 sewer rates into two or three districts could be achieved.

24

25 **III. REBUTTAL OF MIEC WITNESS BRIAN COLLINS**

26 **Q. PLEASE SUMMARIZE THE ISSUES ADDRESSED IN THE TESTIMONY OF**
27 **MIEC WITNESS BRIAN COLLINS.**

28 A. Mr. Collins opposes consolidated pricing. He generally agrees with my St.
29 Louis Metro cost allocation except for the allocation of power costs. He
30 recommends an increase for Rate J customers in St. Louis Metro of 1.93%.

31

32 **Q. PLEASE COMMENT ON MR. COLLINS' ISSUES.**

1 A. Dr. McDermott will address the issue related to consolidated tariff pricing. I
2 will address the allocation of power costs.

3

4 **Q. PLEASE ADDRESS MR. COLLINS' MODIFICATION TO YOUR**
5 **ALLOCATION OF POWER COSTS?**

6 A. Mr. Collins suggests that since power bills include a demand charge that
7 varies with the Company's peak demands, Factor 3 would be a more
8 appropriate factor for allocating power costs.

9

10 **Q. DO YOU AGREE WITH MR. COLLINS MODIFICATION TO YOUR**
11 **ALLOCATION OF POWER COSTS?**

12 A. No, I do not. I have conducted an analysis of a sample of the Company's
13 power bills in St. Louis Metro and determined that the bills include a monthly
14 demand charge regardless of the level of service. Generally, electric rates
15 are structured with a customer charge, a demand charge and commodity
16 charges. Depending on the rate schedule, there will be a monthly demand
17 charge every month even when power is at its lowest demand. The amount
18 of the demand charge that fluctuates from month to month would be
19 considered the extra capacity portion of the Company's power purchases, not
20 the total demand charges.

21 In my analysis of power bills, the difference between the minimum
22 demand charge for the lowest demand month and the demand charges for
23 the remaining months results in approximately 4.5% of the total purchased
24 power expense attributable to extra demand. Therefore, I would support a
25 refinement to my cost allocation that would allocate 4.5% of purchased power
26 costs to the extra capacity function; however, this refinement would result in a
27 very minor revision to my study.

1

2 **Q. DOES THE AWWA MANUAL M1 SUPPORT YOUR METHOD OF**
3 **ALLOCATING PURCHASED POWER IN THIS MANNER?**

4 A. Yes, it does. It states that "the demand portion of power costs should be
5 allocated to extra capacity *to the degree that it varies with the demand*
6 *pumping requirements.*" (emphasis added). It does not suggest that the
7 total demand portion of power costs should be allocated to extra capacity,
8 only to the degree that it varies with pumping requirements.

9

10 **Q. WHAT IS THE RESULT OF ALLOCATING POWER COSTS USING YOUR**
11 **ALTERNATIVE METHOD?**

12 A. As shown on Schedule No. PRH-5, the result of allocating 4.5% of the power
13 costs on an extra capacity basis reduces the Rate J cost of service by
14 \$24,160 or about 0.35% of the total Rate J costs - a very small and
15 insignificant amount.

16

17 **IV. REBUTTAL OF DE WITNESS MARTIN HYMAN**

18 **Q. PLEASE SUMMARIZE THE ISSUES IN THE TESTIMONY OF DE WITNESS**
19 **MARTIN HYMAN.**

20 A. DE witness Martin Hyman supports no increase to customer charges, rejects
21 the Company's CTP proposal, and suggests moving to inclining block rates.

22

23 **Q. ON WHAT BASIS DOES MR. HYMAN RELY TO SUPPORT NO INCREASE**
24 **TO CUSTOMER CHARGES?**

1 A. He provides no supporting evidence. Only his opinion that uncollectible
2 accounts should not be included in customer charges.

3

4 **Q. DO YOU AGREE?**

5 A. No, not at all. Uncollectible accounts should be included in the customer
6 costs supporting customer charges. Uncollectible accounts do not vary with
7 usage, they vary with the number of customers. By using an allocation factor
8 based on the number of customers to allocate uncollectible accounts, the
9 result is more closely aligned with the write-offs by class, as shown in the
10 table below:

	<u>Write-offs</u>	<u>Percent</u>
11 Residential	\$3,945,329	94.36%
12 Commercial	230,248	5.51%
13 Industrial/Other	1,005	0.02%
14 Fire Service	<u>4,488</u>	<u>0.11%</u>
15 Total	\$4,181,070	100.00%

16

17
18 The table above clearly shows that the residential class is primarily
19 responsible for uncollectible accounts and are properly allocated to customer
20 costs based on the number of customers. Allocating uncollectible accounts
21 to volumetric rates as Mr. Martin suggests would be inequitable since large
22 users would pay a disproportionate share of the cost. Mr. Martin's position
23 should be rejected as well as his recommendation not to increase customer
24 charges. Customer charges are properly determined in my Schedule Nos.
25 PRH-2 and PRH-3 attached to my rebuttal testimony.

26

1 Q. MR. MARTIN ALSO SUGGESTS MOVEMENT TOWARD INCLINING
2 BLOCK RATES IN THE NEXT CASE. DO YOU AGREE?

3 A. No, I do not. The price of water is relatively inelastic. The single block rates
4 that the Company and Staff have proposed in this case provide sufficient
5 incentive for customers to conserve and limit discretionary usage.

6

7 **V. REBUTTAL OF OPC WITNESS RALPH SMITH**

8 Q. PLEASE SUMMARIZE THE ISSUES ADDRESSED IN THE TESTIMONY OF
9 OPC WITNESS RALPH SMITH.

10 A. Mr. Smith generally opposes consolidated pricing although he is open to
11 some limited consolidation. He also opposes consolidation for wastewater
12 but could support the Staff's five rate districts.

13

14 Q. PLEASE ADDRESS THE ISSUE REGARDING CONSOLIDATED TARIFF
15 PRICING.

16 A. As I indicated earlier, Dr. McDermott will address the subject of consolidated
17 tariff pricing, but I wanted to comment on the other factors that Mr. Smith
18 mentions that the Commission should consider in determining just and
19 reasonable rates. On page 7 of his testimony, Mr. Smith indicates that the
20 concept of value of service is one factor that should be considered.

21

22 Q. PLEASE EXPLAIN VALUE OF SERVICE CONCEPT.

23 A. Value of service pricing implies the pricing of a service based on the
24 customers' perceived value of that service rather than the exact cost. That is,

1 if customers perceive that the value of water service is the same, then the
2 pricing should be the same. Value of service pricing supports consolidated
3 tariff pricing not district specific pricing.

4

5 **Q. ARE CUSTOMERS AWARE OF THE COST DIFFERENCES REQUIRED TO**
6 **SERVE CUSTOMERS IN DIFFERENT LOCATIONS?**

7 A. I don't believe so. Customers generally are concerned with the quality and
8 pressure of the water delivered to them. Although the original source of the
9 water supply and the treatment process may be different, the final product
10 delivered to the customer is the same. The Company provides water service
11 that meets all the quality standards delivered under sufficient pressure in all of
12 its service areas. Therefore the customers' perception would be that water
13 service has the same value so the price should be the same.

14

15 **Q. DOES DISTRICT SPECIFIC PRICING ELIMINATE ALL COST INEQUITIES**
16 **IN A RATE STRUCTURE?**

17 A. No, it does not. District specific pricing does not eliminate inequities or
18 subsidies within a district. For example, it is widely acknowledged that a
19 customer who resides near the treatment plant requires little distribution costs
20 compared to a customer who resides many miles away. Also, certain
21 customers can be served directly from high service pumping at the treatment
22 facility while others require additional booster pumping and storage facilities
23 in order to receive service at higher elevations. Yet these cost differences
24 within a district are ignored by Mr. Smith in the district specific rate design. In

1 other words, Mr. Smith feels it is fine to have inequities within a district, but
2 not between districts.

3

4 **Q. WHAT DATA DOES MR. SMITH USE TO SUPPORT HIS OPPOSITION TO**
5 **CONSOLIDATED TARIFF PRICING?**

6 A. On pages 35 and 47 of his testimony, he presents a table showing what he
7 claims to be the cost of service per residential customer for each district in
8 Zone 1 and Zone 2 respectively.

9

10 **Q. ARE HIS FIGURES IN HIS TABLES ACCURATE?**

11 A. No, not at all, his testimony is very misleading. The cost of service he shows
12 for each district is not the annual residential cost of service as he indicates in
13 his testimony.

14

15 **Q. WHAT DOES HIS TABLE ON PAGE 35 OF HIS TESTIMONY**
16 **REPRESENT?**

17 A. The amounts shown come from his Schedule RCS-11 and reflect the sum of
18 the average rate base per customer plus the average depreciation expense
19 per customer. The amounts range from \$1,136 annually per customer for
20 Warrensburg to \$3,077 for Platte County or about 3 to 5 times what the
21 average annual cost of service for residential customers should be.

22

23 **Q. IS THIS A PROPER DETERMINATION OF COST OF SERVICE?**

1 A. No, not at all. Cost of service is the sum of O&M expenses and other taxes,
2 annual depreciation expense, and the return on rate base plus associated
3 income taxes.

4
5 **Q. HAVE YOU CORRECTED THE AVERAGE COST OF SERVICE PER**
6 **RESIDENTIAL CUSTOMER?**

7 A. Yes. Schedule No. PRH-6 shows the correct average residential cost of
8 service. Most districts are in the \$400-\$500 range with Jefferson City,
9 Brunswick and Spring Valley in the \$500-\$700 range. Platte County is the
10 only significant outlier at \$1,035 annually. On page 2 of the schedule, I
11 rearranged the districts to conform with Staff's Water Districts 1, 2, and 3 for
12 comparative purposes.

13
14 **Q. WHAT DO YOU CONCLUDE WITH RESPECT TO THE DATA SHOWN ON**
15 **SCHEDULE NO. PRH-6?**

16 A. The cost differences among the districts are actually a fraction of the cost
17 differences that Mr. Smith claims in his testimony. There are a few outliers,
18 but most districts are within a reasonable range of one another. Since Mr.
19 Smith relied on his misleading information to oppose consolidated pricing, I
20 believe his opinion and recommendations should be rejected.

21
22 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

23 A. Yes, it does.

MISSOURI AMERICAN WATER COMPANY

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

<u>Cost Function</u>	<u>Cost of Service</u>	<u>Number of Units</u>	<u>Unit Cost Per Month</u>	<u>Unit Cost Per Quarter</u>
Meters	\$ 20,803,873	568,002 5/8 Equivalents	\$ 3.05	\$ 9.15
Services	8,480,642	534,809 3/4 Equivalents	1.32	3.96
Billing/Collecting	<u>29,613,896</u>	2,797,709 Bills	<u>10.59</u>	<u>10.59</u>
Subtotal	58,898,411		14.96	23.70
Unrecovered Public Fire	<u>16,770,089</u>	568,002 5/8 Equivalents	<u>2.46</u>	<u>7.38</u>
Total	<u>\$ 75,668,499</u>		<u>\$ 17.42</u>	<u>\$ 31.08</u>

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31,2014 ALLOCATED TO FUNCTIONAL CLASSIFICATIONS

Account (1)	Factor Ref. (2)	Cost of Service (3)	Base (4)	Max Day (5)	Max Hour (6)	Meters (7)	Services (8)	Billing & Collecting (9)	Fire Service (10)
OPERATION AND MAINTENANCE EXPENSES									
SOURCE OF SUPPLY EXPENSES									
Super & Eng Oper SS	2	0	0	0	0	0	0	0	0
Labor & Exp Oper SS	2	75,723	37,627	37,861	0	0	0	0	235
Labor & Exp Oper SS	2	390,823	194,200	195,411	0	0	0	0	1,212
Purchased Water	1	983,579	977,579	0	0	0	0	0	6,000
TOTAL SS EXPENSE - OPERATION		1,450,124	1,209,406	233,273	0	0	0	0	7,446
Misc Exp Oper SS	2	601,264	298,768	300,632	0	0	0	0	1,864
Misc Exp Oper SS	2	673,348	334,586	336,674	0	0	0	0	2,087
Rents Oper SS	2	2,603	1,293	1,302	0	0	0	0	8
Super & Eng Maint SS - Labor	2	58	29	29	0	0	0	0	0
Collect & Impound Maint SS - Labor	2	230	114	115	0	0	0	0	1
Lake, River & Oth Maint SS - Labor	2	372	185	186	0	0	0	0	1
Lake, River & Oth Maint SS	2	21	11	11	0	0	0	0	0
Wells & Springs Maint SS - Labor	2	97,691	48,543	48,845	0	0	0	0	303
Wells & Springs Maint SS	2	909	452	455	0	0	0	0	3
Infil Gall & Tunnels Maint SS - Labor	2	605	301	302	0	0	0	0	2
Infil Gall & Tunnels Maint SS	2	0	0	0	0	0	0	0	0
Supply Mains Maint SS - Labor	2	1,138	565	569	0	0	0	0	4
Misc Plant Maint SS - Labor	2	252,884	125,658	126,442	0	0	0	0	784
Misc Plant Maint SS	2	31,931	15,866	15,965	0	0	0	0	99
TOTAL SS EXPENSE - MAINTENANCE		1,663,053	826,371	831,527	0	0	0	0	5,155
TOTAL SS EXPENSE		3,113,178	2,035,777	1,064,799	0	0	0	0	12,602
POWER AND PUMPING EXPENSES									
Super & Eng Oper P	3	107,156	50,942	51,253	0	0	0	0	4,961
Fuel for Power Prod	1	12,522	12,445	0	0	0	0	0	76
Labor & Exp Oper Pwr Prod	3	664	316	318	0	0	0	0	31
Purch Fuel/Power for Pump	1	10,292,057	10,229,275	0	0	0	0	0	62,782
Labor & Exp Oper Pump	3	2,394,863	1,138,518	1,145,463	0	0	0	0	110,882
Labor & Exp Oper Pump	3	290,887	138,288	139,131	0	0	0	0	13,468
Misc Exp Oper P	3	25,711	12,223	12,298	0	0	0	0	1,190
Rents Oper P	3	2,415	1,148	1,155	0	0	0	0	112
TOTAL PUMPING EXPENSE - OPERATION		13,126,275	11,583,155	1,349,618	0	0	0	0	193,502
Super & Eng Maint P	3	115,263	54,796	55,130	0	0	0	0	5,337
Super & Eng Maint P - Other	3	332	158	159	0	0	0	0	15
Struct & Improve Maint P - Labor	3	694,842	330,328	332,343	0	0	0	0	32,171
Struct & Improve Maint P	3	89,717	42,652	42,912	0	0	0	0	4,154
Pump Equip Maint P - Labor	3	462	220	221	0	0	0	0	21
Pump Equip Maint P - Labor	3	140,274	66,886	67,093	0	0	0	0	6,495
Pump Equip Maint P	3	39,816	18,928	19,044	0	0	0	0	1,843
TOTAL PUMPING EXPENSES - MAINTENANCE		1,080,707	513,768	516,902	0	0	0	0	50,037

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31,2014 ALLOCATED TO FUNCTIONAL CLASSIFICATIONS

Account (1)	Factor Ref. (2)	Cost of Service (3)	Base (4)	Max Day (5)	Max Hour (6)	Meters (7)	Services (8)	Billing & Collecting (9)	Fire Service (10)
TOTAL PUMPING EXPENSES		14,206,982	12,096,923	1,866,520	0	0	0	0	243,539
WATER TREATMENT									
Super & Eng Oper WT	2	245,508	121,993	122,754	0	0	0	0	761
Super & Eng Oper WT	2	22	11	11	0	0	0	0	0
Chemicals	1	8,921,667	8,867,245	0	0	0	0	0	54,422
Labor & Exp Oper WT - Labor	2	1,364,388	677,964	682,194	0	0	0	0	4,230
Labor & Exp Oper WT	2	569,217	282,844	284,608	0	0	0	0	1,765
Misc Exp Oper WT	2	0	0	0	0	0	0	0	0
Misc Exp Oper WT - Waste Disposal	1	562,667	559,235	0	0	0	0	0	3,432
Misc Exp Oper WT	2	54,840	27,250	27,420	0	0	0	0	170
Misc Exp Oper WT - Purchased Power	1	706,265	701,956	0	0	0	0	0	4,308
Rents Oper WT	2	12,038	5,982	6,019	0	0	0	0	37
TOTAL WT EXPENSE - OPERATION		12,436,612	11,244,480	1,123,007	0	0	0	0	69,125
Super & Eng Maint WT	2	1,712,813	851,097	856,407	0	0	0	0	5,310
Super & Eng Maint WT - Contractor	2	61,572	30,595	30,786	0	0	0	0	191
Struct & Improve Maint WT - Labor	2	34	17	17	0	0	0	0	0
Struct & Improve Maint WT	2	50	25	25	0	0	0	0	0
WT Equip Maint WT - Labor	2	3,540	1,759	1,770	0	0	0	0	11
WT Equip Maint WT	2	856,241	425,466	428,120	0	0	0	0	2,654
TOTAL WT EXPENSE - MAINTENANCE		2,634,250	1,308,959	1,317,125	0	0	0	0	8,166
TOTAL WT EXPENSE		15,070,862	12,553,439	2,440,132	0	0	0	0	77,291
TRANSMISSION AND DISTRIBUTION EXPENSES									
Super & Eng Oper TD	10	533,065	111,837	29,425	124,844	147,126	87,583	0	32,250
Super & Eng Oper - Other	10	26,528	5,566	1,464	6,213	7,322	4,359	0	1,605
Storage Facility Exp - Labor	5	48,334	16,810	0	25,365	0	0	0	6,158
Storage Facility Exp	5	270	94	0	142	0	0	0	34
TD Lines Exp - Labor	6	1,984,052	772,788	207,333	855,920	0	0	0	148,010
TD Lines Exp	6	120,193	46,815	12,560	51,851	0	0	0	8,966
Meter Expense - Labor	8	1,080,296	0	0	0	1,068,521	0	0	11,775
Meter Expense	8	31,776	0	0	0	31,430	0	0	346
Customer Install Exp - Labor	9	616,897	0	0	0	0	560,451	0	56,446
Customer Install Exp	9	103,958	0	0	0	0	94,446	0	9,512
Misc Exp Oper TD - Labor	10	1,676,007	351,626	92,516	392,521	462,578	275,368	0	101,398
Misc Exp Oper TD	10	1,696,898	356,009	93,669	397,414	468,344	278,800	0	102,662
Rents Oper TD	10	67,227	14,104	3,711	15,745	18,555	11,045	0	4,067
TOTAL T & D EXPENSE OPERATION		7,985,500	1,675,650	440,678	1,870,014	2,203,874	1,312,052	0	483,232
Super & Eng Maint TD	11	107,358	36,319	9,737	40,227	3,961	4,230	0	12,883
Super & Eng Maint TD - Other	11	982	332	89	368	36	39	0	118
Struct & Improve Maint TD - Labor	11	24,955	8,442	2,263	9,351	921	983	0	2,995
Struct & Improve Maint TD	11	2,219	751	201	831	82	87	0	266

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2014 ALLOCATED TO FUNCTIONAL CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Base	Max Day	Max Hour	Meters	Services	Billing & Collecting	Fire Service
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dist Res Stand Maint TD - Labor	5	1,617	563	0	849	0	0	0	206
TD Main Maint TD - Labor	6	534,907	208,346	55,898	230,759	0	0	0	39,904
TD Main Maint TD	6	5,727,405	2,230,824	598,514	2,470,802	0	0	0	427,264
Fire Main Maint TD - Labor	7	240	0	0	0	0	0	0	240
Services Maint TD - Labor	9	254,099	0	0	0	0	230,849	0	23,250
Services Maint TD	9	58,755	0	0	0	0	53,379	0	5,376
Meters Maint TD	8	252,071	0	0	0	249,323	0	0	2,748
Meters Maint TD	8	16,820	0	0	0	16,636	0	0	183
Hydrants Maint TD	7	307,340	0	0	0	0	0	0	307,340
Hydrants Maint TD	7	58,593	0	0	0	0	0	0	58,593
Misc Plant Maint TD	11	1,256,412	425,044	113,957	470,778	46,362	49,503	0	150,769
Mat and Sup Maint TD	11	3,180,662	1,076,018	288,486	1,191,794	117,366	125,318	0	381,679
Misc Maint TD	11	0	0	0	0	0	0	0	0
TOTAL T & D EXPENSE - MAINTENANCE		11,784,434	3,986,639	1,069,145	4,415,759	434,688	464,388	0	1,413,815
TOTAL T & D EXPENSE		19,769,934	5,662,289	1,509,824	6,285,773	2,638,562	1,776,439	0	1,897,047
CUSTOMER ACCOUNTS									
Supervision CA	12	65,406	0	0	0	0	0	63,843	1,563
Supervision CA - Other	12	101	0	0	0	0	0	98	2
Meter Reading Exp CA - Labor	13	1,872,104	0	0	0	0	0	1,872,104	0
Meter Reading Exp CA	13	16,460	0	0	0	0	0	16,460	0
Cust Rec & Collection CA - Labor	12	702,794	0	0	0	0	0	685,997	16,797
Cust Rec & Collection CA	12	2,562,582	0	0	0	0	0	2,501,336	61,246
Uncollectible Accts	12	3,423,934	0	0	0	0	0	3,342,102	81,832
Misc Cust Accts Exp CA - Labor	12	20,215	0	0	0	0	0	19,732	483
Misc Cust Accts Exp CA	12	53,773	0	0	0	0	0	52,488	1,285
Cust Serv & Info Exp CA	12	27	0	0	0	0	0	27	1
Cust Serv & Info Exp CA - Labor	12	338	0	0	0	0	0	329	8
TOTAL CUSTOMER ACCOUNTING EXPENSE		8,717,734	0	0	0	0	0	8,554,517	163,217
ADMINISTRATIVE AND GENERAL EXPENSES									
Salaries AG	14	7,519,140	2,194,085	1,290,284	1,178,249	494,759	333,098	1,603,833	424,831
Salaries AG - Other	14	1,299,471	379,186	222,989	203,627	85,505	57,567	277,177	73,420
Other Supplies & Exp AG	14	1,888,333	551,015	324,038	295,902	124,252	83,653	402,781	106,691
Mgmt Fees-Admin	14	22,787,514	6,649,397	3,910,337	3,570,804	1,499,418	1,009,487	4,860,577	1,287,495
Mgmt Fees-Customer Service	12	4,186,133	0	0	0	0	0	4,086,084	100,049
Mgmt Fees-Belleville Lab	2	131,416	65,300	65,708	0	0	0	0	407
Mgmt Fees- Employee	16	1,417,713	415,106	289,922	181,042	134,541	83,929	230,945	82,227
Outside Services AG	14	1,465,412	427,607	251,465	229,630	96,424	64,918	312,572	82,796
Outside Services AG	14	0	0	0	0	0	0	0	0
Ins Gen Liab Oper AG	14	3,236,746	944,482	555,426	507,198	212,978	143,388	690,398	182,876
Ins Work Comp AG	16	1,123,233	328,882	229,701	143,437	106,595	66,495	182,975	65,147
Ins Other Oper AG	14	461,829	134,762	79,250	72,369	30,388	20,459	98,508	26,093
Property Insurance	14	23,785	6,940	4,082	3,727	1,565	1,054	5,073	1,344

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2014 ALLOCATED TO FUNCTIONAL CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Base	Max Day	Max Hour	Meters	Services	Billing & Collecting	Fire Service
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Injuries & Damages	16	51,420	15,056	10,515	6,566	4,880	3,044	8,376	2,982
Employee Pension & Benefits	16	8,875,014	2,598,604	1,814,940	1,133,339	842,239	525,401	1,445,740	514,751
Reg Commision Exp	19	760,665	284,108	136,768	133,649	53,779	21,907	76,599	53,855
Rents AG	14	297,280	86,746	51,013	46,584	19,561	13,169	63,410	16,796
Goodwill Advertising Exp	14	20,924	6,106	3,591	3,279	1,377	927	4,463	1,182
Misc Exp AG	14	1,752,348	511,335	300,703	274,593	115,305	77,629	373,776	99,008
Research & Development	14	82,715	24,136	14,194	12,961	5,443	3,664	17,643	4,673
TOTAL A & G OPERATIONS		57,381,089	15,622,855	9,554,926	7,996,955	3,829,009	2,509,788	14,740,931	3,126,625
General Plant Maint AG	14	9,329	2,722	1,601	1,462	614	413	1,990	527
General Plant Maint AG	14	674,750	196,892	115,787	105,733	44,399	29,891	143,924	38,123
TOTAL A & G EXPENSE - MAINTENANCE		684,080	199,614	117,388	107,195	45,012	30,305	145,914	38,650
TOTAL A & G EXPENSE		58,065,169	15,822,470	9,672,314	8,104,151	3,874,021	2,540,093	14,886,845	3,165,275
Total Operation & Maintenance Expenses		118,943,858	48,170,898	16,553,588	14,389,923	6,512,584	4,316,533	23,441,362	5,558,971
DEPRECIATION EXPENSE									
Struct & Imp SS	2	315,193	156,619	157,597	0	0	0	0	977
Struct & Imp P	3	729,241	346,681	348,796	0	0	0	0	33,764
Struct & Imp WT	2	2,591,498	1,287,715	1,295,749	0	0	0	0	8,034
Struct & Imp TD	6	123,917	48,266	12,949	53,458	0	0	0	9,244
Struct & Imp AG	14	198,740	57,992	34,104	31,143	13,077	8,804	42,391	11,229
Struct & Imp Offices	14	143,274	41,807	24,586	22,451	9,427	6,347	30,560	8,095
Gen Structures HVAC	14	28,841	8,416	4,949	4,519	1,898	1,278	6,152	1,630
Struct & Imp Leasehold	14	522	152	90	82	34	23	111	29
Struct & Imp Store, Shop, Gar	14	83,438	24,347	14,318	13,075	5,490	3,696	17,797	4,714
Struct & Imp Misc	14	164,156	47,901	28,169	25,723	10,801	7,272	35,014	9,275
Collect & Impounding	1	419	416	0	0	0	0	0	3
Lake, River & Other Intakes	2	284,773	141,504	142,387	0	0	0	0	883
Wells & Springs	2	209,002	103,853	104,501	0	0	0	0	648
Infiltration Galleries & Tunnels	2	32	16	16	0	0	0	0	0
Supply Mains	2	323,057	160,527	161,529	0	0	0	0	1,001
Power Generation Equip	3	93,856	44,619	44,891	0	0	0	0	4,346
Pump Equip Steam	3	202	96	97	0	0	0	0	9
Pump Equip Electric	3	1,170,670	556,537	559,931	0	0	0	0	54,202
Pump Equip Diesel	3	45,108	21,444	21,575	0	0	0	0	2,089
Pump Equip Hydraulic	3	7,589	3,608	3,630	0	0	0	0	351
Pump Equip Other	3	10,548	5,015	5,045	0	0	0	0	488
Pump Equip WT	2	38,458	19,110	19,229	0	0	0	0	119
Pump Equip TD	6	56	22	6	24	0	0	0	4
WT Equip Non-Media	2	2,936,556	1,459,175	1,468,278	0	0	0	0	9,103
WT Equip Filter Media	2	90,467	44,953	45,234	0	0	0	0	280
Dist Reservoirs & Standpipe	5	242,259	84,258	0	127,138	0	0	0	30,864

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31,2014 ALLOCATED TO FUNCTIONAL CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Base	Max Day	Max Hour	Meters	Services	Billing & Collecting	Fire Service
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Elevated Tanks & Standpipes	5	154,248	53,647	0	80,949	0	0	0	19,651
Ground Level Facilities	5	170,197	59,195	0	89,319	0	0	0	21,683
Below Ground Facilities	5	782	272	0	410	0	0	0	100
Clearwells	5	2,741	953	0	1,438	0	0	0	349
TD Mains Not Classified by	6	1,453,613	566,182	151,903	627,089	0	0	0	108,440
TD Mains 4 & Less "	4	243,099	88,828	0	134,191	0	0	0	20,080
TD Mains 6 to 8" "	4	6,914,502	2,526,559	0	3,816,805	0	0	0	571,138
TD Mains 10 to 16" "	3	5,383,999	2,559,553	2,575,167	0	0	0	0	249,279
TD Mains 18 & Grtr "	3	458,834	218,130	219,460	0	0	0	0	21,244
Fire Mains	7	9,231	0	0	0	0	0	0	9,231
Services	9	1,145,083	0	0	0	0	1,040,308	0	104,775
Meters Bronze Case	8	499,891	0	0	0	494,442	0	0	5,449
Meters Plastic Case	8	42,887	0	0	0	42,420	0	0	467
Meters Other	8	1,853,663	0	0	0	1,833,458	0	0	20,205
Meters Other-Rem Rdr Units	8	113,041	0	0	0	111,809	0	0	1,232
Meter Installations	8	473,818	0	0	0	468,653	0	0	5,165
Meter Installation Other	8	273,879	0	0	0	270,894	0	0	2,985
Meter Vaults	8	28,402	0	0	0	28,092	0	0	310
Hydrants	7	1,393,626	0	0	0	0	0	0	1,393,626
Other P/E Intangible	17	144	51	29	33	11	3	3	13
Other P/E SS	2	86	43	43	0	0	0	0	0
Other P/E WT Res Hand Equip	2	49,059	24,377	24,530	0	0	0	0	152
Other P/E TD	6	1,115	434	117	481	0	0	0	83
Other P/E CPS	14	56,112	16,373	9,629	8,793	3,692	2,486	11,969	3,170
Office Furniture & Equip	14	55,448	16,180	9,515	8,689	3,648	2,456	11,827	3,133
Comp & Periph Equip	14	2,081,852	607,484	357,246	326,226	136,986	92,226	444,059	117,625
Computer Software	14	712,330	207,858	122,236	111,622	46,871	31,556	151,940	40,247
Comp Software Mainframe	14	3,038,081	886,512	521,335	476,067	199,906	134,587	648,023	171,652
Comp Software Mainframe - CIS	12	1,553,940	0	0	0	0	0	1,516,801	37,139
Comp Software Customized	14	5,587	1,630	959	875	368	248	1,192	316
Comp Software Other	14	4,108	1,199	705	644	270	182	876	232
Data Handling Equipment	14	20,164	5,884	3,460	3,160	1,327	893	4,301	1,139
Other Office Equipment	14	21,005	6,129	3,604	3,291	1,382	931	4,480	1,187
Trans Equip Lt Duty Trks	14	350,320	102,223	60,115	54,895	23,051	15,519	74,723	19,793
Trans Equip Other	14	217,957	63,600	37,401	34,154	14,342	9,655	46,490	12,315
Stores Equipment	14	68,100	19,872	11,686	10,671	4,481	3,017	14,526	3,848
Tools,Shop,Garage Equip	14	335,560	97,916	57,582	52,582	22,080	14,865	71,575	18,959
Tools,Shop,Garage Equip Oth	14	94,576	27,597	16,229	14,820	6,223	4,190	20,173	5,344
Laboratory Equipment	2	115,196	57,241	57,598	0	0	0	0	357
Laboratory Equip Other	2	7,291	3,623	3,646	0	0	0	0	23

MISSOURI-AMERICAN WATER COMPANY
ALL WATER DISTRICTS
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31,2014 ALLOCATED TO FUNCTIONAL CLASSIFICATIONS

Account (1)	Factor Ref. (2)	Cost of Service (3)	Base (4)	Max Day (5)	Max Hour (6)	Meters (7)	Services (8)	Billing & Collecting (9)	Fire Service (10)
Power Operated Equipment	14	54,833	16,000	9,409	8,592	3,608	2,429	11,696	3,098
Comm Equip Non-Telephone	14	180,052	52,539	30,897	28,214	11,847	7,976	38,405	10,173
Remote Control & Instr	14	166,885	48,697	28,637	26,151	10,981	7,393	35,597	9,429
Comm Equip Telephone	14	6,914	2,018	1,186	1,083	455	306	1,475	391
Misc Equipment	14	237,445	69,286	40,746	37,208	15,624	10,519	50,647	13,416
Other Tangible Property	17	5,126	1,827	1,043	1,186	400	103	106	460
Total Depreciation Expense		39,886,694	13,074,964	8,853,766	6,237,253	3,798,050	1,409,269	3,292,910	3,220,482
Amort-Other UP	18	159,410	57,499	32,089	36,601	12,306	3,204	3,507	14,203
Amort-Intangible Fin	2	211,021	104,856	105,511	0	0	0	0	654
Amort-Property Losses	2	158,730	78,873	79,365	0	0	0	0	492
Taxes Other Than Income									
Utility Reg Assessment Fee	19	2,389,133	892,341	429,566	419,771	168,912	68,807	240,586	169,151
Property Taxes	18	13,166,307	4,749,087	2,650,378	3,022,984	1,016,439	264,643	289,659	1,173,118
FUTA	16	2,172,511	636,111	444,278	277,430	206,171	128,613	353,902	126,006
Other Taxes & Licenses	14	104,240	30,417	17,888	16,334	6,859	4,618	22,234	5,890
Gross Receipts Tax	19	0	0	0	0	0	0	0	0
Total Taxes, Other Than Income		17,832,191	6,307,957	3,542,110	3,736,519	1,398,381	466,680	906,381	1,474,164
Income Taxes	18	37,876,834	13,652,174	7,624,607	8,696,521	2,924,092	761,324	833,290	3,374,826
Utility Income Available for Return	18	86,805,185	31,310,630	17,473,884	19,930,470	6,701,360	1,744,784	1,909,714	7,734,342
Total Cost of Service		301,715,193	112,688,978	54,185,554	53,027,287	21,346,773	8,701,795	30,387,164	21,377,642
Less: Other Water Revenues	19	3,895,282	1,454,888	700,372	684,401	275,396	112,184	392,255	275,786
Contract Sales	19	3,783,643	1,413,191	680,299	664,786	267,504	108,969	381,013	267,882
Total Other Water Revenues		7,678,925	2,868,079	1,380,671	1,349,187	542,900	221,153	773,268	543,668
Total Cost of Service Related to Sales of Water		\$ 294,036,268	\$ 109,820,899	\$ 52,804,883	\$ 51,678,100	\$ 20,803,873	\$ 8,480,642	\$ 29,613,896	\$ 20,833,975
Reallocation of Public Fire	20	0	0	0	0	16,770,089	0	0	(16,770,089)
Total		\$ 294,036,268	\$ 109,820,899	\$ 52,804,883	\$ 51,678,100	\$ 37,573,962	\$ 8,480,642	\$ 29,613,896	\$ 4,063,886

MISSOURI AMERICAN WATER
WATER DISTRICT 1
CALCULATION OF THE 5/8-INCH CUSTOMER COSTS PER MONTH
INCLUDING THE UNRECOVERED PUBLIC FIRE COSTS

<u>Cost Function</u>	<u>Cost of Service</u>	<u>Number of Units</u>	<u>Unit Cost Per Month</u>	<u>Unit Cost Per Quarter</u>
Meters	\$ 15,855,456	482,940 5/8 Equivalents	\$ 2.74	\$ 8.22
Services	6,532,208	442,158 3/4 Equivalents	1.23	3.69
Billing/Collecting	<u>23,163,822</u>	1,899,653 Bills	<u>12.19</u>	<u>12.19</u>
Subtotal	45,551,486		16.16	24.10
Unrecovered Public Fire	<u>14,569,152</u>	482,940 5/8 Equivalents	2.51	7.53
Total	<u>\$ 60,120,638</u>		<u>\$ 18.67</u>	<u>\$ 31.63</u>

MISSOURI AMERICAN WATER
WATER DISTRICT 2
CALCULATION OF THE 5/8-INCH CUSTOMER COSTS PER MONTH
INCLUDING THE UNRECOVERED PUBLIC FIRE COSTS

<u>Cost Function</u>	<u>Cost of Service</u>	<u>Number of Units</u>	<u>Unit Cost Per Month</u>
Meters	\$ 2,036,450	44,789 5/8 Equivalents	\$ 3.79
Services	1,001,261	44,878 3/4 Equivalents	1.86
Billing/Collecting	<u>2,890,663</u>	455,028 Bills	<u>6.35</u>
Subtotal	5,928,373		12.00
Unrecovered Public Fire	<u>2,293,705</u>	44,789 5/8 Equivalents	4.27
Total	<u><u>\$ 8,222,078</u></u>		<u><u>\$ 16.27</u></u>

MISSOURI AMERICAN WATER
WATER DISTRICT 3
CALCULATION OF THE 5/8-INCH CUSTOMER COSTS PER MONTH
INCLUDING THE UNRECOVERED PUBLIC FIRE COSTS

Cost Function	Cost of Service	Number of Units	Unit Cost Per Month
Meters	\$ 2,188,765	38,079 5/8 Equivalents	\$ 4.79
Services	1,159,426	40,720 3/4 Equivalents	2.37
Billing/Collecting	<u>2,708,773</u>	370,596 Bills	<u>7.31</u>
Subtotal	6,056,964		14.47
Unrecovered Public Fire	<u>1,125,258</u>	38,079 5/8 Equivalents	2.46
Total	<u><u>\$ 7,182,222</u></u>		<u><u>\$ 16.93</u></u>

MISSOURI-AMERICAN WATER COMPANY
WATER DISTRICT 1

COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TEST YEAR ENDED DECEMBER 31, 2014

Customer Classification (1)	Cost of Service		Revenues, Present Rates		Revenues, Proposed Rates Consolidated Pricing		Proposed Increase	
	Amount (Schedule B) (2)	Percent (3)	Amount (4)	Percent (5)	Amount (6)	Percent (7)	Amount (8)	Percent Increase (9)
Residential	\$ 178,583,124	76.0%					\$ -	
Commercial	38,656,467	16.4%					-	
Industrial	153,826	0.1%					-	
Public Authority	2,482,398	1.1%					-	
Total - Rate A	219,875,814	93.6%	176,606,441	92.5%	221,548,501	92.9%	44,942,060	25.4%
Sales for Resale	3,206,856	1.4%	3,406,774	1.8%	3,943,082	1.7%	536,308	15.7%
Rate J - Large Users	8,626,931	3.7%	8,034,292	4.2%	9,792,836	4.1%	1,758,544	21.9%
Private Fire Service	3,418,421	1.5%	2,779,294	1.5%	3,108,008	1.3%	328,715	11.8%
Public Fire Service	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Total Sales	235,128,023	100.2%	190,826,800	100.0%	238,392,427	100.0%	47,565,626	24.9%
Other Revenues	6,496,727		6,496,727		6,496,727		-	0.0%
Total	\$ 241,624,749		\$ 197,323,527		\$ 244,889,154		\$ 47,565,626	24.1%

MISSOURI-AMERICAN WATER COMPANY
WATER DISTRICT 2

COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TEST YEAR ENDED DECEMBER 31, 2014

Customer Classification (1)	Cost of Service**		Revenues, Present Rates		Revenues, Proposed Rates Consolidated Pricing		Proposed Increase	
	Amount (2)	Percent (3)	Amount (4)	Percent (5)	Amount (6)	Percent (7)	Amount (8)	Percent Increase (9)
Residential	\$ 18,418,893	58.0%	\$ 15,720,232	54.2%	\$ 16,625,414	58.6%	\$ 905,182	5.8%
Commercial	4,495,832	14.1%	4,602,126	15.9%	4,695,300	16.5%	93,174	2.0%
Industrial	826,034	2.6%	713,692	2.5%	1,035,956	3.6%	322,264	45.2%
Public Authority	<u>565,937</u>	<u>1.8%</u>	<u>684,356</u>	<u>2.4%</u>	<u>713,970</u>	<u>2.5%</u>	<u>29,614</u>	4.3%
Total - Rate A	24,306,696	76.5%	21,720,407	75.0%	23,070,640	81.2%	1,350,233	6.2%
Sales for Resale	2,781,419	8.7%	2,584,879	8.9%	2,128,935	7.5%	(455,944)	-17.6%
Rate J - Large Users	4,209,492	13.2%	4,179,928	14.4%	2,809,172	9.9%	(1,370,756)	-32.8%
Private Fire Service	516,684	1.6%	541,489	1.9%	408,660	1.4%	(132,829)	-24.5%
Public Fire Service	<u>-</u>	<u>0.0%</u>	<u>-</u>	<u>0.0%</u>	<u>-</u>	<u>0.0%</u>	<u>-</u>	-
Total Sales	31,814,290	<u>100.0%</u>	29,026,702	<u>100.2%</u>	28,417,407	<u>100.0%</u>	(609,296)	-2.1%
Other Revenues*	<u>\$ 746,977</u>		<u>\$ 739,966</u>		<u>\$ 746,977</u>		<u>7,011</u>	0.9%
Total	<u>\$ 32,561,267</u>		<u>\$ 29,766,668</u>		<u>\$ 29,164,383</u>		<u>\$ (602,285)</u>	-2.0%

* Includes Contract Sales

** Includes the revised cost of service for St. Joseph per data request OPC 5042.

MISSOURI-AMERICAN WATER COMPANY
WATER DISTRICT 3

COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TEST YEAR ENDED DECEMBER 31, 2014

Customer Classification (1)	Cost of Service		Revenues, Present Rates		Revenues, Proposed Rates Consolidated Pricing		Proposed Increase	
	Amount (Schedule B) (2)	Percent (3)	Amount (4)	Percent (5)	Amount (6)	Percent (7)	Amount (8)	Percent Increase (9)
	Residential	\$ 12,640,445	51.4%	\$ 12,155,479	53.3%	\$ 12,437,733	51.6%	\$ 282,254
Commercial	4,186,540	17.0%	4,240,888	18.6%	4,650,171	19.3%	409,283	9.7%
Industrial	1,801,012	7.3%	1,096,062	4.8%	2,270,978	9.4%	1,174,916	107.2%
Public Authority	705,757	2.9%	729,855	3.2%	850,691	3.5%	120,836	16.6%
Total Rate A	19,333,754	78.6%	18,222,283	79.9%	20,209,573	83.8%	1,987,290	10.9%
Sales for Resale - Rate B	1,216,227	4.9%	932,208	4.1%	853,528	3.5%	(78,680)	-8.4%
Rate J - Large Users	3,475,837	14.1%	2,633,636	11.6%	2,250,845	9.3%	(382,791)	-14.5%
Private Fire Service	583,467	2.4%	960,769	4.2%	768,281	3.2%	(192,488)	-20.0%
Public Fire Service	-	0.0%	-	0.0%	-	0.0%	-	-
Total Sales	24,609,284	100.0%	22,748,897	99.8%	24,082,228	99.8%	1,333,331	5.9%
Other Revenues	\$ 349,560		\$ 265,146		\$ 265,146		-	0.0%
Total	\$ 24,958,844		\$ 23,014,043		\$ 24,347,374		\$ 1,333,331	5.8%

MISSOURI-AMERICAN WATER COMPANY
ST. LOUIS METRO DISTRICT
REVISED FACTOR FOR POWER ALLOCATION
COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TEST YEAR ENDED DECEMBER 31, 2014

Customer Classification (1)	Cost of Service		Revenues, Present Rates		Revenues, Proposed Rates Consolidated Pricing		Proposed Increase	
	Amount (Schedule B) (2)	Percent (3)	Amount (4)	Percent (5)	Amount (6)	Percent (7)	Amount (8)	Percent Increase (9)
Rate A - Res/Com/Ind/OPA	\$ 209,128,428	94.3%	\$ 166,637,144	93.4%	\$ 210,254,974	93.6%	\$ 43,617,830	26.2%
Rate B - Sales for Resale	2,697,869	1.2%	2,892,461	1.6%	3,420,355	1.5%	527,894	18.3%
Rate J - Manufacturing	6,976,136	3.1%	6,571,486	3.7%	8,419,384	3.7%	1,847,898	28.1%
Rate F - Private Fire	3,095,284	1.4%	2,312,409	1.3%	2,796,173	1.2%	483,764	20.9%
Rate E - Public Fire	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Total Sales	221,897,717	100.0%	178,413,499	100.0%	224,890,886	100.0%	46,477,387	26.1%
Other Revenues*	6,350,401		6,350,400		\$6,350,401		0.33	0.0%
Total	\$ 228,248,118		\$ 184,763,899		\$ 231,241,287		\$ 46,477,388	25.2%

* Includes Rate G and H Contract Sales.

** Includes revenue for Public Fire.

MISSOURI AMERICAN WATER COMPANY
SUMMARY OF AVERAGE ANNUAL RESIDENTIAL COST OF SERVICE BY DISTRICT

	<u>Residential Cost of Service</u>	<u>Residential Customers</u>	<u>Cost per Residential Customer</u>
Zone 1			
St. Louis Metro	\$ 171,271,008	355,437	\$ 481.86
Joplin	9,931,121	20,653	480.86
St. Joseph	12,055,110	28,813	418.39
Warrensburg	2,709,324	6,613	409.70
Maplewood/Riverside/Stonebridge/ Saddlebrooke/Emerald Pointe Water	772,347	1,702	453.72
Tri-States	1,351,806	2,925	462.13
Zone 2			
Mexico	2,479,962	4,288	\$ 433.76
Platt County	5,502,950	5,335	1,031.48
Jefferson City	4,832,155	9,019	535.78
Zone 3			
Brunswick	309,286	330	\$ 702.92
Spring Valley / Lake Manor	88,241	134	659.33
Ozark Mountain / LTA	248,370	499	497.32
Rankin Acres / Whitebranch	92,954	222	418.87

MISSOURI AMERICAN WATER COMPANY
SUMMARY OF AVERAGE ANNUAL RESIDENTIAL COST OF SERVICE BY DISTRICT

	<u>Residential Cost of Service</u>	<u>Residential Customers</u>	<u>Cost per Residential Customer</u>
<u>Water District 1</u>			
St. Louis Metro	\$ 171,271,008	355,437	\$ 481.86
Mexico	2,479,962	4,288	\$ 433.76
Jefferson City	4,832,155	9,019	535.78
<u>Water District 2</u>			
St. Joseph	12,055,110	28,813	418.39
Platt County	5,502,950	5,335	1,031.48
Brunswick	309,286	330	\$ 702.92
<u>Water District 3</u>			
Joplin	9,931,121	20,653	480.86
Warrensburg	2,709,324	6,613	409.70
Maplewood/Riverside/Stonebridge/ Saddlebrooke/Emerald Pointe Water	772,347	1,702	453.72
Tri-States	1,351,806	2,925	462.13
Spring Valley / Lake Manor	88,241	134	659.33
Ozark Mountain / LTA	248,370	499	497.32
Rankin Acres / Whitebranch	92,954	222	418.87

MISSOURI-AMERICAN WATER COMPANY
ST. LOUIS METRO DISTRICT

COMPARISON OF COST OF SERVICE WITH REVENUES UNDER PRESENT AND PROPOSED RATES
FOR THE TEST YEAR ENDED DECEMBER 31, 2014
REVISED TO REALLOCATE RATE A CLASS TO RESIDENTIAL, COMMERCIAL AND OPA CLASSIFICATIONS

Customer Classification	Cost of Service		Revenues, Present Rates		Revenues, Proposed Rates Consolidated Pricing		Proposed Increase	
	Amount (Schedule B)	Percent	Amount	Percent	Amount	Percent	Amount	Percent Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Residential	\$ 171,271,008	77.1%		0.0%		0.0%	\$ -	
Commercial	36,131,238	16.3%		0.0%		0.0%	-	
Industrial	-	0.0%		0.0%		0.0%	-	
Public Authority	1,488,994	0.7%		0.0%		0.0%	-	
Total Rate A	208,891,240	94.1%	166,637,144	93.4%	210,254,974	93.6%	43,617,830	26.2%
Sales for Resale - Rate B	2,785,418	1.3%	2,892,461	1.6%	3,420,355	1.5%	527,894	18.3%
Rate J - Large Users	7,124,927	3.2%	6,571,486	3.7%	8,419,384	3.7%	1,847,898	28.1%
Private Fire Service	3,096,131	1.4%	2,312,409	1.3%	2,796,173	1.2%	483,764	20.9%
Public Fire Service	-	0.0%	-	0.0%	-	0.0%	-	-
Total Sales	221,897,717	100.0%	178,413,499	100.0%	224,890,886	100.0%	46,477,387	26.1%
Other Revenues	\$ 6,350,401		\$ 6,350,401		\$ 6,350,401		-	0.0%
Total	\$228,248,118		\$184,763,901		\$ 231,241,287		\$ 46,477,387	25.2%