Issue:	Class Cost of Service/Rate Design
Witness:	Jessica A. York
Type of Exhibit:	Surrebuttal Testimony
Sponsoring Parties:	Missouri Industrial Energy Consumers
Case Nos.:	WR-2022-0303 & SR-2022-0304
Date Testimony Prepared:	February 8, 2023

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water Company's Request for Authority to Implement General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas.	)))))))	**Case Nos. WR-2022-0303/ SR-2022-0304**

Surrebuttal Testimony and Schedules of

Jessica A. York

On behalf of

Missouri Industrial Energy Consumers

REDACTED VERSION

February 8, 2023

BRUBAKER & ASSOCIATES, INC.

Project 11350

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water Company's Request for Authority to Implement General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas.	)	**Case Nos. WR-2022-0303/ SR-2022-0304**

STATE OF MISSOURI)
) **SS**
COUNTY OF ST. LOUIS)

Affidavit of Jessica A. York

Jessica A. York, being first duly sworn, on her oath states:

1. My name is Jessica A. York. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by the Missouri Industrial Energy Consumers in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony and schedules which were prepared in written form for introduction into evidence in the Missouri Public Service Commission, Case Nos. WR-2022-0303 & SR-2022-0304.

3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things that they purport to show.

Jessica A. York

Subscribed and sworn to before me this 8th day of February, 2023.

TAMMY S. KLOSSNER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Charles County
My Commission Expires: Mar. 18, 2023
Commission # 15024862

Notary Public

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Surrebuttal Testimony of Jessica A. York

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Jessica A. York. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q ARE YOU THE SAME JESSICA A. YORK WHO PRESENTED BOTH DIRECT AND REBUTTAL TESTIMONIES IN THIS PROCEEDING?

A Yes, I am.

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A I am appearing on behalf of Missouri Industrial Energy Consumers ("MIEC"), a non-profit corporation that represents the interests of large customers in Missouri utility matters. The MIEC represents the interests of companies purchasing substantial amounts of water from Missouri-American Water Company ("MAWC" or "Company").

Q WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A The purpose of my surrebuttal testimony is to respond to the rebuttal testimony of Missouri Public Service Commission Staff ("Staff") witness Ms. Roth and MAWC witness Mr. Selinger on class cost of service ("COSS"), and MAWC witness Mr. Rea

on revenue allocation, and on the proposal to continue moving toward consolidated tariff pricing ("CTP"). I will also address Staff's revised class cost of service study ("COSS") models.

My silence with respect to any issues addressed by any other party's testimony in this proceeding should not be taken as tacit approval or agreement regarding those issues.

I. RESPONSE TO STAFF

Q PLEASE SUMMARIZE THE ISSUES YOU IDENTIFIED WITH THE COSS MODELS FILED BY STAFF WITH ITS DIRECT TESTIMONY.

A I addressed the fact that Staff did not actually apply the distribution multipliers it supported in its testimony to its COSS models for the Rate J and Sale for Resale classes.[1] I showed that Staff's COSS models included maximum day and maximum hour demand ratios by customer class from a prior rate case, with no evidence or discussion to prove that these factors are still representative of the load characteristics of each customer class.[2] Lastly, I pointed out that there were other unsupported data points used in Staff's COSS, including the source of average day rate of flow used to develop Factor 3, and the horsepower of pumps used to develop Factors 6 and 7.[3]

[1]Rebuttal Testimony of Jessica A. York at 3-4.
[2]*Ibid.* at 6.
[3]*Ibid.* at 7.

Q DID STAFF CORRECT THESE ISSUES IN THE COSS MODELS PROVIDED WITH ITS REBUTTAL TESTIMONY?

A Staff has applied its recommended distribution multipliers to the Industrial and Sale for Resale classes. Staff has also updated the customer class maximum day and maximum hour demand ratios used in its COSS models. In addition, it has modified several other data points used to develop allocation factors in its COSS. Examples of some of the changes made by Staff include the following:

- Annual usage by customer class used to develop Factor 1.
- Maximum day demand ratios, including a significant reduction in the ratio for the Residential class.
- Maximum hour demand ratios by class.
- Weightings of the base, maximum day extra capacity, and fire protection components used to develop Factor 3.
- Weightings of the base, maximum hour extra capacity, and fire protection components used to develop Factor 4.
- Weightings of the base, maximum hour extra capacity, and fire protection components used to develop Factor 5.

Q HAS STAFF DISCUSSED ANY OF THE CHANGES THAT HAVE BEEN REFLECTED IN ITS COSS MODELS THAT WERE FILED WITH REBUTTAL TESTIMONY?

A Staff's rebuttal testimony only discussed one of the many changes it made to its COSS models, and that is the distribution multiplier issue.[4] While Staff's rebuttal testimony notes that it has corrected the distribution multiplier issue, it is completely silent with respect to all other changes it made to its COSS models. Therefore, Staff has not

[4]Rebuttal Testimony of Keri Roth at 2.

provided any support whatsoever for any of the changes it made to its COSS models between its direct testimony filing and its rebuttal testimony filing. As a result, Staff's COSS models should be rejected.

Q PLEASE SUMMARIZE YOUR RECOMMENDATIONS WITH RESPECT TO STAFF'S COSS.

A Staff's COSS models have been shown to be unreliable and inaccurate, and should be rejected. Staff has modified several aspects of the COSS models that it provided with its rebuttal testimony with zero evidence to suggest that its models produce an accurate measure of MAWC's cost of providing service to each customer class. Therefore, Staff's COSS models should be rejected by the Commission, and should not be relied upon as the basis for revenue apportionment or rate design in this proceeding.

II. RESPONSE TO MAWC

Power and Pumping Expense Allocation

Q PLEASE SUMMARIZE YOUR RECOMMENDATION WITH RESPECT TO THE ALLOCATION OF POWER AND PUMPING EXPENSES.

A I recommended allocating the fixed Power and Pumping expenses using Factor 3, instead of Factor 2.[5]

Q DID THE COMPANY AGREE?

A Yes.[6]

[5]Direct Testimony of Jessica A. York at 10-11.
[6]Rebuttal Testimony of Wesley Selinger at 5.

Q DID THE COMPANY USE FACTOR 3 TO ALLOCATE THESE COSTS IN ITS UPDATED COSS?

A No. Despite agreeing that Factor 3 is correct, the Company's rebuttal COSS models continue to allocate fixed Power and Pumping expenses using Factor 2. This appears to be an oversight by the Company, and needs to be corrected.

Fuel and Power Expense Allocation

Q PLEASE SUMMARIZE YOUR RECOMMENDATION WITH RESPECT TO THE ALLOCATION OF FUEL AND POWER EXPENSES.

A In my direct testimony, I recommended that fuel and power expenses be allocated on the basis of Factor 6, rather than Factor 1. I explained that Factor 6 would more accurately allocate purchased power expense between customer classes based on how MAWC incurs purchased power expense to meet the seasonal, monthly, and daily water demand of its customers.[7]

Q DOES MAWC AGREE WITH YOUR RECOMMENDED ALLOCATION OF FUEL AND POWER EXPENSE?

A No. Mr. Selinger argues that there is limited correlation between increases in customer peak demand and increases in purchased power costs.[8] In addition, he points out that not every commercial electric rate charged to MAWC's facilities by Ameren Missouri includes a demand charge.[9]

[7]Direct Testimony of Jessica A. York at 8-10.
[8]Rebuttal Testimony of Wesley Selinger at 6.
[9]*Ibid.*

Q DID MR. SELINGER PROVIDE ANY ANALYSIS TO SUPPORT HIS CLAIM THAT THERE IS LIMITED CORRELATION BETWEEN INCREASES IN CUSTOMER PEAK DEMAND AND INCREASES IN PURCHASED POWER COST?

A No. Mr. Selinger did not provide any analysis of power demands, power costs, or water system peak demands to support his claim. In addition, he made one argument that specifically related to summer months, but did not fully address the relationship between electric power demand, corresponding power costs, and water demand throughout the rest of the year.

Q WHAT BASIS DOES MR. SELINGER PROVIDE FOR HIS CLAIM THAT THERE IS LIMITED CORRELATION BETWEEN PEAK DEMAND AND INCREASES IN PURCHASED POWER COSTS?

A Mr. Selinger argues that MAWC's customers' peak demand typically occurs in the early morning hours of the summer months due to irrigation and other factors, and that MAWC addresses this peak by pumping twice as much at night filling tanks during off-peak hours.[10]

Q WHAT IS YOUR RESPONSE?

A MAWC's decision to pump at night during off-peak hours is an economic decision that benefits customers. However, those purchased power costs are incurred to store water in tanks for the purpose of meeting peak (extra capacity) water demand that occurs early in the mornings. Allocating purchased power costs on average usage (i.e., Factor 1) effectively assumes that all power costs are incurred to serve customers

[10] *Ibid.*

under a constant, or average, annual rate of use. Mr. Selinger has provided no evidence to show that this is the case.

Q MR. SELINGER POINTS OUT THAT NOT ALL COMMERCIAL ELECTRIC RATES CHARGED TO MAWC'S FACILITIES BY AMEREN MISSOURI HAVE DEMAND CHARGES. HOW DO YOU RESPOND?

A Mr. Selinger is correct that some rate schedules charged to MAWC do not have demand charges. This is because Ameren Missouri does not use a Straight Fixed-Variable ("SFV") rate design, where all energy-related costs are collected through energy charges, and all demand-related costs are collected through demand charges. Mr. Selinger fails to recognize that the electric rate schedules without demand charges are still recovering fixed demand-related power costs. Those rate schedules just recover fixed costs through customer and energy charges instead. Therefore, Mr. Selinger's comment downplays the amount of purchased power cost that is capacity-related rather than energy-related.

Q WHAT IS YOUR RECOMMENDATION WITH RESPECT TO THE ALLOCATION OF PURCHASED POWER COSTS?

A I continue to recommend that fuel and power costs be allocated on the basis of Factor 6, rather than Factor 1.

Separation of Transmission and Distribution Costs

Q PLEASE SUMMARIZE YOUR RECOMMENDATION WITH RESPECT TO MAWC'S ASSIGNMENT OF MAINS SIZED 10- TO 16-INCHES TO THE TRANSMISSION FUNCTION.

A According to MAWC's Annual Report for 2021, mains sized 12-inches and less are distribution mains, rather than transmission mains.[11] However, MAWC's class cost of service study combines plant investment and depreciation expense for mains sized 10- to 16-inches into a single category, and includes them in the Transmission function.[12] Without having the data to break out the investment and depreciation expense by main size within that category, I recommended moving the plant investment and associated depreciation expense for this subset of mains to the distribution function.[13]

Q DID THE COMPANY AGREE WITH YOUR RECOMMENDATION?

A No. The Company disagreed on the basis that it has considered mains 10-inches or larger to serve the Transmission function for many years.[14]

Q DID THE COMPANY ACKNOWLEDGE THE DISCREPANCY BETWEEN THE CLASSIFICATION OF MAINS BY SIZE IN ITS COSS COMPARED TO ITS 2021 ANNUAL REPORT?

A Yes, the Company recognized this. However, rather than modifying the COSS to be consistent with the 2021 Annual Report, the Company suggests that it needs to revisit

[11]Direct Testimony of Jessica A. York at 16.
[12]*Ibid.*
[13]*Ibid.* at 17.
[14]Rebuttal Testimony of Wesley Selinger at 9.

the Annual Report to match how mains are classified for ratemaking and COSS purposes.[15]

Q WHAT IS YOUR RESPONSE?

A The Company's Annual Reports are official documents signed by an officer, or other official representative of the Company, and certified to be true and correct under penalty of perjury. This includes the classification of mains by size which are identified in the Annual Report. The COSS needs to be updated to align with the information presented in this official document. Further, the classification of mains as transmission or distribution should not change depending on whether it is for "ratemaking and COSS purposes" or annual reporting purposes. The Company should be required to justify why certain sized mains should be functionalized as transmission or distribution. Simply moving from them from one category to the other between the annual report and the COSS does not address this issue.

Q HAVE YOU RECEIVED INFORMATION THAT WOULD ALLOW YOU TO IDENTIFY THE PORTION OF INVESTMENT AND DEPRECIATION EXPENSE IN THE 10- TO 16-INCH CATEGORY OF MAINS THAT SHOULD REMAIN IN THE TRANSMISSION FUNCTION?

A The Company has provided information through discovery that allows for an approximation of the portion of plant investment and depreciation expense in the 10- to 16-inch main category that relates to 16-inch mains, and thus should stay in the transmission function.[16] Based on the information provided in response to Discovery

[15] *Ibid.* at 10.
[16] MAWC's Response to Discovery Request MIEC 5-05, attached as Schedule JAY-7.

Request MIEC 5-05, I estimate that for St. Louis County, about 16.4% of the plant and depreciation expenses in that category of mains is associated with 16-inch mains, and should remain in the transmission function. Outside of St. Louis County, about 7.8% of the plant and depreciation expense in the 10- to 16-inch main category should remain in the transmission function. This calculation is shown on Schedule JAY-7.

Q DID THE COMPANY MAKE ANY CORRECTIONS TO THE SEPARATION OF TRANSMISSION AND DISTRIBUTION COSTS IN ITS REBUTTAL COSS MODELS?

A Yes. The Company acknowledged that while preparing discovery responses, it realized that some mains and the associated costs were not included in the correct bucket of costs in the COSS models.[17] This also resulted in certain investment and expenses associated with those mains being included in the incorrect function (i.e., Transmission versus Distribution) in the COSS models.

Q DID YOU IDENTIFY THE AMOUNT OF INVESTMENT AND EXPENSES THAT WERE MOVED BETWEEN FUNCTIONS AS A RESULT OF THE COMPANY'S CORRECTIONS?

A Yes. This information is shown in Table 1.

[17]Rebuttal Testimony of Wesley Selinger at 11.

TABLE 1

MAWC's Correction to the Functionalization/Classification of T&D Mains

Line	Description	Transmission Function				Distribution Function			
		Direct Case[1]	Rebuttal Case[2]	Rebuttal More / (Less) Than Direct Amount	Rebuttal More / (Less) Than Direct Percent	Direct Case[1]	Rebuttal Case[2]	Rebuttal More / (Less) Than Direct Amount	Rebuttal More / (Less) Than Direct Percent
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PLANT INVESTMENT ($ Millions)								
	St. Louis County								
1	TD Mains 4in & Less	$ -	$ -	$ -	0.0%	$ 27.5	$ 23.7	$ (3.7)	-13.5%
2	TD Mains 6in to 8in	-	-	-	0.0%	938.4	1,080.5	142.1	15.1%
3	TD Mains 10in to 16in	294.7	253.8	(40.9)	-13.9%	-	-	-	0.0%
4	TD Mains 18in & Grtr	211.2	113.7	(97.5)	-46.2%	-	-	-	0.0%
5	Total	$ 506	$ 367	$ (138)	-27.4%	$ 966	$ 1,104	$ 138	14.3%
	All Other MO								
6	TD Mains 4in & Less	$ -	$ -	$ -	0.0%	$ 6.6	$ 54.1	$ 47.5	722.7%
7	TD Mains 6in to 8in	-	-	-	0.0%	224.8	199.9	(24.9)	-11.1%
8	TD Mains 10in to 16in	70.6	81.8	11.2	15.9%	-	-	-	0.0%
9	TD Mains 18in & Grtr	50.6	16.7	(33.9)	-67.0%	-	-	-	0.0%
10	Total	$ 121	$ 99	$ (23)	-18.7%	$ 231	$ 254	$ 23	9.8%
	DEPRECIATION EXPENSE ($ Millions)								
	St. Louis County								
11	TD Mains 4in & Less	$ -	$ -	$ -	0.0%	$ 0.4	$ 0.4	$ (0.1)	-13.5%
12	TD Mains 6in to 8in	-	-	-	0.0%	15.0	17.3	2.3	15.1%
13	TD Mains 10in to 16in	4.7	4.1	(0.7)	-13.9%	-	-	-	0.0%
14	TD Mains 18in & Grtr	3.4	1.8	(1.6)	-46.2%	-	-	-	0.0%
15	Total	$ 8	$ 6	$ (2)	-27.4%	$ 15	$ 18	$ 2	14.3%
	All Other MO								
16	TD Mains 4in & Less	$ -	$ -	$ -	0.0%	$ 0.1	$ 0.9	$ 0.8	722.7%
17	TD Mains 6in to 8in	-	-	-	0.0%	3.6	3.2	(0.4)	-11.1%
18	TD Mains 10in to 16in	1.1	1.3	0.2	15.9%	-	-	-	0.0%
19	TD Mains 18in & Grtr	0.8	0.3	(0.5)	-67.0%	-	-	-	0.0%
20	Total	$ 2	$ 2	$ (0)	-18.7%	$ 4	$ 4	$ 0	9.8%

Sources

[1] Schedules WES-1 and WES-2, Account Detail tab, pages 4 and 7 of 9.

[2] Schedules WES-1R and WES-2R, Account Detail tab, pages 4 and 7 of 9.

As shown in Table 1, the Company had erroneously included about $138 million of plant investment in the Transmission function of its COSS, in the category of mains sized 10-inches and greater, for St. Louis County customers. Outside of St. Louis County, the Company erroneously included $23 million of main investment in the Transmission function. In rebuttal, the Company has shifted these amounts to the

Distribution function. The functionalization of depreciation expense had a similar problem in both districts.

Q WITH THIS CORRECTION, DO YOU AGREE WITH THE FUNCTIONALIZATION OF MAINS BETWEEN TRANSMISSION AND DISTRIBUTION IN THE COMPANY'S COSS MODELS?

A No. Even with this correction, the Company is overstating the amount of investment associated with mains in the 10- to 16-inch line item of its COSS that should be included in the Transmission function. To be consistent with the definition of mains in the annual report, investment and expenses associated with mains that are less than 16-inches in diameter should be included in the distribution function. For St. Louis County, this means about 16.4% of the total investment and depreciation expense included in the 10- to 16-inch category should remain in the Transmission function, and the rest should be moved to distribution. For customers outside of St. Louis County, the corresponding percentage is 7.8%.

Distribution Multiplier

Q PLEASE SUMMARIZE YOUR RECOMMENDATION WITH RESPECT TO THE DISTRIBUTION MULTIPLIER FOR RATE J?

A I recommended that the distribution multiplier for Rate J customers be based on the length of small distribution mains required to provide service to these customers.[18] I explained that using water consumption to develop the distribution multiplier

[18]Direct Testimony of Jessica A. York at 14-15.

significantly overstates the portion of distribution system investment and expenses that are required to provide service to these large customers.[19]

Q DID THE COMPANY AGREE?

A No. The Company continues to recommend a distribution multiplier based on usage, and does not believe it is appropriate to give consideration to the length of distribution main serving Rate J customers.[20] The Company also claims that it is not feasible to conduct an analysis that would accurately capture the myriad of factors that determine the installed cost of the portion of distribution mains serving Rate J customers.[21]

Q WHAT IS YOUR RESPONSE?

A One driver of the cost of distribution mains is the length of main installed. MAWC has not disputed the fact that Rate J customers use a very small fraction of the total length of distribution mains installed on the system. Ignoring this fact, and applying a distribution multiplier based strictly on usage is inequitable because it over-allocates small distribution main investment and expenses to these customers. The length of distribution main installed to serve these customers was a consideration made by MAWC in the 2008 rate case, and was somehow relied upon to arrive at the 10% distribution multiplier for Rate J that has been used by MAWC and Staff in MAWC's prior rate cases.[22]

[19] *Ibid.* at 13.
[20] Rebuttal Testimony of Wesley Selinger at 7.
[21] *Ibid.*
[22] Direct Testimony of Jessica A. York at 13-15.

Q CONSIDER AN EXAMPLE WHERE A LARGE INDUSTRIAL CUSTOMER AND A COMMERCIAL CUSTOMER BOTH USE THE SAME MATERIAL, LENGTH, AND DIAMETER OF DISTRIBUTION MAIN, AND THE INVESTMENT IN DISTRIBUTION MAIN TO SERVE THESE CUSTOMERS IS THE SAME. HOWEVER, THE LARGE INDUSTRIAL CUSTOMER USES TWICE AS MUCH WATER AS THE COMMERCIAL CUSTOMER. SHOULD THE LARGE INDUSTRIAL CUSTOMER BE ASSIGNED TWICE THE COST AS THE COMMERCIAL CUSTOMER?

A No. In this example, the investment in distribution main required to service these customers is identical. However, a distribution multiplier based strictly on usage would assign twice as much cost to the Industrial customer, even though the investment in distribution main to serve each of these customers is the same.

Q WHAT DISTRIBUTION MULTIPLIERS HAVE BEEN USED BY THE COMPANY IN PRIOR CASES?

A It is my understanding that from the 2008 rate case (WR-2008-0311) to the 2017 rate case (WR-2017-0285), MAWC had proposed to continue the 10% distribution multiplier developed in the 2008 rate case for St. Louis County Rate J customers. The Company now recommends a different approach, without any analysis to prove that calculating the distribution multiplier based strictly on utilization of the Company's infrastructure produces a reasonable, equitable allocation of these costs across customer classes.

Q WHAT DISTRIBUTION MULTIPLIER DID YOU RECOMMEND FOR RATE J IN YOUR DIRECT TESTIMONY BASED ON LENGTH OF MAINS?

A In my direct testimony, I recommended a distribution multiplier of 1.04% based on information from the 2008 rate case.[23]

Q HAVE YOU BEEN ABLE TO UPDATE THIS NUMBER BASED ON MORE RECENT DATA?

A Yes. In its confidential response to Discovery Request MIEC 5-03,[24] the Company provided updated information on the length of distribution main serving each customer. This document showed that there are 309,400 feet of distribution mains (12-inches and less) serving Rate J customers in St. Louis County. Dividing this amount by the total length of distribution mains identified in MAWC's 2021 Annual Report (and used in the COSS), produces a result of 1.43%.

Q HAVE YOU UPDATED THE ST. LOUIS COUNTY COSS MODEL TO REFLECT THE LATEST INFORMATION FROM MAWC?

A Yes. My complete St. Louis COSS is included in Schedule JAY-9. However, the results of my updated model relative to my primary proposed revenue allocation are presented in Table 2.

[23]Direct Testimony of Jessica A. York at 15.
[24]Attached as Confidential Schedule JAY-8.

TABLE 2

MIEC's Final COSS vs. Primary Proposed Revenue Spread for St.Louis County

Line	Customer Class	Current Revenue[1]	Increase to Reach COS[1] Amount	Percent	Index	MIEC Proposed Increase[2] Amount	Percent	Index
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
	St. Louis County							
1	Residential	$ 167,224,457	$ 75,062,273	44.9%	1.09	$ 75,062,273	44.9%	1.09
2	Non-Residential	49,403,315	18,029,036	36.5%	0.89	18,609,337	37.7%	0.91
3	Rate J	6,252,876	928,332	14.8%	0.36	1,001,780	16.0%	0.39
4	Rate B	4,232,070	(615,935)	-14.6%	(0.35)	(566,224)	-13.4%	(0.32)
5	Rate P	3,977,486	646,256	16.2%	0.39	692,976	17.4%	0.42
6	Private Fire	3,759,239	2,685,743	71.4%	1.73	1,935,563	51.5%	1.25
7	Total	$ 234,849,443	$ 96,735,705	41.2%	1.00	$ 96,735,705	41.2%	1.00

Sources

[1] Schedule JAY-9.

[2] No class receives an increase greater than 1.25x district average. Remaining revenue deficiency is spread uniformly across non-capped classes with increases below the system average.

My primary revenue allocation recommendation assumes that contract customers can receive a rate increase. I am not aware of any party that has disputed this. However, if contract customers cannot receive a rate increase, I recommend no increase for that class and spreading the remaining revenue deficiency across the customer classes that are not capped at 1.25x the district average and that would receive increases below the system average.

Q PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS WITH RESPECT TO MAWC'S COSS MODELS.

A In my direct testimony, I raised concerns about the accuracy of the new structure of the COSS model in this case, relative to the more detailed model that was used prior to Case No. WR-2020-0344. I showed the significant inconsistencies between rate cases and COSS model structures in terms of the relative increase required for Rate J to reach cost of service.[25] Even with the corrections made by MAWC to its COSS in

[25] *Ibid.* at 19-20.

rebuttal testimony, the relative customer class increase for Rate J is out of line with prior more detailed COSS models.

In addition, I questioned whether the Company has made an effort to benchmark the results of its new model structure against the results of the prior version, and the Company admitted it has not done any analysis in this regard.[26] Further, the Company admitted in discovery and in its rebuttal testimony that it had mistakenly included certain size mains in the wrong plant subaccount, which ultimately resulted in them being assigned to the wrong function in the COSS.[27]

Finally, the Company has provided no analysis or evidence to support its proposed distribution multipliers for Rate J customers as producing a reasonable or equitable allocation of distribution main investment and expenses to customers that use about 1% of the distribution mains on the system.

As a result, I continue to believe that MAWC's new COSS model structure, even as updated in its rebuttal testimony, does not produce an accurate measure of the cost of providing service to each customer class. I believe the Company's COSS over-allocates distribution system costs to Rate J customers primarily due to the use of inappropriate distribution multipliers, and an inaccurate split of costs between the transmission and distribution functions (costs that were combined in a single category and allocated on Factor 6 under the Company's previous COSS model structure). For all of these reasons, I recommend that the Commission adopt my proposed modifications to the Company's COSS models.

[26]MAWC's Response to Discovery Request MIEC 4-02, attached as Schedule JAY-6, page 1, of Jessica York's Rebuttal Testimony.

[27]Rebuttal Testimony of Wesley Selinger at 11.

Revenue Apportionment

Q PLEASE SUMMARIZE YOUR REVENUE APPORTIONMENT PROPOSAL.

A I recommended that if my corrections to MAWC's COSS models are adopted, then all customer classes should be brought closer to cost of service subject to the limitation that no class receive an increase greater than 1.25x the district average.[28] In the event that my corrections to MAWC's COSS are not adopted, I continue to recommend that no class receive an increase greater than 1.25x the system average.[29]

Q DID THE COMPANY AGREE?

A No. MAWC claims that my revenue increase allocation proposal is based on a COSS that understates the cost of serving Rate J customers.[30] Mr. Rea claims that there is no valid reason for Industrial customers in the Company's non-St. Louis County service territory to pay rates that are 50% higher than similar Industrial customers in St. Louis County.[31]

Q PLEASE RESPOND TO MR. REA'S COMMENTS ON YOUR RECOMMENDED COSS.

A As explained in detail above, and in my direct testimony, MAWC's COSS models have been shown to be inaccurately functionalizing costs between the transmission and distribution functions, and overstating the amount of distribution costs incurred to serve Rate J customers. My recommended corrections to the COSS tie the functionalization of investment and expenses associated with mains to the functionalization certified to

[28]Direct Testimony of Jessica A. York at 6-7.
[29]*Ibid.* at 7.
[30]Rebuttal Testimony of Charles Rea at 15.
[31]*Ibid.*

be true and correct in the Company's 2021 Annual Report. In addition, my recommended distribution multiplier is based on information provided by the Company that proves that the Rate J customers use a tiny fraction of the length of distribution main, consistent with considerations made by the Company in prior cases. Further, despite the Company's concession that Factor 3 should be used to allocate Power and Pumping expenses, its rebuttal COSS continues to use Factor 2. In addition, Mr. Rea's comment about the rate differential between Industrial customers inside and outside of St. Louis County is just an indirect way to try to convince the Commission that consolidated tariff pricing is necessary.

As a result, I believe that my recommended corrections to the Company's COSS produce the most reliable measure of the cost of providing service to each customer class, and is appropriate to use as the basis for revenue apportionment.

Q DO YOU AGREE THAT THERE IS NO VALID REASON FOR INDUSTRIAL CUSTOMERS OUTSIDE OF ST. LOUIS COUNTY TO PAY RATES THAT ARE HIGHER THAN INDUSTRIAL CUSTOMERS IN ST. LOUIS COUNTY?

A No. The cost of service for St. Louis County Rate J customers is less than the cost of service for Rate J customers outside of St. Louis County. The Company's rebuttal COSS models show that average cost of service for Rate J in St. Louis County is $0.34 per hundred gallons.[32] For Rate J customers outside of St. Louis County, the average cost of service is $0.37 per hundred gallons.[33] In addition, and as explained in greater detail below, there is no need to distort the cost of service associated with St. Louis County by consolidating it with the district outside of St. Louis County.

[32] $11,156,495 / 32,593,962 = $0.34 per hundred gallons.
[33] $11,545,244 / 31,282,916 = $0.37 per hundred gallons.

Consolidated Tariff Pricing

Q PLEASE SUMMARIZE YOUR RECOMMENDATION WITH RESPECT TO THE COMPANY'S PROPOSED CONTINUED MOVEMENT TOWARD CONSOLIDATED TARIFF PRICING.

A I recommended that the Commission reject MAWC's proposal for CTP, and instead maintain the two pricing districts approved by the Commission in the last rate case.[34] I recommended that the respective revenue requirement for St. Louis County customers and non-St. Louis County customers be recovered through proposed rates based on each district's respective cost of service.[35]

Q DID THE COMPANY AGREE?

A No.

Q WHAT CLAIMS ARE MADE BY MR. REA IN AN EFFORT TO SUPPORT MAWC'S PROPOSAL FOR CTP?

A Mr. Rea argues that the concept of CTP has already been established in the Company's rate structure, as all districts outside of St. Louis County have been consolidated.[36] Mr. Rea argues that differences in physical and operating characteristics between different water systems are not a valid reason to establish separate pricing structures by district.[37] He argues that single tariff pricing has been shown to be in the long-term best interest of MAWC's customers.[38]

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[34]Direct Testimony of Jessica A. York at 28.
[35]*Ibid.*
[36]Rebuttal Testimony of Charles Rea at 6.
[37]*Ibid.* at 8.
[38]*Ibid.* at 12.

Q DO YOU AGREE THAT CTP HAS ALREADY BEEN ESTABLISHED IN THE COMPANY'S RATE STRUCTURE?

A Yes. As noted by Mr. Rea, there are more than 20 operating districts in the non-St. Louis County district taking service under a CTP rate structure.[39]

Q DOES THE FACT THAT THE COMMISSION HAS ALLOWED CONSOLIDATION OF ALL WATER DISTRICTS OUTSIDE OF ST. LOUIS COUNTY JUSTIFY FURTHER CONSOLIDATION WITH ST. LOUIS COUNTY?

A No. The Commission previously determined that combining the more than 20 operating districts outside of St. Louis County was sufficient for MAWC to continue acquiring small struggling water systems, and to continue making system improvements in these districts while avoiding rate shock.[40] As MAWC continues to acquire additional water systems, the customer base and water consumption over which it can spread its costs will continue to grow. There is no need to combine St. Louis County with all of the other districts in order for MAWC to accomplish its objectives, and prevent rate shock for the customers outside of St. Louis County.

In addition, Mr. Rea acknowledges that cost of service differences exist between its various operating districts.[41] While it may be beneficial for the customers in small districts outside of St. Louis County to share their cost of service across all of the small districts, further consolidation does not benefit customers in St. Louis County. Indeed, the Company's proposal would cause St. Louis County customers to pay $16.3 million more than their cost of service on an annual basis.[42]

[39]Rebuttal Testimony of Charles Rea at 6.
[40]Direct Testimony of Jessica A. York at 24.
[41]Rebuttal Testimony of Charles Rea at 6.
[42]Direct Testimony of Jessica A. York at 4.

Q DOES MR. REA BELIEVE THAT COST OF SERVICE DIFFERENCES ARE A VALID REASON TO ESTABLISH SEPARATE PRICING STRUCTURES FOR DIFFERENT SERVICE AREAS?

A No. Mr. Rea concedes that from an analytical perspective, these differences could justify different rates.[43] But, he then argues that from a practical perspective, these differences are not a valid reason for having different rates.[44] He proceeds to opine that customers in one location would not understand or accept cost-based reasons for having rates different from those charged to customers in another location.[45]

Q HAVE ANY CUSTOMERS QUESTIONED MAWC ABOUT RATE DIFFERENTIALS BETWEEN DISTRICTS?

A Rate differentials have existed between similar customer classes in different districts for many years. Despite Mr. Rea's assertion that customers would not accept cost-based reasons for rate differentials between districts, I am not aware of any evidence suggesting that customers have been requesting information about rate differentials between districts.

Q HAS MR. REA PROVIDED EVIDENCE THAT CTP HAS BEEN SHOWN TO BE IN THE LONG-TERM BEST INTEREST OF ITS CUSTOMERS?

A No. While Mr. Rea makes this claim in his rebuttal testimony, he has not provided any evidence to support it. He does not offer any analysis of this issue or indicate that the Company has ever studied this in the past.

[43]Rebuttal Testimony of Charles Rea at 8.
[44]*Ibid.*
[45]*Ibid.*at 8-9.

Q PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS WITH RESPECT TO CTP.

A The Company's proposal for consolidating the St. Louis County and non-St. Louis County districts should be rejected, and the current two-district structure should be maintained. It appears that MAWC agrees with MIEC that there are cost of service differences between the various communities served by MAWC. However, despite these differences, the Commission determined in the prior case that consolidating to two districts was reasonable. Maintaining the existing two districts is consistent with the Commission's prior Order, and is sufficient to allow MAWC to continue the practice of acquiring and improving small struggling water systems while preventing rate shock. In addition, maintaining the two-district structure balances the interests of customers both inside and outside of St. Louis County.

Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A Yes, it does.

457066

DATA INFORMATION REQUEST
Missouri-American Water Company
WR-2022-0303
General Rate Case

Requested From: Brian LaGrand

Date Requested: 12/22/2022

Information Requested:

Please refer to Schedule WES-1, Account Detail tab, page 7 of 9.
a. Please confirm that this page shows $294,652,995 of investment in TD Mains 10 inches to 16 inches. If not confirmed, please provide a detailed explanation supporting the response.
b. Please break out the total investment of $294,652,995 by size of mains included in this category.
c. Please identify the portion of the $294,652,995 investment associated with 16-inch mains.

Requested By: Jamie Reifsteck – jreifsteck@chgolaw.com

Information Provided:

a) The amount listed is the amount shown on the account detail tab of Schedule WES-1 for 10–16-inch transmission mains.
b) Please see the attached file 2022 GRC – MIEC 5-05_Attachment 1 for the percentage of each main size and associated cost. While completing this request the company became aware that certain assets were not placed in the appropriate plant sub-accounts, making the percentages used to allocate mains between transmission and distribution inaccurate. This does not impact the total dollar value of main. The attached file corrects this misplacement, and the Company intends to file a limited update of its COSSs in rebuttal to reflect this change.
c) Please see (b) above.

Responsible Witness: Wes Selinger

MAWC T&D Mains

	St. Louis County				Outside St. Louis County			
	Main Diameter		**$**	**%**	**Main Diameter**		**$**	**%**
0.75	0.75	$	25.07	0.000002%	0.75	$	214,320.03	0.064796%
1	1	$	56,178.89	0.003657%	1	$	914,916.36	0.276608%
1.5	1.5	$	15,315.63	0.000997%	1.25	$	4,405.91	0.001332%
2	2	$	1,566,054.72	0.101951%	1.5	$	4,248.35	0.001284%
3	3	$	557.72	0.000036%	2	$	27,318,639.33	8.259289%
4	4	$	23,143,692.15	1.506660%	2.25	$	3,208.29	0.000970%
5	5	$	2,393.41	0.000156%	2.5	$	445,049.60	0.134553%
6	6	$	588,477,844.62	38.310058%	3	$	5,771,980.88	1.745052%
8	8	$	539,291,974.76	35.108046%	4	$	16,089,438.22	4.864346%
10	10	$	2,313,921.86	0.150637%	5	$	1,423,289.45	0.430305%
12	12	$	218,474,409.06	14.222740%	6	$	59,297,073.24	17.927382%
14	14	$	765,880.87	0.049859%	8	$	126,841,212.92	38.348113%
16	16	$	43,320,665.11	2.820186%	10	$	8,578,323.79	2.593499%
18	18	$	44,793.74	0.002916%	12	$	52,577,092.40	15.895719%
20	20	$	53,563,034.63	3.486967%	14	$	374,545.31	0.113237%
24	24	$	28,451,330.81	1.852189%	16	$	15,237,480.28	4.606773%
30	30	$	17,755,253.49	1.155872%	18	$	1,722,472.11	0.520758%
32	32	$	494,093.46	0.032166%	20	$	5,256,958.97	1.589345%
36	36	$	15,300,445.44	0.996063%	24	$	5,548,202.16	1.677397%
42	42	$	3,052,332.69	0.198708%	30	$	1,469,493.60	0.444274%
60	60	$	2,068.17	0.000135%	36	$	1,614,458.71	0.488102%
					60	$	55,784.29	0.016865%
	Total	$	1,536,092,266.29		Total	$	330,762,594.21	

4 Inch or Less	1.61%	4 Inch or Less	15.35%
4-8 Inch	73.42%	4-8 Inch	56.71%
10-16 Inch	17.24%	8-16 Inch	23.21%
16 Inch or Greater	7.73%	16 Inch or Greater	4.74%

MIEC Calculations				
16 inch	$	43,320,665	$	15,237,480
Total 10- to 16-inch	$	264,874,877	$	196,139,899
16-inch %		16.4%		7.8%

DATA INFORMATION REQUEST
Missouri-American Water Company
WR-2022-0303
General Rate Case

Requested From: Brian LaGrand

Date Requested: 12/22/2022

Information Requested:

For purposes of this discovery response, please consider the transmission system to consist of mains with diameters larger than 12-inches, and the distribution system to consist of mains sized 12-inches and smaller. For each Rate J customer in the St. Louis County district, please provide the following information:
a. Please provide the size (diameter) of main serving each customer.

b. For each customer served from a main of size 12-inches and smaller, please provide the length of distribution main that runs from the transmission system to each customer's connection point.

Requested By: Jamie Reifsteck – jreifsteck@chgolaw.com

Information Provided:

CONFIDENTIAL - The information provided is deemed "Confidential" in accordance with Commission Rule 20 CSR 4240-2.135(2)(A) 1 as it contains customer-specific information. We ask that confidentiality be maintained consistent with that Rule and/or Section 386.480 RSMo, as the case may be.

Please see MIEC 5-03_ Attachment 1-CONFIDENTIAL for a revised list originally provided in the Company's response to MIEC Data Request 2-05. The additional columns contain the information requested in part (b) above.

Responsible Witness: Wes Selinger

Missouri-American Water Company
Class Cost of Service Study - Functional Allocators to Customer Class
Case No: WR-2022-0303, SR-2022-0304

	Functional COS	Alloc	Description	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Variance
Source of Supply Expense												
Fixed	$ 5,121,722	2	Base/Extra Daily	$ 3,270,044	$ 1,143,921	$ 330,090	$ 147,939	$ 225,809	$ -	$ 3,919	$ 5,121,722	$ -
Variable	$ 4,608,894	1	Total Usage	$ 3,094,820	$ 940,841	$ 67,111	$ 45,743	$ 46,920	$ 319,684	$ 93,774	$ 4,608,894	$ -
Power and Pumping Expenses												
Fixed	$ 17,455,688	3	Base/Extra Daily	$ 10,529,284	$ 3,684,380	$ 1,060,667	$ 475,005	$ 725,115	$ 760,531	$ 220,705	$ 17,455,688	$ -
Variable	$ 3,008,720	1	Total Usage	$ 2,043,213	$ 615,530	$ 18,896	$ 18,458	$ 11,825	$ 232,948	$ 67,850	$ 3,008,720	$ -
Water Treatment												
Fixed	$ 47,949,147	2	Base/Extra Daily	$ 30,613,886	$ 10,709,298	$ 3,090,275	$ 1,384,996	$ 2,114,003	$ -	$ 36,689	$ 47,949,147	$ -
Variable	$ 12,817,674	1	Total Usage	$ 7,802,197	$ 2,569,364	$ 1,062,493	$ 528,091	$ 791,575	$ 36,368	$ 27,586	$ 12,817,674	$ -
Transmission	$ 16,470,006	3	Base/Extra Daily w/ Fire	$ 9,934,720	$ 3,476,331	$ 1,000,774	$ 448,183	$ 684,170	$ 717,586	$ 208,242	$ 16,470,006	$ -
Distribution	$ 140,284,125	4	Base/Extra Hourly w/ Fire	$ 96,379,086	$ 28,604,504	$ 82,368	$ 551,670	$ -	$ 11,357,682	$ 3,308,815	$ 140,284,125	$ -
Storage	$ 1,098,885	5	Storage	$ 693,655	$ 203,328	$ 35,433	$ 15,883	$ 24,243	$ -	$ 126,344	$ 1,098,885	$ -
Meters	$ 32,680,973	8	Meters	$ 25,732,737	$ 6,730,556	$ 217,679	$ -	$ -	$ -	$ -	$ 32,680,973	$ -
Services	$ 21,504,553	9	Services	$ 17,118,295	$ 2,335,610	$ 26,177	$ -	$ -	$ -	$ 2,024,471	$ 21,504,553	$ -
Customers	$ 14,420,733	10	Customers	$ 13,364,606	$ 740,253	$ 5,595	$ 166	$ 83	$ -	$ 310,029	$ 14,420,733	$ -
Hydrants	$ 14,164,029	7	Hydrants	$ -	$ -	$ -	$ -	$ -	$ 14,147,471	$ 16,558	$ 14,164,029	$ -
Total	**$ 331,585,148**			**$ 220,576,544**	**$ 61,753,918**	**$ 6,997,557**	**$ 3,616,135**	**$ 4,623,741**	**$ 27,572,270**	**$ 6,444,983**	**$ 331,585,148**	$ -
				66.52%	18.62%	2.11%	1.09%	1.39%	8.32%	1.94%	100.00%	
Rate Year Water Revenue	$ 234,849,443			$ 167,224,457	$ 49,403,315	$ 6,252,876	$ 4,232,070	$ 3,977,486	$ -	$ 3,759,239	$ 234,849,443	$ -
Other Water Operating Revenue	$ 3,581,210											
Increase	$ 96,735,705			$ 53,352,087	$ 12,350,603	$ 744,681	$ (615,935)	$ 646,256	$ 27,572,270	$ 2,685,743	$ 96,735,705	$ (0)
Percent Increase	41.2%			31.90%	25.00%	11.91%	-14.55%	16.25%	0.00%	71.44%	41.19%	
Rate Year Revenue				$ 167,224,457	$ 49,403,315	$ 6,252,876	$ 4,232,070	$ 3,977,486	$ -	$ 3,759,239	$ 234,849,443	
Cost of Service Increase				$ 53,352,087	$ 12,350,603	$ 744,681	$ (615,935)	$ 646,256	$ 27,572,270	$ 2,685,743	$ 96,735,705	
Allocation of Public Fire				$ 21,710,186	$ 5,678,433	$ 183,651			$ (27,572,270)		$ -	
Revenue Target				$ 242,286,730	$ 67,432,351	$ 7,181,208	$ 3,616,135	$ 4,623,742	$ -	$ 6,444,982	$ 331,585,148	
Percent Increase				44.9%	36.5%	14.8%	-14.6%	16.2%	0.0%	71.4%	41.2%	
				1.09	0.89	0.36	(0.35)	0.39	-	1.73	1.00	
Including Increase	$ 335,166,358											
Workpaper	335,166,361											
	$ (3)											
Variable Cost	$ 20,435,288											
MAWC As-Filed Rebuttal				$ 237,313,773	$ 66,855,621	$ 11,156,495	$ 4,414,983	$ 6,031,000	$ -	$ 5,813,275	$ 331,585,148	
MIEC Revised				$ 242,286,730	$ 67,432,351	$ 7,181,208	$ 3,616,135	$ 4,623,742	$ -	$ 6,444,982	$ 331,585,148	
Difference				$ 4,972,956	$ 576,729	$ (3,975,286)	$ (798,848)	$ (1,407,258)	$ -	$ 631,707	$ -	

Enter 1 to Modify Purchased Power Allocation

1

	Allocator	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Check
Source of Supply										
Purch Water	1	$ 290,835	$ 96,124	$ 41,179	$ 20,412	$ 30,693	$ -	$ 660	$ 479,903	$ 479,903
Fuel & Power	6	$ 2,803,985	$ 844,718	$ 25,932	$ 25,331	$ 16,227	$ 319,684	$ 93,114	$ 4,128,991	$ 4,128,991
Total		$ 3,094,820	$ 940,841	$ 67,111	$ 45,743	$ 46,920	$ 319,684	$ 93,774	$ 4,608,894	$ 4,608,894 $ -
Power & Pumping										
Fuel & Power	6	$ 2,043,213	$ 615,530	$ 18,896	$ 18,458	$ 11,825	$ 232,948	$ 67,850	$ 3,008,720	$ 3,008,720 $ -
Water Treatment										
Fuel & Power	6	$ 318,991	$ 96,098	$ 2,950	$ 2,882	$ 1,846	$ 36,368	$ 10,593	$ 469,728	$ 469,728
Chemicals	1	$ 7,479,646	$ 2,472,090	$ 1,059,039	$ 524,959	$ 789,353	$ -	$ 16,985	$ 12,342,072	$ 12,342,072
Waste Disposal	1	$ 3,560	$ 1,177	$ 504	$ 250	$ 376	$ -	$ 8	$ 5,874	$ 5,874
Total		$ 7,802,197	$ 2,569,364	$ 1,062,493	$ 528,091	$ 791,575	$ 36,368	$ 27,586	$ 12,817,674	$ 12,817,674 $ -

Missouri-American Water Company
Class Cost of Service Study - Account Detail
Case No: WR-2022-0303, SR-2022-0304

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Source of Supply Expense															
Operating Expense															
Purchased Water	$ 479,903	A	Source of Supply	$ 479,903	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 479,903	$ -
Fuel and Power	$ 4,128,991	A	Source of Supply	$ 4,128,991	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,128,991	$ -
Salaries and Wages	$ 27,691	A	Source of Supply	$ 27,691	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 27,691	$ -
Contract Services - Other	$ 124,230	A	Source of Supply	$ 124,230	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 124,230	$ -
Building Maintenance and Services	$ 382,028	A	Source of Supply	$ 382,028	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 382,028	$ -
Miscellaneous	$ 1,166	A	Source of Supply	$ 1,166	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,166	$ -
Telelcommunications	$ 125,722	A	Source of Supply	$ 125,722	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 125,722	$ -
Postage	$ -	A	Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Office supplies and services	$ 3,566	A	Source of Supply	$ 3,566	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,566	$ -
Materials & Supplies	$ 4,113	A	Source of Supply	$ 4,113	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,113	$ -
Rents-Property	$ 397	A	Source of Supply	$ 397	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 397	$ -
Rents-Equipment	$ 4,647	A	Source of Supply	$ 4,647	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,647	$ -
Transportation	$ 10,066	A	Source of Supply	$ 10,066	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,066	$ -
	$ 5,292,520			$ 5,292,520	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,292,520	$ -
Maintenance Expense															
Salaries and Wages	$ 257,487	A	Source of Supply	$ 257,487	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 257,487	$ -
Materials & Supplies	$ 37,093	A	Source of Supply	$ 37,093	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 37,093	$ -
Transportation	$ -	A	Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Miscellaneous	$ 8,812	A	Source of Supply	$ 8,812	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,812	$ -
Contract Services - Eng	$ -	A	Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Contract Services - Other	$ 81,823	A	Source of Supply	$ 81,823	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 81,823	$ -
	$ 385,215			$ 385,215	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 385,215	$ -
Total SS Expense	**$ 5,677,735**			**$ 5,677,735**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 5,677,735**	**$ -**
Power and Pumping Expenses															
Operating Expense															
Fuel and Power	$ 3,008,720	B	Pumping	$ -	$ 3,008,720	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,008,720	$ -
Salaries and Wages	$ 1,336,409	B	Pumping	$ -	$ 1,336,409	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,336,409	$ -
Employee Benefits	$ -	B	Pumping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Building Maintenance and Services	$ 4,917	B	Pumping	$ -	$ 4,917	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,917	$ -
Miscellaneous	$ 982	B	Pumping	$ -	$ 982	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 982	$ -
Office supplies and services	$ 53	B	Pumping	$ -	$ 53	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 53	$ -
Materials & Supplies	$ 2,821	B	Pumping	$ -	$ 2,821	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,821	$ -
Rents-Equipment	$ 2,198	B	Pumping	$ -	$ 2,198	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,198	$ -
Transportation	$ 329,008	B	Pumping	$ -	$ 329,008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 329,008	$ -
	$ 4,685,108			$ -	$ 4,685,108	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,685,108	$ -
Maintenance Expense															
Salaries and Wages	$ 354,333	B	Pumping	$ -	$ 354,333	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 354,333	$ -
Transportation	$ 561	B	Pumping	$ -	$ 561	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 561	$ -
Contract Services - Eng	$ 1,659	B	Pumping	$ -	$ 1,659	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,659	$ -
Contract Services - Other	$ 78,395	B	Pumping	$ -	$ 78,395	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 78,395	$ -
Miscellaneous	$ 2,344	B	Pumping	$ -	$ 2,344	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,344	$ -
Materials & Supplies	$ 57,913	B	Pumping	$ -	$ 57,913	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 57,913	$ -
	$ 495,205			$ -	$ 495,205	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 495,205	$ -
Total Pumping Expense	**$ 5,180,313**			**$ -**	**$ 5,180,313**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 5,180,313**	**$ -**
Water Treatment															
Operating Expense															
Fuel and Power	$ 469,728	C	Water Treatment	$ -	$ -	$ 469,728	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 469,728	$ -
Chemicals	$ 12,342,072	C	Water Treatment	$ -	$ -	$ 12,342,072	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 12,342,072	$ -
Waste Disposal	$ 5,874	C	Water Treatment	$ -	$ -	$ 5,874	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,874	$ -
Salaries and Wages	$ 3,071,322	C	Water Treatment	$ -	$ -	$ 3,071,322	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,071,322	$ -
Employee Benefits	$ 10	C	Water Treatment	$ -	$ -	$ 10	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10	$ -
Contract Services - Eng	$ 13,355	C	Water Treatment	$ -	$ -	$ 13,355	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,355	$ -
Contract Services - Other	$ 63,055	C	Water Treatment	$ -	$ -	$ 63,055	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 63,055	$ -
Building Maintenance and Services	$ 68,281	C	Water Treatment	$ -	$ -	$ 68,281	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 68,281	$ -
Miscellaneous	$ 86,564	C	Water Treatment	$ -	$ -	$ 86,564	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 86,564	$ -
Telelcommunications	$ 10,462	C	Water Treatment	$ -	$ -	$ 10,462	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,462	$ -
Postage	$ -	C	Water Treatment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Office supplies and services	$ 13,599	C	Water Treatment	$ -	$ -	$ 13,599	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,599	$ -
Materials & Supplies	$ 20,354	C	Water Treatment	$ -	$ -	$ 20,354	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,354	$ -
Rents-Property	$ -	C	Water Treatment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rents-Equipment	$ 5,346	C	Water Treatment	$ -	$ -	$ 5,346	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,346	$ -
Transportation	$ 1,900	C	Water Treatment	$ -	$ -	$ 1,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,900	$ -
	$ 16,171,922			$ -	$ -	$ 16,171,922	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,171,922	$ -

Missouri-American Water Company
Class Cost of Service Study - Account Detail
Case No: WR-2022-0303, SR-2022-0304

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Maintenance Expense															
Salaries and Wages	$ 1,455,538	C	Water Treatment	$ -	$ -	$ 1,455,538	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,455,538	$ -
Transportation	$ 14,420	C	Water Treatment	$ -	$ -	$ 14,420	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 14,420	$ -
Contract Services - Eng	$ 3,537	C	Water Treatment	$ -	$ -	$ 3,537	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,537	$ -
Contract Services - Other	$ 990,534	C	Water Treatment	$ -	$ -	$ 990,534	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 990,534	$ -
Miscellaneous	$ 46,564	C	Water Treatment	$ -	$ -	$ 46,564	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 46,564	$ -
Materials & Supplies	$ 720,477	C	Water Treatment	$ -	$ -	$ 720,477	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 720,477	$ -
	$ 3,231,070			$ -	$ -	$ 3,231,070	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,231,070	$ -
Total Water Treatment Expense	**$ 19,402,992**			**$ -**	**$ -**	**$ 19,402,992**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 19,402,992**	**$ -**
Transmission & Distribution Expense															
Operating Expense															
Fuel and Power	$ 457,785	1	T/D Oper. Expense	$ -	$ -	$ -	$ 29,459	$ 281,921	$ -	$ 146,404	$ -	$ -	$ -	$ 457,785	$ -
Salaries and Wages	$ 4,616,413	1	T/D Oper. Expense	$ -	$ -	$ -	$ 297,075	$ 2,842,963	$ -	$ 1,476,375	$ -	$ -	$ -	$ 4,616,413	$ -
Employee Benefits	$ 10,863	1	T/D Oper. Expense	$ -	$ -	$ -	$ 699	$ 6,690	$ -	$ 3,474	$ -	$ -	$ -	$ 10,863	$ -
Contract Services - Eng	$ 37,650	1	T/D Oper. Expense	$ -	$ -	$ -	$ 2,423	$ 23,186	$ -	$ 12,041	$ -	$ -	$ -	$ 37,650	$ -
Contract Services - Other	$ 1,262,621	1	T/D Oper. Expense	$ -	$ -	$ -	$ 81,252	$ 777,570	$ -	$ 403,799	$ -	$ -	$ -	$ 1,262,621	$ -
Building Maintenance and Services	$ 133,413	1	T/D Oper. Expense	$ -	$ -	$ -	$ 8,585	$ 82,161	$ -	$ 42,667	$ -	$ -	$ -	$ 133,413	$ -
Miscellaneous	$ 44,632	1	T/D Oper. Expense	$ -	$ -	$ -	$ 2,872	$ 27,486	$ -	$ 14,274	$ -	$ -	$ -	$ 44,632	$ -
Telelcommunications	$ 71,262	1	T/D Oper. Expense	$ -	$ -	$ -	$ 4,586	$ 43,886	$ -	$ 22,790	$ -	$ -	$ -	$ 71,262	$ -
Postage	$ -	1	T/D Oper. Expense	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Office supplies and services	$ 44,900	1	T/D Oper. Expense	$ -	$ -	$ -	$ 2,889	$ 27,651	$ -	$ 14,359	$ -	$ -	$ -	$ 44,900	$ -
Materials & Supplies	$ 55,062	1	T/D Oper. Expense	$ -	$ -	$ -	$ 3,543	$ 33,909	$ -	$ 17,609	$ -	$ -	$ -	$ 55,062	$ -
Rents-Property	$ 163	1	T/D Oper. Expense	$ -	$ -	$ -	$ 10	$ 100	$ -	$ 52	$ -	$ -	$ -	$ 163	$ -
Rents-Equipment	$ 4,144	1	T/D Oper. Expense	$ -	$ -	$ -	$ 267	$ 2,552	$ -	$ 1,325	$ -	$ -	$ -	$ 4,144	$ -
Transportation	$ 196,349	1	T/D Oper. Expense	$ -	$ -	$ -	$ 12,635	$ 120,919	$ -	$ 62,794	$ -	$ -	$ -	$ 196,349	$ -
	$ 6,935,257			$ -	$ -	$ -	$ 446,297	$ 4,270,995	$ -	$ 2,217,965	$ -	$ -	$ -	$ 6,935,257	$ -
Maintenance Expense															
Salaries and Wages	$ 1,741,996	2	T/D Maint.. Expense	$ -	$ -	$ -	$ 43,040	$ 411,887	$ -	$ 239,479	$ 582,930	$ -	$ 464,660	$ 1,741,996	$ -
Contract Services - Eng	$ 94,411	2	T/D Maint.. Expense	$ -	$ -	$ -	$ 2,333	$ 22,323	$ -	$ 12,979	$ 31,593	$ -	$ 25,183	$ 94,411	$ -
Contract Services - Other	$ 2,286,428	2	T/D Maint.. Expense	$ -	$ -	$ -	$ 56,492	$ 540,615	$ -	$ 314,325	$ 765,115	$ -	$ 609,881	$ 2,286,428	$ -
Transportation	$ 958,837	2	T/D Maint.. Expense	$ -	$ -	$ -	$ 23,690	$ 226,712	$ -	$ 131,815	$ 320,859	$ -	$ 255,760	$ 958,837	$ -
Miscellaneous	$ 1,117,388	2	T/D Maint.. Expense	$ -	$ -	$ -	$ 27,608	$ 264,201	$ -	$ 153,612	$ 373,915	$ -	$ 298,052	$ 1,117,388	$ -
Materials & Supplies	$ 1,017,496	2	T/D Maint.. Expense	$ -	$ -	$ -	$ 25,140	$ 240,582	$ -	$ 139,879	$ 340,488	$ -	$ 271,407	$ 1,017,496	$ -
	$ 7,216,556			$ -	$ -	$ -	$ 178,302	$ 1,706,321	$ -	$ 992,090	$ 2,414,901	$ -	$ 1,924,943	$ 7,216,556	$ -
Total T&D Expense	**$ 14,151,813**			**$ -**	**$ -**	**$ -**	**$ 624,599**	**$ 5,977,316**	**$ -**	**$ 3,210,054**	**$ 2,414,901**	**$ -**	**$ 1,924,943**	**$ 14,151,813**	**$ -**
General Mains Expense															
Operations															
Salaries and Wages	$ 1,072,388	K	Mains	$ -	$ -	$ -	$ 101,457	$ 970,931	$ -	$ -	$ -	$ -	$ -	$ 1,072,388	$ -
Miscellaneous	$ 1,011	K	Mains	$ -	$ -	$ -	$ 96	$ 915	$ -	$ -	$ -	$ -	$ -	$ 1,011	$ -
	$ 1,073,399			$ -	$ -	$ -	$ 101,553	$ 971,846	$ -	$ -	$ -	$ -	$ -	$ 1,073,399	$ -
Maintenance Expense															
Salaries and Wages	$ 244,551	K	Mains	$ -	$ -	$ -	$ 23,137	$ 221,414	$ -	$ -	$ -	$ -	$ -	$ 244,551	$ -
Miscellaneous	$ (1,168)	K	Mains	$ -	$ -	$ -	$ (111)	$ (1,057)	$ -	$ -	$ -	$ -	$ -	$ (1,168)	$ -
	$ 243,383			$ -	$ -	$ -	$ 23,026	$ 220,357	$ -	$ -	$ -	$ -	$ -	$ 243,383	$ -
General Mains Expense	**$ 1,316,782**			**$ -**	**$ -**	**$ -**	**$ 124,579**	**$ 1,192,203**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,316,782**	**$ -**
Storage Expense															
Operating Expense															
Salaries and Wages	$ -	F	Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Miscellaneous	$ -	F	Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance Expense															
Salaries and Wages	$ -	F	Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Miscellaneous	$ -	F	Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Storage Expense	**$ -**			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Meter Expense															
Operating Expense															
Salaries and Wages	$ 503,793	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ 503,793	$ -	$ -	$ -	$ 503,793	$ -
Miscellaneous	$ 895	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ 895	$ -	$ -	$ -	$ 895	$ -
	$ 504,688			$ -	$ -	$ -	$ -	$ -	$ -	$ 504,688	$ -	$ -	$ -	$ 504,688	$ -
Maintenance Expense															
Salaries and Wages	$ 125,052	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ 125,052	$ -	$ -	$ -	$ 125,052	$ -
Miscellaneous	$ 3,068	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,068	$ -	$ -	$ -	$ 3,068	$ -
	$ 128,120			$ -	$ -	$ -	$ -	$ -	$ -	$ 128,120	$ -	$ -	$ -	$ 128,120	$ -

Missouri-American Water Company
Class Cost of Service Study - Account Detail
Case No: WR-2022-0303, SR-2022-0304

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Total Meter Expense	**$ 632,808**			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 632,808**	**$ -**	**$ -**	**$ -**	**$ 632,808**	**$ -**
Service Expense															
Operating Expense															
Salaries and Wages	$ -	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Miscellaneous	$ -	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance Expense															
Salaries and Wages	$ 306,472	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 306,472	$ -	$ -	$ 306,472	$ -
Miscellaneous	$ 5,392	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,392	$ -	$ -	$ 5,392	$ -
	$ 311,864			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 311,864	$ -	$ -	$ 311,864	$ -
Total Service Expense	**$ 311,864**			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 311,864**	**$ -**	**$ -**	**$ 311,864**	**$ -**
Hydrant Expense															
Maintenance Expense															
Salaries and Wages	$ 249,441	J	Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 249,441	$ 249,441	$ -
Miscellaneous	$ (851)	J	Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (851)	$ (851)	$ -
	$ 248,590			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 248,590	$ 248,590	$ -
Hydrant Expense	**$ 248,590**			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 248,590**	**$ 248,590**	**$ -**
Customer Accounts															
Fuel and Power	$ 1,626	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,626	$ -	$ 1,626	$ -
Salaries and Wages	$ 692,758	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 692,758	$ -	$ 692,758	$ -
Contract Services - Other	$ 129,439	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 129,439	$ -	$ 129,439	$ -
Building Maintenance and Services	$ 14,186	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 14,186	$ -	$ 14,186	$ -
Miscellaneous	$ -	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Telelcommunications	$ 13,448	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,448	$ -	$ 13,448	$ -
Office supplies and services	$ 3,770	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,770	$ -	$ 3,770	$ -
Materials & Supplies	$ 11,576	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 11,576	$ -	$ 11,576	$ -
Transportation	$ (32,254)	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (32,254)	$ -	$ (32,254)	$ -
Uncollectible Accounts	$ 3,379,792	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,379,792	$ -	$ 3,379,792	$ -
Customer accounting, other	$ 1,106,496	I	Customers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,106,496	$ -	$ 1,106,496	$ -
	$ 5,320,837			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,320,837	$ -	$ 5,320,837	$ -
Total Customer Accounting Expense	**$ 5,320,837**			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 5,320,837**	**$ -**	**$ 5,320,837**	**$ -**
Administrative & General Expense															
Operating Expense															
Fuel and Power	$ 22,483	3	Fixed O&M	$ 755	$ 1,535	$ 4,655	$ 530	$ 5,068	$ -	$ 2,716	$ 1,927	$ 3,761	$ 1,536	$ 22,483	$ -
Salaries and Wages	$ 11,584,140	4	Labor	$ 205,756	$ 1,219,870	$ 3,266,127	$ 335,287	$ 3,208,649	$ -	$ 1,691,700	$ 641,703	$ 499,825	$ 515,223	$ 11,584,140	$ -
Employee Benefits	$ 3,700,854	4	Labor	$ 65,734	$ 389,719	$ 1,043,449	$ 107,116	$ 1,025,086	$ -	$ 540,457	$ 205,009	$ 159,682	$ 164,601	$ 3,700,854	$ -
Support Services Costs - Employee	$ 13,784,538	4	Labor	$ 244,839	$ 1,451,583	$ 3,886,526	$ 398,975	$ 3,818,129	$ -	$ 2,013,037	$ 763,594	$ 594,766	$ 613,090	$ 13,784,538	$ -
Support Services Costs - Admin	$ 13,417,304	3	Fixed O&M	$ 450,854	$ 916,012	$ 2,777,791	$ 316,015	$ 3,024,216	$ -	$ 1,620,980	$ 1,150,193	$ 2,244,413	$ 916,830	$ 13,417,304	$ -
Contract Services - Eng	$ 115,691	3	Fixed O&M	$ 3,887	$ 7,898	$ 23,952	$ 2,725	$ 26,076	$ -	$ 13,977	$ 9,918	$ 19,353	$ 7,905	$ 115,691	$ -
Contract Services - Other	$ 1,069,189	3	Fixed O&M	$ 35,927	$ 72,995	$ 221,355	$ 25,182	$ 240,992	$ -	$ 129,172	$ 91,656	$ 178,851	$ 73,060	$ 1,069,189	$ -
Building Maintenance and Services	$ 375,508	3	Fixed O&M	$ 12,618	$ 25,636	$ 77,742	$ 8,844	$ 84,638	$ -	$ 45,366	$ 32,190	$ 62,814	$ 25,659	$ 375,508	$ -
Miscellaneous	$ 1,397,829	3	Fixed O&M	$ 46,970	$ 95,431	$ 289,393	$ 32,923	$ 315,066	$ -	$ 168,875	$ 119,828	$ 233,825	$ 95,516	$ 1,397,829	$ -
Telelcommunications	$ 639,572	3	Fixed O&M	$ 21,491	$ 43,664	$ 132,411	$ 15,064	$ 144,157	$ -	$ 77,268	$ 54,827	$ 106,986	$ 43,703	$ 639,572	$ -
Postage	$ -	3	Fixed O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Office supplies and services	$ 473,965	3	Fixed O&M	$ 15,926	$ 32,358	$ 98,125	$ 11,163	$ 106,830	$ -	$ 57,261	$ 40,630	$ 79,284	$ 32,387	$ 473,965	$ -
Materials & Supplies	$ 62,664	3	Fixed O&M	$ 2,106	$ 4,278	$ 12,973	$ 1,476	$ 14,124	$ -	$ 7,571	$ 5,372	$ 10,482	$ 4,282	$ 62,664	$ -
Communications	$ 12,067	3	Fixed O&M	$ 405	$ 824	$ 2,498	$ 284	$ 2,720	$ -	$ 1,458	$ 1,034	$ 2,019	$ 825	$ 12,067	$ -
Rents-Property	$ 96,349	3	Fixed O&M	$ 3,238	$ 6,578	$ 19,947	$ 2,269	$ 21,717	$ -	$ 11,640	$ 8,259	$ 16,117	$ 6,584	$ 96,349	$ -
Rents-Equipment	$ 12,359	3	Fixed O&M	$ 415	$ 844	$ 2,559	$ 291	$ 2,786	$ -	$ 1,493	$ 1,059	$ 2,067	$ 845	$ 12,359	$ -
Transportation	$ 1,750,896	3	Fixed O&M	$ 58,834	$ 119,535	$ 362,489	$ 41,239	$ 394,646	$ -	$ 211,530	$ 150,095	$ 292,886	$ 119,642	$ 1,750,896	$ -
Regulatory Expense	$ 233,194	3	Fixed O&M	$ 7,836	$ 15,920	$ 48,278	$ 5,492	$ 52,561	$ -	$ 28,173	$ 19,990	$ 39,008	$ 15,935	$ 233,194	$ -
Insurance	$ 5,131,596	3	Fixed O&M	$ 172,434	$ 350,339	$ 1,062,397	$ 120,863	$ 1,156,645	$ -	$ 619,962	$ 439,904	$ 858,401	$ 350,652	$ 5,131,596	$ -
	$ 53,880,198			$ 1,350,027	$ 4,755,019	$ 13,332,666	$ 1,425,739	$ 13,644,107	$ -	$ 7,242,636	$ 3,737,190	$ 5,404,539	$ 2,988,275	$ 53,880,198	$ -
Maintenance Expense															
Salaries and Wages	$ 68,914	4	Labor	$ 1,224	$ 7,257	$ 19,430	$ 1,995	$ 19,088	$ -	$ 10,064	$ 3,817	$ 2,973	$ 3,065	$ 68,914	$ -
Transportation	$ 11,799	3	Fixed O&M	$ 396	$ 806	$ 2,443	$ 278	$ 2,659	$ -	$ 1,425	$ 1,011	$ 1,974	$ 806	$ 11,799	$ -
Contract Services - Eng	$ -	3	Fixed O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Contract Services - Other	$ 58,683	3	Fixed O&M	$ 1,972	$ 4,006	$ 12,149	$ 1,382	$ 13,227	$ -	$ 7,090	$ 5,031	$ 9,816	$ 4,010	$ 58,683	$ -
Miscellaneous	$ 318,530	3	Fixed O&M	$ 10,703	$ 21,746	$ 65,945	$ 7,502	$ 71,796	$ -	$ 38,482	$ 27,306	$ 53,283	$ 21,766	$ 318,530	$ -
Materials & Supplies	$ 21,436	3	Fixed O&M	$ 720	$ 1,463	$ 4,438	$ 505	$ 4,832	$ -	$ 2,590	$ 1,838	$ 3,586	$ 1,465	$ 21,436	$ -
	$ 479,362			$ 15,016	$ 35,279	$ 104,405	$ 11,662	$ 111,602	$ -	$ 59,651	$ 39,003	$ 71,632	$ 31,112	$ 479,362	$ -
Total A&G Expense	**$ 54,359,560**			**$ 1,365,043**	**$ 4,790,298**	**$ 13,437,072**	**$ 1,437,401**	**$ 13,755,709**	**$ -**	**$ 7,302,287**	**$ 3,776,193**	**$ 5,476,171**	**$ 3,019,387**	**$ 54,359,560**	**$ -**
Total Operations & Maintenace Exp. (STL Water)	**$ 106,603,294**			**$ 7,042,778**	**$ 9,970,611**	**$ 32,840,064**	**$ 2,186,579**	**$ 20,925,227**	**$ -**	**$ 11,145,149**	**$ 6,502,958**	**$ 10,797,008**	**$ 5,192,919**	**$ 106,603,294**	**$ -**

Missouri-American Water Company
Class Cost of Service Study - Account Detail
Case No: WR-2022-0303, SR-2022-0304

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Taxes Other Than Income Tax															
Property Taxes	$ 28,327,198	5	Net Plant (less gen. a	$ 276,320	$ 1,037,096	$ 2,888,930	$ 1,992,959	$ 16,958,075	$ 115,604	$ 2,378,516	$ 1,351,865	$ 290,423	$ 1,037,410	$ 28,327,198	$ -
Payroll Taxes	$ 2,102,386	4	Labor	$ 37,342	$ 221,392	$ 592,764	$ 60,851	$ 582,332	$ -	$ 307,024	$ 116,462	$ 90,712	$ 93,507	$ 2,102,386	$ -
Utility Reg Assessment	$ 1,673,964	6	Rate Base	$ 18,700	$ 69,891	$ 194,777	$ 114,327	$ 948,422	$ 7,965	$ 155,671	$ 79,899	$ 18,899	$ 65,413	$ 1,673,964	$ -
Other Taxes	$ (93,694)	6	Rate Base	$ (1,047)	$ (3,912)	$ (10,902)	$ (6,399)	$ (53,084)	$ (446)	$ (8,713)	$ (4,472)	$ (1,058)	$ (3,661)	$ (93,694)	$ -
	$ 32,009,854			$ 331,316	$ 1,324,468	$ 3,665,569	$ 2,161,738	$ 18,435,744	$ 123,124	$ 2,832,497	$ 1,543,753	$ 398,977	$ 1,192,668	$ 32,009,854	$ -
Total Taxes Other Than Income Taxes (STL Water)	**$ 32,009,854**			**$ 331,316**	**$ 1,324,468**	**$ 3,665,569**	**$ 2,161,738**	**$ 18,435,744**	**$ 123,124**	**$ 2,832,497**	**$ 1,543,753**	**$ 398,977**	**$ 1,192,668**	**$ 32,009,854**	**$ -**
Plant Depreciation															
Intangible Plant															
Organization	$ -	5	Net Plant (less gen. a	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Franchises	$ -	5	Net Plant (less gen. a	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other P/E-Intangible	$ -	5	Net Plant (less gen. a	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Source of Supply															
Land & Land Rights	$ -	A	Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Structures & Improvements	$ 331,346	A	Source of Supply	$ 331,346	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 331,346	$ -
Collection & Impound Reservoirs	$ -	A	Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lake, River, & Other Intakes	$ 12,498	A	Source of Supply	$ 12,498	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 12,498	$ -
Wells & Springs	$ 10,018	A	Source of Supply	$ 10,018	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,018	$ -
Infiltration Galleries & Tunnels	$ -	A	Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Supply Mains	$ 87,813	A	Source of Supply	$ 87,813	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 87,813	$ -
Other P/E-Supply	$ -	A	Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Pumping															
Pumping Land & Land Rights	$ -	B	Pumping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Pumping Structures & Improvements	$ 872,371	B	Pumping	$ -	$ 872,371	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 872,371	$ -
Boiler Plant Equipment	$ -	B	Pumping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Power Generation Equipment	$ 390,913	B	Pumping	$ -	$ 390,913	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 390,913	$ -
Steam Pumping Equipment	$ -	B	Pumping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Electric Pumping Equipment	$ 1,106,403	B	Pumping	$ -	$ 1,106,403	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,106,403	$ -
Diesel Pumping Equipment	$ 37,191	B	Pumping	$ -	$ 37,191	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 37,191	$ -
Pump Equip Hydraulic	$ 4,935	B	Pumping	$ -	$ 4,935	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,935	$ -
Other Pumping Equipment	$ 155,209	B	Pumping	$ -	$ 155,209	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 155,209	$ -
Water Treatment															
Water Treatment Land & land Rights	$ -	C	Water Treatment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Treatment Structures & Improvements	$ 2,678,396	C	Water Treatment	$ -	$ -	$ 2,678,396	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,678,396	$ -
Water Treatment Equipment	$ 2,978,553	C	Water Treatment	$ -	$ -	$ 2,978,553	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,978,553	$ -
Water Treatment - Other	$ -	C	Water Treatment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
T&D															
Transmission & Distribution Land	$ -	K	Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Transmission & Distribution Structures & Impr	$ 87,933	K	Mains	$ -	$ -	$ -	$ 8,319	$ 79,613	$ -	$ -	$ -	$ -	$ -	$ 87,933	$ -
TD Mains 4in & Less	$ 379,344	E	Distribution	$ -	$ -	$ -	$ -	$ 379,344	$ -	$ -	$ -	$ -	$ -	$ 379,344	$ -
TD Mains 6in to 8in	$ 17,263,222	E	Distribution	$ -	$ -	$ -	$ -	$ 17,263,222	$ -	$ -	$ -	$ -	$ -	$ 17,263,222	$ -
TD Mains 10in to 16in	$ 4,054,537	D	Transmission	$ -	$ -	$ -	$ 663,125	$ 3,391,411	$ -	$ -	$ -	$ -	$ -	$ 4,054,537	$ -
TD Mains 18in & Grtr	$ 1,816,423	D	Transmission	$ -	$ -	$ -	$ 1,816,423	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,816,423	$ -
Other Transmission & Distribution Plant	$ -	K	Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Storage															
Distribution Reservoirs & Standpipes	$ 298,582	F	Storage	$ -	$ -	$ -	$ -	$ -	$ 298,582	$ -	$ -	$ -	$ -	$ 298,582	$ -
Distribution Reservoirs & Standpipes - Tank Coating	$ -	F	Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Meters															
Meters	$ 3,899,348	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,899,348	$ -	$ -	$ -	$ 3,899,348	$ -
Meter Installation	$ 543,000	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ 543,000	$ -	$ -	$ -	$ 543,000	$ -
Meter Vaults	$ -	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Services															
Services	$ 2,639,691	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,639,691	$ -	$ -	$ 2,639,691	$ -
Hydrants															
Hydrants	$ 1,653,509	J	Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,653,509	$ 1,653,509	$ -
Fire Mains	$ -	J	Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Missouri-American Water Company
Class Cost of Service Study - Account Detail
Case No: WR-2022-0303, SR-2022-0304

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
General Plant															
General Land & Land Rights	$ -	3	Fixed O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Stores Shops Equipment Structures	$ 543,416	3	Fixed O&M	$ 18,260	$ 37,100	$ 112,504	$ 12,799	$ 122,484	$ -	$ 65,651	$ 46,584	$ 90,901	$ 37,133	$ 543,416	$ -
Office Structures	$ 164,652	3	Fixed O&M	$ 5,533	$ 11,241	$ 34,088	$ 3,878	$ 37,112	$ -	$ 19,892	$ 14,115	$ 27,543	$ 11,251	$ 164,652	$ -
General Structures - HVAC	$ 51,519	3	Fixed O&M	$ 1,731	$ 3,517	$ 10,666	$ 1,213	$ 11,612	$ -	$ 6,224	$ 4,416	$ 8,618	$ 3,520	$ 51,519	$ -
Miscellaneous Structures	$ 53,468	3	Fixed O&M	$ 1,797	$ 3,650	$ 11,069	$ 1,259	$ 12,051	$ -	$ 6,460	$ 4,584	$ 8,944	$ 3,654	$ 53,468	$ -
Structures & Improvements - Leasehold	$ 1,151	3	Fixed O&M	$ 39	$ 79	$ 238	$ 27	$ 260	$ -	$ 139	$ 99	$ 193	$ 79	$ 1,151	$ -
Office Furniture and Equipment	$ 52,540	3	Fixed O&M	$ 1,765	$ 3,587	$ 10,877	$ 1,237	$ 11,842	$ -	$ 6,347	$ 4,504	$ 8,789	$ 3,590	$ 52,540	$ -
Computers & Peripheral Equipment	$ 1,055,026	3	Fixed O&M	$ 35,451	$ 72,028	$ 218,423	$ 24,849	$ 237,799	$ -	$ 127,460	$ 90,442	$ 176,482	$ 72,092	$ 1,055,026	$ -
Computer Hardware & Software	$ 1,053,708	3	Fixed O&M	$ 35,407	$ 71,938	$ 218,150	$ 24,818	$ 237,502	$ -	$ 127,301	$ 90,329	$ 176,262	$ 72,002	$ 1,053,708	$ -
Computer Software	$ 2,414,868	3	Fixed O&M	$ 81,145	$ 164,865	$ 499,951	$ 56,877	$ 544,303	$ -	$ 291,747	$ 207,013	$ 403,953	$ 165,013	$ 2,414,868	$ -
Personal Computer Software	$ -	3	Fixed O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Office Equipment	$ 42,566	3	Fixed O&M	$ 1,430	$ 2,906	$ 8,813	$ 1,003	$ 9,594	$ -	$ 5,143	$ 3,649	$ 7,120	$ 2,909	$ 42,566	$ -
BTS Initial Investment	$ 1,616,600	3	Fixed O&M	$ 54,322	$ 110,367	$ 334,685	$ 38,075	$ 364,376	$ -	$ 195,306	$ 138,582	$ 270,421	$ 110,465	$ 1,616,600	$ -
Transportation Equipment - Light Trucks	$ 832,785	3	Fixed O&M	$ 27,984	$ 56,855	$ 172,412	$ 19,614	$ 187,707	$ -	$ 100,611	$ 71,390	$ 139,306	$ 56,906	$ 832,785	$ -
Transportation Equipment - Heavy Trucks	$ -	3	Fixed O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Transportation Equipment - Cars	$ -	3	Fixed O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Transportation Equipment - Other	$ 372,031	3	Fixed O&M	$ 12,501	$ 25,399	$ 77,022	$ 8,762	$ 83,855	$ -	$ 44,946	$ 31,892	$ 62,232	$ 25,422	$ 372,031	$ -
Stores Equipment	$ 23,553	3	Fixed O&M	$ 791	$ 1,608	$ 4,876	$ 555	$ 5,309	$ -	$ 2,846	$ 2,019	$ 3,940	$ 1,609	$ 23,553	$ -
Tools, Shop, & Garage Equipment	$ 342,229	3	Fixed O&M	$ 11,500	$ 23,364	$ 70,852	$ 8,060	$ 77,137	$ -	$ 41,346	$ 29,337	$ 57,247	$ 23,385	$ 342,229	$ -
Laboratory Equipment	$ 42,412	C	Water Treatment	$ -	$ -	$ 42,412	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 42,412	$ -
Power Operated Equipment	$ 31,031	3	Fixed O&M	$ 1,043	$ 2,119	$ 6,424	$ 731	$ 6,994	$ -	$ 3,749	$ 2,660	$ 5,191	$ 2,120	$ 31,031	$ -
Communication Equipment	$ -	3	Fixed O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Communication Equipment (non telephone)	$ 362,427	3	Fixed O&M	$ 12,178	$ 24,743	$ 75,033	$ 8,536	$ 81,690	$ -	$ 43,786	$ 31,069	$ 60,626	$ 24,765	$ 362,427	$ -
Telephone Equipment	$ 8,071	3	Fixed O&M	$ 271	$ 551	$ 1,671	$ 190	$ 1,819	$ -	$ 975	$ 692	$ 1,350	$ 552	$ 8,071	$ -
Miscellaneous Equipment	$ 223,588	3	Fixed O&M	$ 7,513	$ 15,265	$ 46,290	$ 5,266	$ 50,396	$ -	$ 27,012	$ 19,167	$ 37,401	$ 15,278	$ 223,588	$ -
Other Tangible Property	$ 2,025	3	Fixed O&M	$ 68	$ 138	$ 419	$ 48	$ 456	$ -	$ 245	$ 174	$ 339	$ 138	$ 2,025	$ -
Plant Depreciation (STL Water)	$ 50,590,901			$ 752,404	$ 3,198,341	$ 7,613,824	$ 2,705,667	$ 23,197,892	$ 298,582	$ 5,559,533	$ 3,432,408	$ 1,546,858	$ 2,285,392	$ 50,590,901	$ -
CIAC-Non Taxable - Mains	$ (2,085,927)	K	Mains	$ -	$ -	$ -	$ (197,347)	$ (1,888,580)	$ -	$ -	$ -	$ -	$ -	$ (2,085,927)	$ -
CIAC-Non Taxable - Ext Dep	$ (712,213)	K	Mains	$ -	$ -	$ -	$ (67,382)	$ (644,831)	$ -	$ -	$ -	$ -	$ -	$ (712,213)	$ -
CIAC-Non Taxable - Services	$ (267)	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (267)	$ -	$ -	$ (267)	$ -
CIAC-Non Taxable - Meters	$ (127,558)	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ (127,558)	$ -	$ -	$ -	$ (127,558)	$ -
CIAC-Non Taxable - Hydrants	$ (97,228)	J	Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (97,228)	$ (97,228)	$ -
CIAC-Non Taxable - Other	$ (56,663)	K	Mains	$ -	$ -	$ -	$ (5,361)	$ (51,302)	$ -	$ -	$ -	$ -	$ -	$ (56,663)	$ -
CIAC-Non Taxable - WIP	$ (0)	K	Mains	$ -	$ -	$ -	$ (0)	$ (0)	$ -	$ -	$ -	$ -	$ -	$ (0)	$ -
CIAC-Taxable - Mains	$ (425,813)	K	Mains	$ -	$ -	$ -	$ (40,286)	$ (385,527)	$ -	$ -	$ -	$ -	$ -	$ (425,813)	$ -
CIAC-Taxable - Extension Deposits	$ (34,613)	K	Mains	$ -	$ -	$ -	$ (3,275)	$ (31,338)	$ -	$ -	$ -	$ -	$ -	$ (34,613)	$ -
CIAC-Taxable - Services	$ (356,312)	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (356,312)	$ -	$ -	$ (356,312)	$ -
CIAC-Taxable - Meters	$ (14,672)	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ (14,672)	$ -	$ -	$ -	$ (14,672)	$ -
CIAC-Taxable - Hydrants	$ 47	J	Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 47	$ 47	$ -
CIAC-Taxable - Other	$ (1,164)	K	Mains	$ -	$ -	$ -	$ (110)	$ (1,054)	$ -	$ -	$ -	$ -	$ -	$ (1,164)	$ -
CIAC-Taxable - WIP	$ (0)	K	Mains	$ -	$ -	$ -	$ (0)	$ (0)	$ -	$ -	$ -	$ -	$ -	$ (0)	$ -
CIAC-Taxable - Services SIT	$ -	K	Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Amortization of CIAC (STL Water)	$ (3,912,382)			$ -	$ -	$ -	$ (313,760)	$ (3,002,633)	$ -	$ (142,230)	$ (356,579)	$ -	$ (97,181)	$ (3,912,382)	$ -
Total Depreciation Expense (STL Water)	**$ 46,678,518**			**$ 752,404**	**$ 3,198,341**	**$ 7,613,824**	**$ 2,391,907**	**$ 20,195,259**	**$ 298,582**	**$ 5,417,303**	**$ 3,075,829**	**$ 1,546,858**	**$ 2,188,211**	**$ 46,678,518**	**$ -**
Eureka Depreciation	$ 425,107	3	Fixed O&M	$ 14,285	$ 29,022	$ 88,010	$ 10,012	$ 95,818	$ -	$ 51,358	$ 36,442	$ 71,111	$ 29,048	$ 425,107	$ -
Total Depreciation Expense	**$ 47,103,625**			**$ 766,689**	**$ 3,227,363**	**$ 7,701,834**	**$ 2,401,919**	**$ 20,291,077**	**$ 298,582**	**$ 5,468,662**	**$ 3,112,271**	**$ 1,617,968**	**$ 2,217,259**	**$ 47,103,625**	**$ -**
Amortization Expense															
Lead Service Replacement	$ 3,552,823	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,552,823	$ -	$ -	$ 3,552,823	$ -
Amortization - Reg Asset AFUDC	$ 1,135,922	6	Rate Base	$ 12,690	$ 47,427	$ 132,172	$ 77,580	$ 643,582	$ 5,405	$ 105,635	$ 54,218	$ 12,825	$ 44,388	$ 1,135,922	$ -
Amortization - Property Losses	$ 457,217	6	Rate Base	$ 5,108	$ 19,090	$ 53,200	$ 31,227	$ 259,047	$ 2,176	$ 42,519	$ 21,823	$ 5,162	$ 17,866	$ 457,217	$ -
Amortization - Reg Asset	$ -	6	Rate Base	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Hollister Pipeline	$ 6,801	6	Rate Base	$ 76	$ 284	$ 791	$ 465	$ 3,853	$ 32	$ 632	$ 325	$ 77	$ 266	$ 6,801	$ -
Low Income Costs	$ 7,596	6	Rate Base	$ 85	$ 317	$ 884	$ 519	$ 4,304	$ 36	$ 706	$ 363	$ 86	$ 297	$ 7,596	$ -
Total Amortization Expense (STL Water)	$ 5,160,359			$ 17,958	$ 67,118	$ 187,047	$ 109,790	$ 910,786	$ 7,649	$ 149,493	$ 3,629,551	$ 18,149	$ 62,817	$ 5,160,359	$ -
Total Amortization Expense	**$ 5,160,359**			**$ 17,958**	**$ 67,118**	**$ 187,047**	**$ 109,790**	**$ 910,786**	**$ 7,649**	**$ 149,493**	**$ 3,629,551**	**$ 18,149**	**$ 62,817**	**$ 5,160,359**	**$ -**

Missouri-American Water Company
Class Cost of Service Study - Account Detail
Case No: WR-2022-0303, SR-2022-0304

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Income Taxes															
Federal Income Tax	$ 7,017,187	6	Rate Base	$ 78,390	$ 292,982	$ 816,496	$ 479,255	$ 3,975,745	$ 33,390	$ 652,565	$ 334,932	$ 79,226	$ 274,207	$ 7,017,187	$ -
State Income Tax	$ 1,217,524	6	Rate Base	$ 13,601	$ 50,834	$ 141,667	$ 83,154	$ 689,816	$ 5,793	$ 113,224	$ 58,113	$ 13,746	$ 47,576	$ 1,217,524	
Deferred Income Taxes	$ 9,065,741	6	Rate Base	$ 101,275	$ 378,513	$ 1,054,859	$ 619,166	$ 5,136,399	$ 43,137	$ 843,070	$ 432,710	$ 102,355	$ 354,257	$ 9,065,741	
ITC Restored	$ (74,894)	6	Rate Base	$ (837)	$ (3,127)	$ (8,714)	$ (5,115)	$ (42,433)	$ (356)	$ (6,965)	$ (3,575)	$ (846)	$ (2,927)	$ (74,894)	$ -
Total Income Taxes (STL Water)	$ 17,225,558			$ 192,430	$ 719,202	$ 2,004,307	$ 1,176,459	$ 9,759,527	$ 81,964	$ 1,601,894	$ 822,179	$ 194,481	$ 673,113	$ 17,225,558	$ -
Total Income Tax Expense	**$ 17,225,558**			**$ 192,430**	**$ 719,202**	**$ 2,004,307**	**$ 1,176,459**	**$ 9,759,527**	**$ 81,964**	**$ 1,601,894**	**$ 822,179**	**$ 194,481**	**$ 673,113**	**$ 17,225,558**	
Required Net Operating Income (STL Water)	$ 127,063,668	6	Rate Base	$ 1,419,451	$ 5,305,168	$ 14,784,696	$ 8,678,107	$ 71,990,779	$ 604,606	$ 11,816,312	$ 6,064,773	$ 1,434,581	$ 4,965,193	$ 127,063,668	$ -
Required Net Operating Income	$ 127,063,668			$ 1,419,451	$ 5,305,168	$ 14,784,696	$ 8,678,107	$ 71,990,779	$ 604,606	$ 11,816,312	$ 6,064,773	$ 1,434,581	$ 4,965,193	$ 127,063,668	$ -
Total Revenue Requirement (STL Water)	**$ 335,166,358**			**$ 9,770,622**	**$ 20,613,931**	**$ 61,183,518**	**$ 16,714,593**	**$ 142,313,141**	**$ 1,115,926**	**$ 33,014,008**	**$ 21,675,485**	**$ 14,461,165**	**$ 14,303,970**	**$ 335,166,358**	**$ -**
Other Operating Revenue (STL Water)	$ (3,581,210)	6	Rate Base	$ (40,006)	$ (149,523)	$ (416,697)	$ (244,587)	$ (2,029,015)	$ (17,040)	$ (333,035)	$ (170,932)	$ (40,433)	$ (139,941)	$ (3,581,210)	$ -
Total Retail Revenue Requirement (STL Water)	**$ 331,585,148**			**$ 9,730,616**	**$ 20,464,408**	**$ 60,766,821**	**$ 16,470,006**	**$ 140,284,125**	**$ 1,098,885**	**$ 32,680,973**	**$ 21,504,553**	**$ 14,420,733**	**$ 14,164,029**	**$ 331,585,148**	**$ -**
Total Revenue Requirement (STL Water)	**$ 335,166,361**														
check	$ 3														

Missouri-American Water Company
Class Cost of Service Study - Account Detail
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	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Plant Account															
Intangible Plant															
Organization	$ 154,919	5	Net Plant (less gen. a	$ 1,511	$ 5,672	$ 15,799	$ 10,899	$ 92,742	$ 632	$ 13,008	$ 7,393	$ 1,588	$ 5,674	$ 154,919	$ -
Franchises	$ -	5	Net Plant (less gen. a	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other P/E-Intangible	$ 942,662	5	Net Plant (less gen. a	$ 9,195	$ 34,512	$ 96,137	$ 66,321	$ 564,325	$ 3,847	$ 79,151	$ 44,987	$ 9,665	$ 34,523	$ 942,662	$ -
Source of Supply															
Land & Land Rights	$ 1,507,036	A	Source of Supply	$ 1,507,036	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,507,036	$ -
Structures & Improvements	$ 13,666,910	A	Source of Supply	$ 13,666,910	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,666,910	$ -
Collection & Impound Reservoirs	$ -	A	Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lake, River, & Other Intakes	$ 266,443	A	Source of Supply	$ 266,443	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 266,443	$ -
Wells & Springs	$ 393,847	A	Source of Supply	$ 393,847	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 393,847	$ -
Infiltration Galleries & Tunnels	$ -	A	Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Supply Mains	$ 1,556,863	A	Source of Supply	$ 1,556,863	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,556,863	$ -
Other P/E-Supply	$ -	A	Source of Supply	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Pumping															
Pumping Land & Land Rights	$ 284,360	B	Pumping	$ -	$ 284,360	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 284,360	$ -
Pumping Structures & Improvements	$ 15,454,184	B	Pumping	$ -	$ 15,454,184	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,454,184	$ -
Boiler Plant Equipment	$ -	B	Pumping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Power Generation Equipment	$ 10,984,740	B	Pumping	$ -	$ 10,984,740	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,984,740	$ -
Steam Pumping Equipment	$ -	B	Pumping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Electric Pumping Equipment	$ 37,356,593	B	Pumping	$ -	$ 37,356,593	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 37,356,593	$ -
Diesel Pumping Equipment	$ 135,173	B	Pumping	$ -	$ 135,173	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 135,173	$ -
Pump Equip Hydraulic	$ 209,898	B	Pumping	$ -	$ 209,898	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 209,898	$ -
Other Pumping Equipment	$ 8,860,976	B	Pumping	$ -	$ 8,860,976	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,860,976	$ -
Water Treatment														$ -	$ -
Water Treatment Land & land Rights	$ 1,902,246	C	Water Treatment	$ -	$ -	$ 1,902,246	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,902,246	$ -
Water Treatment Structures & Improvements	$ 82,460,631	C	Water Treatment	$ -	$ -	$ 82,460,631	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 82,460,631	$ -
Water Treatment Equipment	$ 116,700,451	C	Water Treatment	$ -	$ -	$ 116,700,451	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 116,700,451	$ -
Water Treatment - Other	$ -	C	Water Treatment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
														$ -	$ -
T&D														$ -	$ -
Transmission & Distribution Land	$ 4,091,405	K	Mains	$ -	$ -	$ -	$ 387,083	$ 3,704,322	$ -	$ -	$ -	$ -	$ -	$ 4,091,405	$ -
Transmission & Distribution Structures & Impr	$ 1,639,748	K	Mains	$ -	$ -	$ -	$ 155,135	$ 1,484,614	$ -	$ -	$ -	$ -	$ -	$ 1,639,748	$ -
TD Mains 4in & Less	$ 23,743,864	E	Distribution	$ -	$ -	$ -	$ -	$ 23,743,864	$ -	$ -	$ -	$ -	$ -	$ 23,743,864	$ -
TD Mains 6in to 8in	$ 1,080,536,698	E	Distribution	$ -	$ -	$ -	$ -	$ 1,080,536,698	$ -	$ -	$ -	$ -	$ -	$ 1,080,536,698	$ -
TD Mains 10in to 16in	$ 253,780,880	D	Transmission	$ -	$ -	$ -	$ 41,506,226	$ 212,274,654	$ -	$ -	$ -	$ -	$ -	$ 253,780,880	$ -
TD Mains 18in & Grtr	$ 113,693,267	D	Transmission	$ -	$ -	$ -	$ 113,693,267	$ -	$ -	$ -	$ -	$ -	$ -	$ 113,693,267	$ -
Other Transmission & Distribution Plant	$ -	K	Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
														$ -	$ -
Storage														$ -	$ -
Distribution Reservoirs & Standpipes	$ 9,223,269	F	Storage	$ -	$ -	$ -	$ -	$ -	$ 9,223,269	$ -	$ -	$ -	$ -	$ 9,223,269	$ -
Distribution Reservoirs & Standpipes - Tank Coating	$ -	F	Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Meters														$ -	$ -
Meters	$ 160,730,168	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ 160,730,168	$ -	$ -	$ -	$ 160,730,168	$ -
Meter Installation	$ 12,300,266	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ 12,300,266	$ -	$ -	$ -	$ 12,300,266	$ -
Meter Vaults	$ -	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
														$ -	$ -
Services														$ -	$ -
Services	$ 95,981,453	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 95,981,453	$ -	$ -	$ 95,981,453	$ -
Hydrants														$ -	$ -
Hydrants	$ 73,302,495	J	Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 73,302,495	$ 73,302,495	$ -
Fire Mains	$ -	J	Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
														$ -	$ -

Missouri-American Water Company
Class Cost of Service Study - Account Detail
Case No: WR-2022-0303, SR-2022-0304

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
General Plant															
General Land & Land Rights	$ 1,749	3	Fixed O&M	$ 59	$ 119	$ 362	$ 41	$ 394	$ -	$ 211	$ 150	$ 293	$ 120	$ 1,749	$ -
Stores Shops Equipment Structures	$ 17,150,508	3	Fixed O&M	$ 576,299	$ 1,170,882	$ 3,550,678	$ 403,942	$ 3,865,668	$ -	$ 2,071,998	$ 1,470,220	$ 2,868,894	$ 1,171,927	$ 17,150,508	$ -
Office Structures	$ 6,948,889	3	Fixed O&M	$ 233,500	$ 474,407	$ 1,438,632	$ 163,666	$ 1,566,257	$ -	$ 839,514	$ 595,690	$ 1,162,393	$ 474,831	$ 6,948,889	$ -
General Structures - HVAC	$ 1,280,856	3	Fixed O&M	$ 43,040	$ 87,445	$ 265,176	$ 30,168	$ 288,701	$ -	$ 154,744	$ 109,801	$ 214,258	$ 87,523	$ 1,280,856	$ -
Miscellaneous Structures	$ 568,109	3	Fixed O&M	$ 19,090	$ 38,785	$ 117,616	$ 13,381	$ 128,050	$ -	$ 68,635	$ 48,701	$ 95,032	$ 38,820	$ 568,109	$ -
Structures & Improvements - Leasehold	$ (139,053)	3	Fixed O&M	$ (4,673)	$ (9,493)	$ (28,788)	$ (3,275)	$ (31,342)	$ -	$ (16,799)	$ (11,920)	$ (23,261)	$ (9,502)	$ (139,053)	$ -
Office Furniture and Equipment	$ 1,032,745	3	Fixed O&M	$ 34,703	$ 70,507	$ 213,810	$ 24,324	$ 232,777	$ -	$ 124,769	$ 88,532	$ 172,755	$ 70,569	$ 1,032,745	$ -
Computers & Peripheral Equipment	$ 3,709,769	3	Fixed O&M	$ 124,657	$ 253,269	$ 768,035	$ 87,375	$ 836,170	$ -	$ 448,187	$ 318,018	$ 620,561	$ 253,496	$ 3,709,769	$ -
Computer Hardware & Software	$ 149,162	3	Fixed O&M	$ 5,012	$ 10,183	$ 30,881	$ 3,513	$ 33,621	$ -	$ 18,021	$ 12,787	$ 24,951	$ 10,193	$ 149,162	$ -
Computer Software	$ 37,629,653	3	Fixed O&M	$ 1,264,448	$ 2,569,012	$ 7,790,485	$ 886,284	$ 8,481,600	$ -	$ 4,546,138	$ 3,225,786	$ 6,294,594	$ 2,571,307	$ 37,629,653	$ -
Personal Computer Software	$ -	3	Fixed O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Office Equipment	$ 461,170	3	Fixed O&M	$ 15,496	$ 31,484	$ 95,476	$ 10,862	$ 103,946	$ -	$ 55,715	$ 39,534	$ 77,143	$ 31,513	$ 461,170	$ -
BTS Initial Investment	$ 16,521,372	3	Fixed O&M	$ 555,158	$ 1,127,930	$ 3,420,428	$ 389,125	$ 3,723,863	$ -	$ 1,995,991	$ 1,416,287	$ 2,763,654	$ 1,128,937	$ 16,521,372	$ -
Transportation Equipment - Light Trucks	$ 12,157,338	3	Fixed O&M	$ 408,516	$ 829,993	$ 2,516,940	$ 286,339	$ 2,740,224	$ -	$ 1,468,760	$ 1,042,182	$ 2,033,649	$ 830,734	$ 12,157,338	$ -
Transportation Equipment - Heavy Trucks	$ 22,121,760	3	Fixed O&M	$ 743,345	$ 1,510,274	$ 4,579,879	$ 521,029	$ 4,986,172	$ -	$ 2,672,588	$ 1,896,378	$ 3,700,473	$ 1,511,623	$ 22,121,760	$ -
Transportation Equipment - Cars	$ 1,258,141	3	Fixed O&M	$ 42,277	$ 85,895	$ 260,474	$ 29,633	$ 283,581	$ -	$ 151,999	$ 107,854	$ 210,459	$ 85,971	$ 1,258,141	$ -
Transportation Equipment - Other	$ 3,405,386	3	Fixed O&M	$ 114,429	$ 232,489	$ 705,019	$ 80,206	$ 767,563	$ -	$ 411,414	$ 291,925	$ 569,644	$ 232,697	$ 3,405,386	$ -
Stores Equipment	$ 764,039	3	Fixed O&M	$ 25,674	$ 52,162	$ 158,179	$ 17,995	$ 172,212	$ -	$ 92,306	$ 65,497	$ 127,807	$ 52,208	$ 764,039	$ -
Tools, Shop, & Garage Equipment	$ 6,529,558	3	Fixed O&M	$ 219,409	$ 445,779	$ 1,351,818	$ 153,789	$ 1,471,741	$ -	$ 788,853	$ 559,743	$ 1,092,248	$ 446,177	$ 6,529,558	$ -
Laboratory Equipment	$ 746,821	C	Water Treatment	$ -	$ -	$ 746,821	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 746,821	$ -
Power Operated Equipment	$ 63,718	3	Fixed O&M	$ 2,141	$ 4,350	$ 13,192	$ 1,501	$ 14,362	$ -	$ 7,698	$ 5,462	$ 10,659	$ 4,354	$ 63,718	$ -
Communication Equipment	$ -	3	Fixed O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Communication Equipment (non telephone)	$ 4,439,930	3	Fixed O&M	$ 149,192	$ 303,118	$ 919,201	$ 104,573	$ 1,000,745	$ -	$ 536,400	$ 380,611	$ 742,700	$ 303,389	$ 4,439,930	$ -
Telephone Equipment	$ 85,649	3	Fixed O&M	$ 2,878	$ 5,847	$ 17,732	$ 2,017	$ 19,305	$ -	$ 10,347	$ 7,342	$ 14,327	$ 5,853	$ 85,649	$ -
Miscellaneous Equipment	$ 2,300,043	3	Fixed O&M	$ 77,287	$ 157,026	$ 476,179	$ 54,172	$ 518,422	$ -	$ 277,874	$ 197,170	$ 384,745	$ 157,166	$ 2,300,043	$ -
Other Tangible Property	$ 76,662	3	Fixed O&M	$ 2,576	$ 5,234	$ 15,871	$ 1,806	$ 17,279	$ -	$ 9,262	$ 6,572	$ 12,824	$ 5,238	$ 76,662	$ -
Net Utility Plant	$ 2,261,125,417			$ 22,056,318	$ 82,782,806	$ 230,599,358	$ 159,081,397	$ 1,353,622,528	$ 9,227,748	$ 189,857,216	$ 107,908,155	$ 23,182,056	$ 82,807,835	$ 2,261,125,417	$ -
Additions to Rate Base															
Cash Working Capital(STL Water)	$ (3,358,846)	3	Fixed O&M	$ (112,865)	$ (229,312)	$ (695,384)	$ (79,110)	$ (757,073)	$ -	$ (405,791)	$ (287,936)	$ (561,859)	$ (229,516)	$ (3,358,846)	$ -
Materials and Supplies(STL Water)	$ 7,523,443	5	Net Plant (less gen. a	$ 73,388	$ 275,443	$ 767,273	$ 529,312	$ 4,503,908	$ 30,703	$ 631,712	$ 359,043	$ 77,134	$ 275,527	$ 7,523,443	$ -
Pension Asset(STL Water)	$ 11,703,053	5	Net Plant (less gen. a	$ 114,158	$ 428,464	$ 1,193,528	$ 823,368	$ 7,006,032	$ 47,761	$ 982,656	$ 558,507	$ 119,985	$ 428,594	$ 11,703,053	$ -
Regulatory Deferrals(STL Water)	$ 2,286,087	5	Net Plant (less gen. a	$ 22,300	$ 83,697	$ 233,145	$ 160,838	$ 1,368,566	$ 9,330	$ 191,953	$ 109,099	$ 23,438	$ 83,722	$ 2,286,087	$ -
Tank Painting Tracker(STL Water)	$ -	F	Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Additions	$ 18,153,737			$ 96,981	$ 558,293	$ 1,498,563	$ 1,434,407	$ 12,121,433	$ 87,794	$ 1,400,530	$ 738,714	$ (341,303)	$ 558,326	$ 18,153,737	$ -
Reductions to Rate Base															
Customer Advances for Construction															
Advances for Construction - NT Mains	$ (24,796)	K	Mains	$ -	$ -	$ -	$ (2,346)	$ (22,450)	$ -	$ -	$ -	$ -	$ -	$ (24,796)	$ -
Advances for Construction - NT Extension Deposits	$ (1,030,964)	K	Mains	$ -	$ -	$ -	$ (97,538)	$ (933,426)	$ -	$ -	$ -	$ -	$ -	$ (1,030,964)	$ -
Advances for Construction - NT Hydrants	$ -	J	Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Advances for Construction - NT WIP	$ -	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Advances for Construction - TAX Mains	$ -	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Advances for Construction - Reclassed to Current	$ -	K	Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Allocated MAWC Corporate - Customer Advances	$ 3,012	K	Mains	$ -	$ -	$ -	$ 285	$ 2,727	$ -	$ -	$ -	$ -	$ -	$ 3,012	$ -
CIAC															
CIAC-Non Taxable - Mains	$ (149,292,558)	K	Mains	$ -	$ -	$ -	$ (14,124,382)	$ (135,168,176)	$ -	$ -	$ -	$ -	$ -	$ (149,292,558)	$ -
CIAC-Non Taxable - Ext Dep	$ (51,238,345)	K	Mains	$ -	$ -	$ -	$ (4,847,596)	$ (46,390,749)	$ -	$ -	$ -	$ -	$ -	$ (51,238,345)	$ -
CIAC-Non Taxable - Services	$ (9,152)	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (9,152)	$ -	$ -	$ (9,152)	$ -
CIAC-Non Taxable - Meters	$ (5,319,778)	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ (5,319,778)	$ -	$ -	$ -	$ (5,319,778)	$ -
CIAC-Non Taxable - Hydrants	$ (5,255,590)	J	Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (5,255,590)	$ (5,255,590)	$ -
CIAC-Non Taxable - Other	$ (1,909,057)	K	Mains	$ -	$ -	$ -	$ (180,613)	$ (1,728,444)	$ -	$ -	$ -	$ -	$ -	$ (1,909,057)	$ -
CIAC-Non Taxable - WIP	$ -	K	Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CIAC-Taxable - Mains	$ (30,121,444)	K	Mains	$ -	$ -	$ -	$ (2,849,752)	$ (27,271,692)	$ -	$ -	$ -	$ -	$ -	$ (30,121,444)	$ -
CIAC-Taxable - Extension Deposits	$ (2,490,136)	K	Mains	$ -	$ -	$ -	$ (235,589)	$ (2,254,547)	$ -	$ -	$ -	$ -	$ -	$ (2,490,136)	$ -
CIAC-Taxable - Services	$ (12,202,449)	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (12,202,449)	$ -	$ -	$ (12,202,449)	$ -
CIAC-Taxable - Meters	$ (611,339)	G	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ (611,339)	$ -	$ -	$ -	$ (611,339)	$ -
CIAC-Taxable - Hydrants	$ 2,563	J	Hydrants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,563	$ 2,563	$ -
CIAC-Taxable - Other	$ (39,314)	K	Mains	$ -	$ -	$ -	$ (3,719)	$ (35,595)	$ -	$ -	$ -	$ -	$ -	$ (39,314)	$ -
CIAC-Taxable - WIP	$ -	K	Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CIAC-Taxable - Services SIT	$ -	H	Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Accum Amort CIAC	$ 60,921,180	5	Net Plant (less gen. a	$ 594,260	$ 2,230,405	$ 6,213,006	$ 4,286,107	$ 36,470,459	$ 248,622	$ 5,115,296	$ 2,907,354	$ 624,591	$ 2,231,080	$ 60,921,180	$ -
Allocated MAWC Corporate - CIAC	$ (1,294,222)	K	Mains	$ -	$ -	$ -	$ (122,445)	$ (1,171,777)	$ -	$ -	$ -	$ -	$ -	$ (1,294,222)	$ -
Deferred Income Tax (STL Water)	$ (398,618,481)	5	Net Plant (less gen. a	$ (3,888,354)	$ (14,593,952)	$ (40,652,838)	$ (28,044,789)	$ (238,632,918)	$ (1,626,779)	$ (33,470,322)	$ (19,023,352)	$ (4,086,813)	$ (14,598,365)	$ (398,618,481)	$ -
Pension/OPEB Tracker (STL Water)	$ (12,633,100)	4	Labor	$ (224,387)	$ (1,330,330)	$ (3,561,880)	$ (365,648)	$ (3,499,197)	$ -	$ (1,844,885)	$ (699,810)	$ (545,084)	$ (561,877)	$ (12,633,100)	$ -
Total Reductions	$ (611,163,970)			$ (3,518,481)	$ (13,693,877)	$ (38,001,712)	$ (46,588,025)	$ (420,635,784)	$ (1,378,157)	$ (36,131,028)	$ (29,027,409)	$ (4,007,306)	$ (18,182,189)	$ (611,163,970)	$ -
TOTAL RATE BASE (STL Water)	**$ 1,668,115,184**			**$ 18,634,818**	**$ 69,647,221**	**$ 194,096,208**	**$ 113,927,779**	**$ 945,108,177**	**$ 7,937,385**	**$ 155,126,718**	**$ 79,619,460**	**$ 18,833,447**	**$ 65,183,971**	**$ 1,668,115,184**	**$ -**
TOTAL MO RATE BASE	**$ 1,668,115,184**														

Missouri-American Water Company
Class Cost of Service Study - Account Detail
Case No: WR-2022-0303, SR-2022-0304

	Post Test Year	Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total	Variance
Miscellaneous T&D Operating Expense	$ 1,578,087	1	$ -	$ -	$ -	$ -	$ 101,553	$ 971,846	$ -	$ 504,688	$ -	$ -	$ -	$ 1,578,087	
				-	-	-	0.06435	0.61584	-	0.31981	-	-	-	1.00000	
Miscellaneous T&D Maintenance Expense	$ 931,957	2		$ -	$ -	$ -	$ 23,026	$ 220,357	$ -	$ 128,120	$ 311,864	$ -	$ 248,590	$ 931,957	
				-	-	-	0.02471	0.23645	-	0.13747	0.33463	-	0.26674	1.00000	
Fixed O&M	$ 31,326,552	3		$ 1,068,841	$ 2,171,593	$ 6,585,318	$ 749,178	$ 7,169,519	$ -	$ 3,842,862	$ 2,726,765	$ 5,320,837	$ 2,173,533	$ 31,808,446	
				0.03360	0.06827	0.20703	0.02355	0.22540	-	0.12081	0.08572	0.16728	0.06833	1.00000	
Labor	$ 27,708,698	4		$ 285,178	$ 1,690,742	$ 4,526,860	$ 464,709	$ 4,447,195	$ -	$ 2,344,699	$ 889,402	$ 692,758	$ 714,101	$ 16,055,644	
				0.01776	0.10531	0.28195	0.02894	0.27699	-	0.14604	0.05539	0.04315	0.04448	1.00000	
Net Plant	$ 2,261,125,417	5		$ 22,045,612	$ 82,742,622	$ 230,487,422	$ 159,004,177	$ 1,352,965,461	$ 9,223,269	$ 189,765,057	$ 107,855,775	$ 23,170,803	$ 82,767,639	$ 2,260,027,835	
				0.00975	0.03661	0.10198	0.07035	0.59865	0.00408	0.08397	0.04772	0.01025	0.03662	1.00000	
Rate Base	$ 1,668,115,184	6		$ 18,634,818	$ 69,647,221	$ 194,096,208	$ 113,927,779	$ 945,108,177	$ 7,937,385	$ 155,126,718	$ 79,619,460	$ 18,833,447	$ 65,183,971	$ 1,668,115,184	
				0.01117	0.04175	0.11636	0.06830	0.56657	0.00476	0.09300	0.04773	0.01129	0.03908	1.00000	
Variable Cost	$ 20,435,288			$ 4,608,894	$ 3,008,720	$ 12,817,674	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,435,288	

Missouri-American Water Company
Cost of Service Study - Usage Statistics
Case No: WR-2022-0303, SR-2022-0304

	Residential	Non Residential	Rate J	Rate B	Contracts	Public Fire	Rate F Private Fire	Total	
Total Usage	230,200,596	76,083,359	32,593,962	16,156,639	24,293,869		522,754	379,851,179	hundred gallons
Average Day Usage	630,687	208,448	89,299	44,265	66,559	-	1,432	1,040,688	hundred gallons
Max Day Capacity Factor	1.97	2.09	1.38	1.24	1.26			---	
Max Day Usage	1,242,453	435,655	123,265	54,888	83,864	93,091	26,909	2,060,125	hundred gallons
Extra Capacity	611,766	227,208	33,966	10,624	17,305	93,091	25,477	1,019,437	hundred gallons
Fire Allocator						0.7758	0.2242	1.0000	20,000 gpm for 10 hours
Distribution Multiplier	1.00	1.00	0.01	0.21		1.00	1.00	N/A	
Average Hourly Usage	26,279	8,685	53	383	-	-	60	35,460	hundred gallons
Max Hour Capacity Factor	3.98	3.52	1.38	1.24	1.26			---	
Max Hour Usage	104,589	30,572	73	475	-	13,964	4,036	153,710	hundred gallons
Extra Capacity	78,310	21,887	20	92	-	13,964	3,977	118,250	hundred gallons
Customers	322,445	17,860	135	4	2		7,480	347,926	
Hydrants						32,467	38	32,505	
Revenue	$ 167,224,457	$ 49,403,315	$ 6,252,876	$ 4,232,070	$ 3,977,486		$ 3,759,239	$ 234,849,443	

	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Meter Weighting	Service Weighting
5/8-METER	285,742	7,343	-	-	-		-	1.0	1.0
3/4-METER	24,390	3,049	-	-	-		-	1.5	1.0
1-METER	10,633	2,222	3	-	-		-	2.5	2.9
1.5-METER	757	1,111	-	-	-		-	5.0	4.0
2-METER	1,029	3,329	6	-	-		135	8.0	5.6
3-METER	21	306	3	-	-		1	16.0	5.6
4-METER	25	214	19	-	-		553	25.0	6.4
6-METER	24	204	20	-	-		2,291	50.0	9.9
8-METER	43	241	9	-	-		1,330	80.0	9.9
10-METER	3	57	7	-	-		33	115.0	9.9
12-METER	-	-	-	-	-		82	215.0	12.2
16-METER	-	-	-	-	-		-	320.0	12.2

Enter 1 to update distribution Rate J multiplier	1
Filed Distrbution Multiplier	0.44
JAY Surrebuttal Distribution Multipler	1.43%
length of distribution mains serving Rate J	309,400
Total length of distribution mains	21,706,675

Missouri-American Water Company
Cost of Service Study - Usage Statistics
Case No: WR-2022-0303, SR-2022-0304

System Load Factor:	0.5560	1,871,762	max day - thousand gallons per day	Average system hourly flow on max day
System Load Factor (fire):	0.5229	1,990,330	max day with fire - thousand gallons per day	Average system hourly flow on max day
System Load Factor (Hourly)	0.3738	94,854	max hour - thousand gallons per day	
System Load Factor (Hourly fire)	0.3144	112,794	max hour with fire - thousand gallons per day	

Mains Statistics

Type		Pct
Transmission	2,268,236	0.0946
Distribution	21,706,675	0.9054
Total	23,974,911	1.0000

Storage Statistics

Total Capacity	1,034,700	hundred gallons (2021 annual report)
Fire Allocation	0.1146	percentage of storage needed for maximum fire protection day
Non-Fire Allocation	0.8854	

Missouri-American Water Company
Cost of Service Study - Class Allocators
Case No: WR-2022-0303, SR-2022-0304

1. VARIABLE COST

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Units
Total Usage	230,200,596	76,083,359	32,593,962	16,156,639	24,293,869	-	522,754	379,851,179	hundred gallons
Allocator	**0.6060**	**0.2003**	**0.0858**	**0.0425**	**0.0640**	**-**	**0.0014**	**1.0000**	

2. BASE/EXTRA DAILY

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Units
Average Daily Use	630,687	208,448	89,299	44,265	66,559	-	1,432	1,040,688	hundred gallons
Extra Capacity	611,766	227,208	33,966	10,624	17,305			900,869	hundred gallons
System Capacity Factor	0.5560								
Average Day Allocator	0.3369	0.1114	0.0477	0.0236	0.0356	-	0.0008	0.5560	
Extra Capacity Allocator	0.3015	0.1120	0.0167	0.0052	0.0085	-	-	0.4440	
Allocator	**0.6385**	**0.2233**	**0.0644**	**0.0289**	**0.0441**	**-**	**0.0008**	**1.0000**	

3. BASE/EXTRA DAILY (w FIRE PROTECTION)

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Units
Average Daily Use	630,687	208,448	89,299	44,265	66,559	-	1,432	1,040,688	hundred gallons
Extra Capacity	611,766	227,208	33,966	10,624	17,305	93,091	25,477	1,019,437	hundred gallons
System Capacity Factor	0.5229	assuming fire protection							
Average Day Allocator	0.3169	0.1047	0.0449	0.0222	0.0334	-	0.0007	0.5229	
Extra Capacity Allocator	0.2863	0.1063	0.0159	0.0050	0.0081	0.0436	0.0119	0.4771	
Combined Allocator	**0.6032**	**0.2111**	**0.0608**	**0.0272**	**0.0415**	**0.0436**	**0.0126**	**1.0000**	

4. BASE/EXTRA HOURLY (w FIRE PROTECTION)

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Units
Average Hourly Use	26,279	8,685	53	383	-	-	60	35,460	hundred gallons
Extra Capacity	78,310	21,887	20	92	-	13,964	3,977	118,250	hundred gallons
System Capacity Factor	0.3144	assuming fire protection							
Average Day Allocator	0.2330	0.0770	0.0005	0.0034	-	-	0.0005	0.3144	
Extra Capacity Allocator	0.4540	0.1269	0.0001	0.0005	-	0.0810	0.0231	0.6856	
Combined Allocator	**0.6870**	**0.2039**	**0.0006**	**0.0039**	**-**	**0.0810**	**0.0236**	**1.0000**	

Missouri-American Water Company
Cost of Service Study - Class Allocators
Case No: WR-2022-0303, SR-2022-0304

5. STORAGE

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Units
Average Hourly Use	26,279	8,685	3,721	1,844	2,773		60	43,362	
Extra Capacity	78,310	21,887	1,415	443	721		----	102,776	
Fire Allocator							1.00000	1.00000	
System Capacity Factor	0.3144	assuming fire protection							
Average Day Allocator	0.1905	0.0630	0.0270	0.0134	0.0201		0.0004	0.3144	
Extra Capacity Allocator	0.5224	0.1460	0.0094	0.0030	0.0048			0.6856	
Allocator	0.7129	0.2090	0.0364	0.0163	0.0249		0.0004	1.0000	
Non-Fire Allocation of Storage	0.88541								
Fire Allocaton of Storage	0.11459								
Non-Fire Allocator	0.6312	0.1850	0.0322	0.0145	0.0221	-	0.0004	0.8854	
Fire Allocator	-	-	-	-	-	-	0.1146	0.1146	
Combined Allocator	**0.6312**	**0.1850**	**0.0322**	**0.0145**	**0.0221**	**-**	**0.1150**	**1.0000**	

6. MAINS

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Units
Factor 3	0.6032	0.2111	0.0608	0.0272	0.0415	0.0436	0.0126	1.0000	hundred gallons
Factor 4	0.6870	0.2039	0.0006	0.0039	-	0.0810	0.0236	1.0000	hundred gallons
Tranmission Weighting	0.0946	Average system hourly load							
Distribution Weighting	0.9054	Average system hourly load - max day with fire protection (incremental)							
Combined Allocator	**0.6791**	**0.2046**	**0.0063**	**0.0061**	**0.0039**	**0.0774**	**0.0226**	**1.0000**	

7. HYDRANTS

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Units
Total Hydrants	-	-	-	-	-	32,467	38	32,505	
Allocator	**-**	**-**	**-**	**-**	**-**	**0.99883**	**0.00117**	**1.00000**	

Missouri-American Water Company
Cost of Service Study - Class Allocators
Case No: WR-2022-0303, SR-2022-0304

8. METERS

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Weighting
5/8-METER	285,742	7,343	-	-	-			293,085	1.0
3/4-METER	24,390	3,049	-	-	-			27,439	1.5
1-METER	10,633	2,222	3	-	-			12,858	2.5
1.5-METER	757	1,111	-	-	-			1,868	5.0
2-METER	1,029	3,329	6	-	-			4,364	8.0
3-METER	21	306	3	-	-			330	16.0
4-METER	25	214	19	-	-			258	25.0
6-METER	24	204	20	-	-			248	50.0
8-METER	43	241	9	-	-			293	80.0
10-METER	3	57	7	-	-			67	115.0
12-METER	-	-	-	-	-			-	215.0
16-METER	-	-	-	-	-			-	320.0
Total	366,877	95,959	3,104	-	-		-	465,940	-----
Allocator	**0.78739**	**0.20595**	**0.00666**	**-**	**-**		**-**	**1.00000**	

9. SERVICES

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	Weighting
5/8-METER	285,742	7,343	-	-	-		-	293,085	1.0
3/4-METER	24,390	3,049	-	-	-		-	27,439	1.0
1-METER	10,633	2,222	3	-	-		-	12,858	2.9
1.5-METER	757	1,111	-	-	-		-	1,868	4.0
2-METER	1,029	3,329	6	-	-		135	4,499	5.6
3-METER	21	306	3	-	-		1	331	5.6
4-METER	25	214	19	-	-		553	811	6.4
6-METER	24	204	20	-	-		2,291	2,539	9.9
8-METER	43	241	9	-	-		1,330	1,624	9.9
10-METER	3	57	7	-	-		33	100	9.9
12-METER	-	-	-	-	-		82	82	12.2
16-METER	-	-	-	-	-		-	-	12.2
Total	351,118	47,906	537	-	-		41,525	441,086	-----
Allocator	**0.79603**	**0.10861**	**0.00122**	**-**	**-**		**0.09414**	**1.00000**	

10. CUSTOMERS

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total
Total Customers	322,445	17,860	135	4	2		7,480	347,926
Allocator	**0.92676**	**0.05133**	**0.00039**	**0.00001**	**0.00001**		**0.02150**	**1.00000**

11. METERED CUSTOMERS

Missouri-American Water Company
Cost of Service Study - Class Allocators
Case No: WR-2022-0303, SR-2022-0304

Item	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total
Total Customers	322,445	17,860	135	4	2		7,480	347,926
Allocator	**0.92676**	**0.05133**	**0.00039**	**0.00001**	**0.00001**		**0.02150**	**1.00000**

Missouri-American Water Company
Cost of Service Study - Allocator Summary
Case No: WR-2022-0303, SR-2022-0304

Alloc	Description	Source of Supply	Pumping	Water Treatment	Transmission	Distribution	Storage	Meters	Services	Customers	Hydrants	Total
A	Source of Supply	1.00000	-	-	-	-	-	-	-	-	-	1.00000
B	Pumping	-	1.00000	-	-	-	-	-	-	-	-	1.00000
C	Water Treatment	-	-	1.00000	-	-	-	-	-	-	-	1.00000
D	Transmission	-	-	-	1.00000	-	-	-	-	-	-	1.00000
E	Distribution	-	-	-	-	1.00000	-	-	-	-	-	1.00000
F	Storage	-	-	-	-	-	1.00000	-	-	-	-	1.00000
G	Meters	-	-	-	-	-	-	1.00000	-	-	-	1.00000
H	Services	-	-	-	-	-	-	-	1.00000	-	-	1.00000
I	Customers	-	-	-	-	-	-	-	-	1.00000	-	1.00000
J	Hydrants	-	-	-	-	-	-	-	-	-	1.00000	1.00000
K	Mains	-	-	-	0.09461	0.90539	-	-	-	-	-	1.00000
1	T/D Oper. Expense	-	-	-	0.06435	0.61584	-	0.31981	-	-	-	1.00000
2	T/D Maint.. Expense	-	-	-	0.02471	0.23645	-	0.13747	0.33463	-	0.26674	1.00000
3	Fixed O&M	0.03360	0.06827	0.20703	0.02355	0.22540	-	0.12081	0.08572	0.16728	0.06833	1.00000
4	Labor	0.01776	0.10531	0.28195	0.02894	0.27699	-	0.14604	0.05539	0.04315	0.04448	1.00000
5	Net Plant (less gen. and int.)	0.00975	0.03661	0.10198	0.07035	0.59865	0.00408	0.08397	0.04772	0.01025	0.03662	1.00000
6	Rate Base	0.01117	0.04175	0.11636	0.06830	0.56657	0.00476	0.09300	0.04773	0.01129	0.03908	1.00000
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Alloc	Description	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total
1	Total Usage	0.60603	0.20030	0.08581	0.04253	0.06396	-	0.00138	1.00000
2	Base/Extra Daily	0.63847	0.22335	0.06445	0.02888	0.04409	-	0.00077	1.00000
3	Base/Extra Daily w/ Fire	0.60320	0.21107	0.06076	0.02721	0.04154	0.04357	0.01264	1.00000
4	Base/Extra Hourly w/ Fire	0.68703	0.20390	0.00059	0.00393	-	0.08096	0.02359	1.00000
5	Storage	0.63124	0.18503	0.03224	0.01445	0.02206	-	0.11497	1.00000
7	Hydrants	-	-	-	-	-	0.99883	0.00117	1.00000
8	Meters	0.78739	0.20595	0.00666	-	-	-	-	1.00000
9	Services	0.79603	0.10861	0.00122	-	-	-	0.09414	1.00000
10	Customers	0.92676	0.05133	0.00039	0.00001	0.00001	-	0.02150	1.00000
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