

Exhibit No. 32

Exhibit No.:
Issues: Class Cost of Service Study, Discrete
Adjustments, Uncollectible Expense
and Property Tax Trackers
Witness: Wesley E. Selinger
Exhibit Type: Direct
Sponsoring Party: Missouri-American Water Company
Case No.: WR-2022-0303
SR-2022-0304
Date: July 1, 2022

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2022-0303
CASE NO. SR-2022-0304

DIRECT TESTIMONY

OF

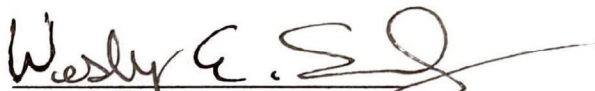
WESLEY E. SELINGER

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

AFFIDAVIT

I, Wesley E. Selinger, under penalty of perjury, and pursuant to Section 509.030, RSMo, state that I am Director, Rates and Regulatory for American Water Works Service Company, Inc. that the accompanying testimony has been prepared by me or under my direction and supervision; that if inquiries were made as to the facts in said testimony, I would respond as therein set forth; and that the aforesaid testimony is true and correct to the best of my knowledge and belief.


Wesley E. Selinger

July 1, 2022
Dated

**DIRECT TESTIMONY
WESLEY E. SELINGER**

**MISSOURI AMERICAN WATER COMPANY
CASE NO.: WR-2022-0303
CASE NO.: SR-2022-0304**

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DIRECT TESTIMONY

WESLEY E. SELINGER

I. INTRODUCTION

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

2 A. My name is Wesley E. Selinger and my business address is 727 Craig Road, Saint Louis,
3 Missouri 63141.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am employed by American Water Works Service Company, Inc. (“Service Company”)
6 as Director of Regulatory Services.

7 **Q. Please summarize your educational background and business experience.**

8 A. I graduated from the University of Illinois in May 2013 with a bachelor’s degree in
9 Economics with a minor in Accounting. I earned a master’s degree in Public
10 Administration from the University of Illinois in 2016. I have been in my present position
11 since May of 2021. Prior to joining American Water, from June 2012 through September
12 2013, I was employed by the Center for Business and Regulation at the University of
13 Illinois as an assistant to the Director. From September 2013 to August 2015, I was
14 employed by Vectren Corporation, an electric and natural gas combination utility located
15 in Evansville, Indiana as a Rates Analyst in the Company’s Rates and Regulatory
16 Department and managed several of the Company’s periodic rate adjustment filings,
17 performed industry research, and participated in the evaluation and development of
18 regulatory initiatives. From August 2015 to September 2017, I was employed by Vectren
19 Corporation as a Senior Regulatory Policy Analyst. In that role, I participated in the
20 evaluation and development of the Company’s strategic approach to regulatory and

1 legislative developments and initiatives. From September 2017 to November 2020, I was
2 employed as Manager, Rates and Planning for Spire Missouri, a natural gas local
3 distribution company serving customers in St. Louis and Western Missouri. In that role, I
4 was responsible for the management, research, development, and implementation of all
5 rate/regulatory initiatives including the management of all aspects of regulatory cases.
6 From November 2020 to May 2021, I was employed as Director of Rates and Regulatory
7 for Spire Missouri in which I was responsible for the management of all Regulatory Affairs
8 personnel and activities, the management of all regulatory casework for Spire Missouri at
9 the Missouri Public Service Commission, and the planning of all future Regulatory
10 activities for Spire Missouri, including financial planning and forecasting.

11 **Q. What are your current employment responsibilities?**

12 A. My duties consist of reviewing, preparing, and assisting in regulatory filings and related
13 activities for all the regulated subsidiaries of American Water Works Company, Inc.
14 (“American Water”), including Missouri-American Water Company (“Missouri-
15 American”, “MAWC”, or “the Company”). These responsibilities include the support of
16 rate applications and other regulatory filings.

17 **Q. Are you generally familiar with the operations, books, and records of MAWC?**

18 A. Yes.

19 **Q. Have you previously testified before the Missouri Public Service Commission?**

20 A. Yes, I have testified before the Commission in Case Nos. GO-2019-0115, GO-2019-0116,
21 GO-2019-0356, GO-2019-0357, GO-2020-0229, GO-2020-0230, GO-2021-0126, and
22 GR-2021-0108.

1 **Q. What is the purpose of your Direct Testimony in this proceeding?**

2 A. The purpose of my Direct Testimony is to sponsor and testify in support of MAWC’s class
3 cost of service studies, MAWC’s proposal for the inclusion of discrete adjustments within
4 its revenue requirement, and the Company’s proposals to implement trackers for
5 uncollectible expense and property taxes.

6 **Q. Please identify the Schedules you will be sponsoring and for which you will be
7 providing testimony.**

8 A. I am sponsoring the following Schedules:

9 Schedule WES-1 – St. Louis County – Water Cost of Service Study

10 Schedule WES-2 – Outside St. Louis County – Water Cost of Service Study

11 Schedule WES-3 – Wastewater Cost of Service Study

12 **II. COST OF SERVICE**

13 **A. Water Cost of Service Studies**

14 **Q. What is a cost-of-service study?**

15 A. A cost-of-service study is an analysis that calculates a utility’s total investment and
16 operating costs incurred to provide service to various customer groups, or service classes,
17 for the purpose of establishing cost-based rates. The resulting cost determination process
18 based on the allocation of costs to defined customer groups is called a cost-of-service study.
19 Because this analysis is done by customer class, the study is often referred to as a “class
20 cost of service study.”

21 **Q. Does the American Water Works Association (“AWWA”) provide guidance on the
22 appropriate methods to be used in conducting water cost of service studies?**

23 A. Yes. The AWWA M1 Manual, titled Principles of Water Rates, Fees, and Charges,

1 provides guidance on the appropriate allocation methodologies to use in allocating different
2 types of costs to customer classes.

3 **Q. Have you relied on the recommendations made in the AWWA M1 Manual in**
4 **conducting its water cost-of-service studies submitted in this case?**

5 A. Yes. Specifically, the AWWA M1 Manual outlines the use of the Base/Extra capacity
6 method to allocate production and distribution costs to customer classes. The Company
7 uses this Base/Extra capacity method in its class cost of service study as I describe later in
8 my Direct Testimony.

9 **Q. Please describe the cost of service studies performed for the Company's water**
10 **operations.**

11 A. The Company's cost of service analysis allocates the total revenue requirement for MAWC
12 water operations to various cost categories as I describe later in my Direct Testimony. The
13 revenue requirement for each of these cost categories is then allocated to the various
14 customer classes MAWC serves, with different cost categories allocated to customer
15 classes using a class allocation factor that differs depending on the nature of the costs. Per
16 the stipulation in MAWC's most recent rate case, the Company has submitted with this
17 case separate water cost of service studies for its St. Louis County service territory and its
18 territory outside of St. Louis County. Within these studies, the Company's cost of water
19 service was allocated to the following customer classifications:

- 20 - Residential
- 21 - Nonresidential
- 22 - Sales for Resale
- 23 - Contract Rates

1 - Private Fire

2 - Public Fire

3 These studies were performed in accordance with generally accepted principles and
4 procedures and results in the relative cost responsibilities of each class of customers.

5 **Q. How is the Company's water cost of service study organized?**

6 A. The Company's water cost of service studies attached hereto as Schedule WES-1 and
7 Schedule WES-2 are organized into five different tabs, or sections:

8 - The "Summary" tab allocates the revenue requirement for each cost category to
9 customer class and summarizes the results of the cost allocations by customer class
10 and business function to get a total revenue requirement by class and business
11 function. The "Summary" tab also compares the revenue requirements by customer
12 class to pro-forma revenues under current rates;

13 - The "Account Detail" tab contains rate base, depreciation, and operations and
14 maintenance ("O&M") balances by account and allocates each account to cost
15 category;

16 - The "Usage Statistics" tab contains usage information by customer class and other
17 information necessary to calculate class allocation factors for the "Account Detail"
18 tab;

19 - The "Class Allocators" tab provides detailed calculations of all class allocation
20 factors used in the cost-of-service study; and

21 - The "Allocation Summary" tab provides a summary of the class allocation factors.

22 **Q. What are the various cost categories that the Company uses to group individual**
23 **accounts?**

1 A. The cost categories that the Company assigns to specific accounts are as follows:

- 2 • Variable Cost
- 3 • Capacity Cost
 - 4 o Source of Supply
 - 5 o Water Pumping
 - 6 o Water Treatment
 - 7 o Transmission Mains
 - 8 o Distribution Mains
- 9 • Storage Facility Costs
- 10 • Metering Cost
- 11 • Service Line Costs
- 12 • Customer Service Costs
- 13 • Fire Hydrants

14 **Q. Please describe how the individual accounts that make up the Company’s revenue**
15 **requirement are assigned to a cost element.**

16 A. Most of the accounts that make up the Company’s revenue requirement are directly
17 assigned to a single cost category. Examples of this include net plant for Collecting and
18 Impounding Reservoirs, Purchased Water for water pumping, and Water Treatment labor
19 expenses. Accounts not directly assignable to a single cost category are allocated among
20 cost elements based on appropriate allocation factors. Examples of this include general
21 and intangible plant, miscellaneous rate base deductions, administrative and general
22 (“A&G”) expenses, and payroll taxes. These accounts are allocated to cost categories
23 based on net plant, O&M, or labor dollars associated with each cost element depending on

1 the account.

2 **a. Variable Costs**

3 **Q. Please describe what variable costs are and how variable costs are allocated to**
4 **customer classes.**

5 A. Variable costs refer to purchased electric power, purchased water, treatment chemicals and
6 waste disposal costs. These are costs that tend to vary directly with the amount of water
7 produced and consumed and are allocated to customer classes in direct proportion to each
8 class's annual water consumption.

9 **b. Capacity Costs - General**

10 **Q. Please describe what capacity costs are and how capacity costs are allocated to**
11 **customer classes.**

12 A. Capacity costs refer to the cost of owning, operating, and maintaining the Company's water
13 production, pumping, and distribution system that do not vary directly with the amount of
14 water consumed. These costs are allocated to customer classes in a variety of ways as
15 described below.

16 **c. Capacity Costs – Source of Supply**

17 **Q. Please describe how source of supply costs are allocated to customer classes.**

18 A. Source of supply costs not included in the variable cost section described above are
19 allocated to customer classes using a methodology known as the Base/Extra capacity
20 method.

21 **Q. Please describe the Base/Extra capacity method.**

22 A. The Base/Extra capacity method is explained in detail in the AWWA M1 Manual. It is
23 generally accepted as a sound method for allocating the cost of water service and has been

1 used by the Company in previous cases. In short, the Base/Extra capacity methodology
2 relies upon a combination of the average water consumption across the year for each
3 customer class and each class's estimated maximum daily consumption for the year to
4 allocate the fixed costs of the water production and distribution system to customer classes.
5 The Base/Extra capacity allocator is a two-part allocator, the first part being the "Base"
6 component and the second part being the "Extra" component.

7 The Base component for each class is the average daily consumption for the year (total
8 annual sales divided by 365 days). For each class, the "Base" allocation component is each
9 class's average consumption divided by the total sum of average consumption for all
10 classes. The "Extra" component is the difference between the maximum daily consumption
11 for a given class and the average daily consumption for that class. For each class, the
12 "Extra" allocator is each class's extra demand value divided by the total sum of the extra
13 demand values for all customer groups.

14 For each class, the Base/Extra allocator is calculated as a weighted average of the Base and
15 Extra allocators. The Base component is weighted by the total system load factor expressed
16 as a percentage (average daily system production divided by maximum day production),
17 and the Extra component is weighted by one minus the system load factor.

18 **Q. Please describe how the maximum daily consumption values for each class were**
19 **estimated.**

20 A. Maximum daily consumption values for each customer class are estimated based on daily
21 and hourly consumption data collected via Advanced Metering Infrastructure ("AMI")
22 meter data. For Sales for Resale customer classes, maximum daily consumption values are
23 estimated based on AMI data collected for those customers where data exists, with

1 estimated data used for resale customers where AMI data is not available. For other classes,
2 maximum daily consumption is estimated based on samples of customers for which
3 MAWC has AMI data. These samples, which are selected by customer class and
4 subgroups within each class, are selected such that the customers in each customer class
5 sample have monthly usage characteristics that are nearly identical to monthly usage
6 characteristics for MAWC customers in total (all districts), thus providing consistency
7 between the usage characteristics of the customers in each sample and the usage
8 characteristics of MAWC customers in total.

9 **d. Capacity Costs – Water Pumping Costs**

10 **Q. Please describe how water pumping costs are allocated to customer classes.**

11 A. Water pumping costs not included in the variable cost section described above are allocated
12 to customer classes based on the Base/Extra capacity methodology.

13 **e. Capacity Costs – Water Treatment Costs**

14 **Q. Please describe how water treatment costs are allocated to customer classes.**

15 A. Water treatment costs not included in the variable cost section described above are
16 allocated to customer classes based on the Base/Extra capacity methodology.

17 **f. Capacity Costs – Transmission Mains**

18 **Q. Does the Company distinguish between transmission mains and distribution mains?**

19 A. Generally, for cost allocation purposes, mains with a diameter of 10 inches and larger are
20 classified as serving a transmission function and mains smaller than 10 inches are classified
21 as serving a distribution function.

22 **Q. Are transmission mains costs allocated to all customer groups?**

23 A. Yes. All customer groups are considered to take service from the Company's transmission

1 system and therefore transmission costs are allocated to all customer classes.

2 **Q. Please describe how costs associated with transmission mains are allocated to**
3 **customer classes.**

4 A. Costs associated with transmission mains are allocated to customer class based on the
5 Base/Extra capacity method.

6 **g. Capacity Costs – Distribution Mains**

7 **Q. Are distribution mains costs allocated to all customer groups?**

8 A. No. It is often the case that for large customers, service is taken directly from the
9 transmission system (10 inches and above) and therefore it would not be appropriate to
10 allocate costs related to the smaller diameter distribution system to these customers. For
11 each customer class, a calculation is done to estimate the percentage of water sales served
12 to that class directly from the transmission system. That portion of sales in each class is not
13 subject to an allocation of distribution costs. It is only the distribution-level sales in each
14 class that are allocated distribution-related costs, and that relative level of sales is
15 significantly different for different customer classes.

16 **Q. Please describe how costs associated with distribution mains are allocated to customer**
17 **classes.**

18 A. After removing usage served at the transmission level, costs associated with distribution
19 mains are allocated to customer classes based on the previously defined Base/Extra
20 capacity method, which is modified to include a component that recognizes maximum
21 hourly demand (at the distribution level) instead of maximum daily demand. This is
22 appropriate because the transmission main system functions as a conduit from production
23 facilities to the distribution system and is sized to accommodate varying water demands

1 from customers that take service at the distribution level. Sizing at the distribution level
2 needs to accommodate higher demands for shorter periods of time. It is therefore
3 appropriate to consider hourly consumption requirements for distribution mains allocation,
4 as opposed to daily requirements

5 **Q. Aside from the differences between maximum hourly consumption and maximum**
6 **daily consumption, does the Base/Extra allocator work the same way as you have**
7 **previously described?**

8 A. Yes. In this case, the Base component for each class is the average hourly consumption for
9 the year (total annual sales divided by 8,760 hours). The “Extra” component is calculated
10 as the difference between the maximum hourly consumption for a given class and the
11 average hourly consumption for that class. For each class, the Base/Extra allocator is
12 calculated as a weighted average of the Base and Extra allocators. The Base component is
13 weighted by the total system load factor expressed as a percentage defined this time as
14 average hourly system consumption divided by maximum hourly system consumption, and
15 the Extra component is weighted by one minus the system load factor.

16 **Q. Please describe how the maximum hourly consumption values are calculated.**

17 A. Similar to the process used to estimate maximum daily consumption values by customer
18 class, maximum hourly consumption values for each customer class are estimated either
19 through direct AMI metering of Sales for Resale customers or from samples of customers
20 for which the Company has AMI data. The samples used to estimate maximum hourly
21 consumption are the same samples used to estimate maximum daily consumption to ensure
22 that there is consistency in usage patterns.

1 **h. Capacity Costs – Storage Facility Costs**

2 **Q. Please describe how the Company allocates the revenue requirements associated with**
3 **storage costs to customer classes.**

4 A. Storage costs are allocated to customer classes based on the Base/Extra allocator using
5 hourly estimated peak demand for the extra component, like the allocator used to allocate
6 distribution mains costs. For the storage allocator, it is assumed that all fire service
7 capacity requirements are served first from the Company's storage capacity, and the
8 remaining capacity is allocated to non-fire service classes using the Base/Extra hourly
9 allocator. Therefore, the storage allocator is more heavily weighted toward fire service
10 than any of the other Base/Extra class allocators. I discuss the calculation of fire service
11 capacity requirements later in my Direct Testimony.

12 **i. Customer Related Costs – Metering Costs**

13 **Q. Please describe how the Company allocates the revenue requirements associated with**
14 **the metering cost component to customer classes.**

15 A. Metering costs are allocated to customer classes based on a weighted number of customers
16 calculation. Customer weights in each class are based on AWWA standard meter
17 equivalents by meter size.

18 **j. Customer Related Costs – Service Line Costs**

19 **Q. Please describe how the Company allocates the revenue requirements associated with**
20 **the service line cost component to customer classes.**

21 A. Service line costs are allocated to customer classes based on a weighted number of
22 customers calculation. The customer weights are the same as those used in the last MAWC
23 water service rate case.

1 **k. Customer Related Costs – Customer Service Costs**

2 **Q. Please describe how the Company allocates the revenue requirements associated with**
3 **the customer service cost component to customer classes.**

4 A. Customer service costs are allocated to customer classes based on the total number of
5 customers in each class.

6 **l. Fire Service**

7 **Q. How are fire service requirements considered in the Company’s cost of service**
8 **analysis?**

9 A. Fire service requirements are determined through a combination of information on
10 firefighting requirements provided by the American Insurance Association. This
11 information relates firefighting requirements in terms of maximum gallons per minute and
12 the duration of time those requirements are needed to general population levels. Given the
13 population of MAWC’s service territories, a firefighting demand of 20,000 gallons per
14 minute for ten hours was used in the cost of service analysis for St. Louis County and a
15 firefighting demand of 12,000 gallons per minute was used in the cost of service study for
16 the Company’s service territory outside of St. Louis County. This firefighting demand was
17 split between private fire and public fire customer groups based on the relative potential
18 water demand for each class, which is in turn based on the number and size of service lines
19 and hydrants in each class.

20 **Q. How is the revenue requirement for hydrants allocated to customer classes?**

21 A. Because MAWC does not charge separately for public fire service, the revenue
22 requirements for hydrants are allocated back to the residential, nonresidential, and Rate J
23 customer classes based on the relative Meter Cost class allocators for those classes.

1 **m. Other Allocation Factors**

2 **Q. How are A&G costs and cash working capital costs allocated to cost categories and**
3 **customer classes?**

4 A. Administrative and general (“A&G”) costs are generally allocated to cost categories and
5 customer classes on the same basis that direct costs are allocated. For most A&G expenses,
6 costs are allocated the same way that non-A&G direct O&M costs are allocated. A&G
7 costs that are associated with employee costs, however, are allocated directly based on
8 labor expenses. Cash working capital is allocated based on total O&M expense.

9 **Q. How are depreciation costs allocated to cost categories and customer classes?**

10 A. Annual depreciation accruals are allocated based on the function of the facilities
11 represented by the depreciation expense for each depreciable plant account. The original
12 cost less depreciation of utility plant in service was similarly allocated for the purpose of
13 developing factors for allocating items such as income taxes and return. These factors are
14 based on the results of allocating other costs and are computed internally in the cost
15 allocation program.

16 **Q. How are income taxes and operating income requirements allocated to cost categories**
17 **and customer classes?**

18 A. Income taxes and operating income requirements are allocated to cost categories and
19 customer classes based on the amount of total rate base allocated to each customer class.

20 **Q. Please summarize the results of MAWCs water cost of service analysis.**

21 A. The following table provides a summary of the Company’s cost of service analysis and
22 shows total test year revenues, cost of service, and the difference between the two by
23 customer class.

St. Louis County			
<u>Customer Class</u>	<u>Revenue at Present Rates</u>	<u>Cost of Service</u>	<u>Difference</u>
Residential	\$ 167,224,457	\$ 235,875,115	41.1%
Non-Residential	\$ 49,403,315	\$ 66,901,977	35.4%
Rate J	\$ 6,252,876	\$ 11,767,278	88.2%
Rate B	\$ 4,232,070	\$ 4,747,670	12.2%
Rate P	\$ 3,977,486	\$ 6,621,483	66.5%
Public Fire	\$ -	\$ -	
Rate F (Private Fire)	\$ 3,759,239	\$ 5,660,446	50.6%
Total	\$ 234,849,443	\$ 331,573,969	41.2%
Outside St. Louis County			
<u>Customer Class</u>	<u>Revenue at Present Rates</u>	<u>Cost of Service</u>	<u>Difference</u>
Residential	\$ 48,975,492	\$ 79,701,398	62.7%
Non-Residential	\$ 21,037,197	\$ 27,883,045	32.5%
Rate J	\$ 9,050,666	\$ 11,914,423	31.6%
Rate B	\$ 3,006,411	\$ 4,285,921	42.6%
Rate P	\$ 1,113,066	\$ 3,726,002	234.8%
Public Fire	\$ -	\$ -	
Rate F (Private Fire)	\$ 1,441,810	\$ 4,418,647	206.5%
Total	\$ 84,624,643	\$ 131,929,437	55.9%

B. Wastewater Cost of Service Study

Q. Please describe the overall cost of service study prepared in this case for MAWC's wastewater operations.

A. In its most recent general rate case MAWC agreed to conduct a cost-of-service analysis for its wastewater operations in its next general rate case. Similar to the water cost of service studies performed in this case, the purpose of MAWC's wastewater cost-of-service study is to allocate the total wastewater cost of service (i.e., revenue requirement), to the separate customer classifications. In this case, the costs of wastewater service have been allocated between Collection only and Collection and Treatment customers in accordance with generally accepted cost of service principles.

Q. Please describe the method of cost allocation that was used in MAWC's wastewater cost of service study.

1 A. In conducting the wastewater cost of service study, I relied generally on the guidance of
2 the functional cost allocation methodology as described in “Financing and Charges for
3 Wastewater Systems”, Manual of Practice No. 27, published by the Water Environment
4 Federation. This method allocates the costs of providing wastewater service to customer
5 classifications in proportion to each classification’s use of MAWC’s facilities and services.
6 Costs are assigned to cost components using predominant operational purposes (i.e.,
7 functions) as cost-causative factors. The functional cost method is generally accepted as a
8 sound method for allocating the cost of wastewater service.

9 **Q. Please describe the cost-of-service study performed for the Company’s wastewater**
10 **operations.**

11 A. The Company’s cost of service analysis allocates the total revenue requirement for MAWC
12 wastewater operations to several cost categories described later in my Direct Testimony.
13 The revenue requirement for each of these cost categories is then allocated to the customer
14 classes MAWC serves, with different cost categories allocated to customer classes using a
15 class allocation factor that differs depending on the nature of the costs.

16 **Q. How is the Company’s wastewater cost of service study organized?**

17 A. Similar to the water cost of service studies described above, the Company’s wastewater
18 cost of service study attached hereto as Schedule WES-3 is organized into several different
19 tabs, or sections:

20 - The “Summary” tab allocates the revenue requirement for each cost category to
21 customer class and summarizes the results of the cost allocations by customer class
22 and business function to get a total revenue requirement by class and business
23 function. The “Summary” tab also compares the revenue requirements by customer

- 1 class to pro-forma revenues under current rates;
- 2 - The “Account Detail” tab contains rate base, depreciation, and operations and
3 maintenance (“O&M”) balances by account and allocates each account to cost
4 category;
- 5 - The “Class Allocators” tab provides detailed calculations of all class allocation
6 factors used in the cost-of-service study; and
- 7 - The “Allocation Summary” tab provides a summary of the class allocation factors.

8 **Q. What are the various cost categories that the Company uses to group individual
9 accounts?**

10 A. The cost categories that the Company assigns to specific accounts are as follows:

- 11 • Intangible
- 12 • Collection
- 13 • Pumping
- 14 • Treatment and Disposal
- 15 • General

16 **Q. Please describe how individual accounts that make up the Company’s revenue
17 requirement are assigned to a cost element.**

18 A. Most of the accounts that make up the Company’s revenue requirement are directly
19 assigned to a single cost category. Accounts not directly assignable to a single cost
20 category are allocated among cost elements based on appropriate allocation factors.
21 Examples of this include general and intangible plant, miscellaneous rate base deductions,
22 general expenses, and payroll taxes. These accounts are allocated to cost categories based
23 on net plant, O&M, or labor dollars associated with each cost element depending on the

1 account.

2 **a. Variable Costs**

3 **Q. Please describe what variable costs are and how variable costs are allocated to**
4 **customer classes.**

5 A. Variable costs refer to purchased fuel and electric power, treatment chemicals and waste
6 disposal costs. These are costs that tend to vary directly with the amount of wastewater
7 flows and are allocated to customer classes as such.

8 **b. Fixed Costs**

9 **Q. Please describe what fixed costs are and how fixed costs are allocated to customer**
10 **classes.**

11 A. Fixed costs refer to the costs of operating MAWC's wastewater facilities and providing
12 wastewater services that do not vary based on wastewater flows. Due to the homogeneous
13 nature of MAWC's wastewater customer base, which is overwhelmingly Residential and
14 Small Commercial, MAWC's fixed costs have been allocated among its customer classes
15 based on customer count.

16 **c. Other Allocation Factors**

17 **Q. How are A&G costs and cash working capital costs allocated to cost categories and**
18 **customer classes?**

19 A. Administrative and general costs are generally allocated to cost categories and customer
20 classes on the same basis that direct costs are allocated. For most A&G expenses, costs are
21 allocated the same way that non-A&G direct O&M costs are allocated.

22 **Q. How are depreciation costs allocated to cost categories and customer classes?**

23 A. Annual depreciation accruals are allocated based on the function of the facilities

1 represented by the depreciation expense for each depreciable plant account. The original
2 cost less depreciation of utility plant in service was similarly allocated for the purpose of
3 developing factors for allocating items such as income taxes and return. These factors are
4 based on the results of allocating other costs and are computed internally in the cost
5 allocation program.

6 **Q. How are income taxes and operating income requirements allocated to cost categories
7 and customer classes?**

8 A. Income taxes and operating income requirements are allocated to cost categories and
9 customer classes based on the amount of total rate base allocated to each customer class.

10 **Q. Please summarize the results of MAWCs wastewater cost of service analysis.**

11 A. The following table provides a summary of the Company's cost of service analysis and
12 shows total test year revenues, cost of service, and the difference between the two by
13 customer class.

Missouri American Wastewater COSS Results		
Revenue at Present Rates	Cost of Service	Difference
\$ 17,671,542	\$ 19,027,258	7.7%

14 **III. DISCRETE ADJUSTMENTS**

15 **Q. Please describe the discrete adjustments MAWC has proposed in this proceeding?**

16 A. MAWC has adjusted several rate base and expense items to better reflect the Company's
17 ongoing cost of service. These adjustments are for items that are known and measurable
18 that extend beyond the typical true-up period reflected in the Company's prior rate cases.

19 **Q. What is the Company's rationale for making these adjustments?**

20 A. In its last general rate proceeding, Case No. WR-2020-0344, MAWC filed its case in chief
21 utilizing a fully forecasted future test year. Ultimately, in its August 26, 2020 Order Setting

1 Test Year and Adopting Procedural Schedule, the Commission authorized the use of a
2 historical test year with a true-up period, typical of historical Missouri utility rate cases, to
3 allow for known and measurable adjustments. The Commission further authorized the
4 parties to propose specific “discrete adjustments” for certain items beyond the true-up date.

5 **Q. Please explain the benefit of including the proposed discrete adjustments in this case.**

6 A. As described below, the Company’s proposed discrete adjustments are designed to include
7 within MAWC’s revenue requirement specific known and measurable amounts through
8 the operation of law date in this case. The purpose for selecting a test year and allowing
9 adjustments is to arrive at results of operation that are representative of ongoing levels.
10 While a future test year would best serve this purpose, discrete adjustments to a historical
11 year will better serve this purpose than adjustments that are cut off by an earlier true-up
12 date. As demonstrated in the Company’s accounting schedules, the discrete adjustments
13 work both ways, increasing or decreasing the overall revenue requirement to reflect known
14 and measurable changes through the operation of law date. The Company’s proposed
15 discrete adjustments are a step towards better matching the Company’s ongoing costs and
16 the revenues to be ultimately approved in this proceeding.

17 **Q. What period is MAWC proposing for its discrete adjustments?**

18 A. MAWC is proposing discrete adjustments for select known and measurable changes
19 through May 31, 2023.

20 **Q. Please describe the Company’s discrete adjustments related to plant and rate base
21 items.**

22 A. MAWC has proposed a discrete adjustment to recognize within rate base select non-
23 WSIRA eligible projects that will go into service prior to the operation of law date in this

1 case, including annualized depreciation and property taxes. The projects captured within
2 the Company's proposed adjustment help mitigate risk, address aging infrastructure, and
3 address safety and/or environmental concerns. MAWC has also included adjustments for
4 other rate base related items such as accumulated deferred income taxes, contributions in
5 aid of construction, cash working capital, pension asset and tracker balances, and other
6 regulatory deferrals.

7 **Q. Has the Company proposed a discrete adjustment to its ratemaking capital structure?**

8 A. Yes, since the Company is proposing to include certain plant additions through May 2023,
9 it is appropriate to recognize the financing supporting those additions. The ratemaking
10 capital structure proposed by MAWC reflects all planned changes to equity and long-term
11 debt balances, as well as cost of debt, through May 31, 2023.

12 **Q. Please explain the discrete adjustments related to labor expenses.**

13 A. The Company's salaries and wages are split between bargaining and non-bargaining unit
14 employees. Salaries and wages for non-bargaining unit employees for 2022 have been
15 annualized based on merit increases that took effect in March of 2022. The Company's
16 adjustment for 2023 salaries and wages are annualized by applying a 3-year average merit
17 increase to 2022 wage levels for non-bargaining unit employees. The Company's 2023
18 merit increase will be known in February of 2023 and will be trued-up at that time. For
19 collective bargaining unit employees, MAWC has utilized contract wages for 2023 levels
20 as the basis for the adjustment. The Company has made related adjustments to payroll
21 taxes.

22 **Q. Please explain the discrete adjustment to other employee benefits.**

23 A. The Company has adjusted several other employee benefits items. MAWC adjusted 401k

1 costs based on the adjusted 2023 wages, current employee contribution levels and the
2 corresponding match for their benefit group. The May 31, 2023, pro forma defined
3 contribution plan (“DCP”) expense was calculated by multiplying the 2023 pro forma
4 wages of each eligible employee by 5.25%. The adjustment to the Employee Stock
5 Purchase Plan (“ESPP”) expense was calculated based on the 2023 wages for each
6 employee who participates in the plan. The employee 2023 base wage, times their
7 individual contribution amount, applied to the fifteen percent company discount, was used
8 to calculate the 2023 expense. MAWC made a discrete adjustment for other employee
9 benefits including expenses associated with training, tuition reimbursement, employee
10 rewards, and other such benefits utilizing a three-year average of year over year percentage
11 increase in cost over the same time periods. That percentage was applied to the December
12 31, 2022, pro forma amount to derive an on-going level of expense as of May 31, 2023,
13 subject to true-up later in this proceeding.

14 **Q. Please explain the adjustments made to Pension, OPEB, and Group Insurance**
15 **expense.**

16 A. MAWC has adjusted pension and OPEB expense to capture the increases/decreases as of
17 March 2023 based on the most recent actuarial reports received by the Company. Pension
18 and OPEB expense are further discussed in the Direct Testimony of Company witness John
19 Watkins. Group Insurance expense was adjusted based on a trend analysis to reach the
20 May 2023 pro-forma level and is further described in the Direct Testimony of Company
21 witness Matthew Mason.

22 **Q. Please explain the adjustment MAWC made for production expense.**

23 A. MAWC has proposed a discrete adjustment for purchased water and fuel & power rates

1 effective May 31, 2023, adjusted for expected system delivery for the twelve months
2 ending May 31, 2023. MAWC has also adjusted for chemical prices through May 31,
3 2023, adjusted for expected system delivery for the twelve months ending May 31, 2023.

4 **Q. Please explain the adjustment to Insurance Other than Group.**

5 A. The Company has included an adjustment for policy updates effective through May 2023.
6 2023 pricing is anticipated to be known and measurable in December 2022.

7 **Q. Please explain the adjustment for support services.**

8 A. MAWC receives support services related to customer service, water quality testing,
9 innovation and environmental stewardship, human resources, communications,
10 information technology, finance, accounting, payroll, tax, legal, engineering, accounts
11 payable, supply chain, and risk management services. MAWC has made an adjustment to
12 account for support service expenses through May 31, 2023. The increase in expense is
13 due in large part to the annualizing of the merit increases through 2023. Additional
14 components of this adjustment include the elimination of severance expense, normalization
15 of pension and OPEB costs, and adjustments to reflect the movement of employees
16 between the Company and the Service Company. Additional adjustments were made for
17 depreciation, interest associated with capital leases and travel expense. Lastly, the
18 Company removed certain expenses for one-time costs from its requested pro forma
19 expense including, but not limited to, charitable contribution, donations, injuries and
20 damages, and penalties.

21 **Q. Please explain the adjustment related to uncollectible accounts expense.**

22 A. The Company calculated an uncollectible rate for the years 2018, 2019, and 2021 by taking
23 actual net charge-offs over annual billed revenue (2020 was excluded in the calculation

1 due to COVID-19 pandemic impacts). The uncollectible rate was then applied to pro-
2 forma present rate revenues at May 31, 2023.

3 **Q. Please explain the adjustment related to building maintenance and services.**

4 A. MAWC has made a discrete adjustment to building maintenance and service expense to
5 reflect the annual impact of increased pricing for security services.

6 **IV. UNCOLLECTIBLE EXPENSE TRACKER**

7 **Q. Is the Company proposing a mechanism related to uncollectible (or bad debt) expense**
8 **in this proceeding?**

9 A. Yes. Consistent with MAWC's prior base rate cases, MAWC has included a level of
10 uncollectible expense within its proposed revenue requirement. In addition, the Company
11 is proposing to implement an Uncollectible Expense tracker. The Company's proposed
12 tracker records the difference between the expense level established in base rates and the
13 actual incurred uncollectible expense to a regulatory asset/liability account with any
14 recorded balance to be recovered/refunded through an amortization during a subsequent
15 rate case.

16 **Q. What is the basis for the Company's proposal?**

17 A. MAWC's proposed tracker is designed to address fluctuations in bad debt expense and to
18 protect both MAWC customers and the Company from the immediate impact of this
19 volatility. Due to the ongoing and uncertain impacts of the COVID-19 pandemic, the
20 ability to forecast the level of uncollectible expense in base rates continues to be
21 challenging in the current environment and the historical approach utilized for setting a
22 level of uncollectible expense in base rates carries risks for both customers and the
23 Company.

1 **Q. Does this make the costs associated with uncollectible expense difficult to forecast or**
2 **predict?**

3 A. Yes, it does. As described in the Direct Testimony of Company witness Mr. Mason, the
4 Company has seen a steady increase in uncollectible expense and using the typical
5 approach of a multi-year average has failed to provide an accurate baseline to include in
6 base rates.

7 I would add that there are a variety of economic factors, both on a macro and micro level,
8 that can cause fluctuations in bad debt expense. A timely example is the current elevated
9 level of inflation, which is currently at a level not seen in decades. The impact of these
10 factors is recognized in the fact that numerous regulatory jurisdictions have approved some
11 form of uncollectible cost recovery provision or mechanism, in addition to the many
12 jurisdictions that utilize annual rate updates, full decoupling, or formula rate plans.

13 It is also important to recognize that the economic consequences of the COVID pandemic
14 are still highly uncertain. For instance, new customer assistance programs and sources of
15 funds (e.g., Low-Income Household Water Assistance Program) may reduce uncollectible
16 expenses going forward. The Company's uncollectible expense tracker proposal would
17 ensure that these impacts are recognized, and customers receive the benefit of this reduced
18 expense

19 **Q. Please explain how the proposed Uncollectible Expense tracker will work.**

20 A. MAWC will track the level of actual uncollectible expense incurred and compare that to
21 the base level of expense established in this case. Any variances will be recorded to a
22 regulatory asset or liability account to be addressed during MAWC's next subsequent
23 general rate case.

1 **Q. How does the Company plan to address the Uncollectible Expense deferrals at the**
2 **time of filing its next base rate case?**

3 A. During the Company's next general rate case, MAWC will amortize any deferred amounts
4 using an amortization period established during the case. In addition, the base level of
5 uncollectible expense to be tracked against will be updated to reflect current information.
6 At the conclusion of MAWC's subsequent general rate case, the Company will begin
7 tracking actual uncollectible expense incurred against the new base level.

8 **Q. Is the variability in uncollectible expense only related to severe events such as the**
9 **COVID-19 pandemic?**

10 A. No, while the COVID-19 pandemic has certainly impacted uncollectible balances due to
11 the necessary measures taken by the Commission and the Company over the past two years,
12 changes in economic conditions in general can drive these balances to significantly change
13 from year to year. Implementing the Uncollectible Expense tracker allows the Company
14 to collect, and customers to pay, the level of uncollectible expense determined appropriate
15 in this case.

16 **V. PROPERTY TAX TRACKER**

17 **Q. Please explain the recently passed Missouri legislation regarding the tracking of**
18 **property taxes.**

19 A. On May 5, 2022, the Missouri General Assembly passed Senate Bill 745 enacting RSMo
20 393.1275. RSMo 393.1275 authorizes Missouri water and sewer corporations to defer to
21 a regulatory asset or liability account any difference in state or local property tax expense
22 incurred, with the property tax expense included within the revenue requirement used to
23 set rates in that corporation's most recently completed general rate proceeding. Any

1 deferred balances are to be amortized over a reasonable period in the corporation's
2 subsequent rate proceedings. In addition, at the time of a subsequent rate proceeding, any
3 unamortized asset or liability balances will be included within the Company's rate base.

4 **Q. Is MAWC proposing to exercise the above-described accounting treatment regarding**
5 **property tax expense in this case?**

6 A. Yes.

7 **Q. Please explain.**

8 A. The Governor signed SB745 on June 29, 2022, so the provisions of RSMo 393.1275 will
9 become effective on August 28, 2022. Therefore, MAWC has included within its case a
10 property tax deferral, per the legislation, for its 2022 property taxes. At the August 28th,
11 2022 effective date, MAWC will begin deferring the difference between the property tax
12 expense level approved in its last rate proceeding, WR-2020-0344 and its actual property
13 tax incurred as described in the legislation.

14 **Q. Please explain MAWC's proposed property tax deferral.**

15 A. MAWC has recorded the difference between the actual property taxes included for
16 recovery through its current base rates and its WSIRA mechanism and its projected 2022
17 property tax bill and proposes to amortize this difference over a five-year period beginning
18 at the conclusion of this case.

19 **Q. Will the Company's 2022 property tax payment amount be updated as part of the**
20 **true-up in this case?**

21 A. Yes, MAWC's 2022 property tax payment will be made by the end of the year and MAWC
22 will true-up the amount included for recovery in base rates and to be tracked against.

23 **Q. Does this conclude your Direct Testimony?**

1 A. Yes.

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	Non					Rate F		Total	Variance
				Residential	Residential	Rate J	Rate B	Rate P	Public Fire	Private Fire		
Source of Supply Expense												
Fixed	\$ 5,121,572	2	Base/Extra Daily	\$ 3,269,948	\$ 1,143,888	\$ 330,080	\$ 147,935	\$ 225,802	\$ -	\$ 3,919	\$ 5,121,572	\$ -
Variable	\$ 4,608,894	1	Total Usage	\$ 2,793,121	\$ 923,151	\$ 395,476	\$ 196,035	\$ 294,768	\$ -	\$ 6,343	\$ 4,608,894	\$ -
Power and Pumping Expenses												
Fixed	\$ 17,454,964	2	Base/Extra Daily	\$ 11,144,396	\$ 3,898,514	\$ 1,124,955	\$ 504,181	\$ 769,562	\$ -	\$ 13,356	\$ 17,454,964	\$ -
Variable	\$ 3,008,720	1	Total Usage	\$ 1,823,370	\$ 602,640	\$ 258,170	\$ 127,973	\$ 192,427	\$ -	\$ 4,141	\$ 3,008,720	\$ -
Water Treatment												
Fixed	\$ 47,947,178	2	Base/Extra Daily	\$ 30,612,630	\$ 10,708,859	\$ 3,090,148	\$ 1,384,939	\$ 2,113,916	\$ -	\$ 36,687	\$ 47,947,178	\$ -
Variable	\$ 12,817,674	1	Total Usage	\$ 7,767,874	\$ 2,567,352	\$ 1,099,849	\$ 545,189	\$ 819,771	\$ -	\$ 17,640	\$ 12,817,674	\$ -
Transmission	\$ 52,498,217	3	Base/Extra Daily w/ Fire	\$ 31,666,965	\$ 11,080,822	\$ 3,189,972	\$ 1,428,585	\$ 2,180,794	\$ 2,287,308	\$ 663,772	\$ 52,498,217	\$ -
Distribution	\$ 104,250,210	4	Base/Extra Hourly w/ Fire	\$ 70,357,874	\$ 20,858,728	\$ 1,828,381	\$ 396,704	\$ -	\$ 8,371,276	\$ 2,437,248	\$ 104,250,210	\$ -
Storage	\$ 1,098,851	5	Storage	\$ 693,308	\$ 203,295	\$ 35,582	\$ 15,963	\$ 24,361	\$ -	\$ 126,343	\$ 1,098,851	\$ -
Meters	\$ 32,679,721	8	Meters	\$ 25,731,752	\$ 6,730,298	\$ 217,671	\$ -	\$ -	\$ -	\$ -	\$ 32,679,721	\$ -
Services	\$ 21,503,995	9	Services	\$ 17,117,851	\$ 2,335,550	\$ 26,176	\$ -	\$ -	\$ -	\$ 2,024,419	\$ 21,503,995	\$ -
Customers	\$ 14,420,398	10	Customers	\$ 13,364,296	\$ 740,236	\$ 5,595	\$ 166	\$ 83	\$ -	\$ 310,022	\$ 14,420,398	\$ -
Hydrants	\$ 14,163,574	7	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,147,016	\$ 16,558	\$ 14,163,574	\$ -
Total	\$ 331,573,969			\$ 216,343,383	\$ 61,793,332	\$ 11,602,055	\$ 4,747,670	\$ 6,621,483	\$ 24,805,600	\$ 5,660,447	\$ 331,573,969	\$ -
				65.25%	18.64%	3.50%	1.43%	2.00%	7.48%	1.71%	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 Revenues	\$ 3,588,819											
Increase	\$ 96,724,526			\$ 49,118,926	\$ 12,390,017	\$ 5,349,179	\$ 515,600	\$ 2,643,997	\$ 24,805,600	\$ 1,901,207	\$ 96,724,526	(0)
Percent Increase	41.2%			29.37%	25.08%	85.55%	12.18%	66.47%	0.00%	50.57%	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				\$ 49,118,926	\$ 12,390,017	\$ 5,349,179	\$ 515,600	\$ 2,643,997	\$ 24,805,600	\$ 1,901,207	\$ 96,724,526	
Allocation of Public Fire				\$ 19,531,732	\$ 5,108,645	\$ 165,223			\$ (24,805,600)	\$ -	\$ -	
Revenue Target				\$ 235,875,115	\$ 66,901,977	\$ 11,767,278	\$ 4,747,670	\$ 6,621,483	\$ -	\$ 5,660,446	\$ 331,573,969	
Percent Increase				41.1%	35.4%	88.2%	12.2%	66.5%	0.0%	50.6%	41.2%	

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	\$ -
Telecommunications	\$ 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	\$ -
Telecommunications	\$ 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	\$ -
Telecommunications	\$ 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
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	\$ 31,326,516	3	\$ 1,068,841	\$ 2,171,593	\$ 6,585,318	\$ 749,178	\$ 7,169,519	\$ -	\$ 3,842,862	\$ 2,726,765	\$ 5,320,801	\$ 2,173,533	\$ 31,808,410	\$ 31,808,410	
			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	\$ 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	\$ 22,045,617	\$ 82,742,632	\$ 230,487,454	\$ 509,673,953	\$ 1,002,295,723	\$ 9,223,269	\$ 189,765,076	\$ 107,855,789	\$ 23,170,672	\$ 82,767,650	\$ 2,260,027,835	\$ 2,260,027,835	
			0.00975	0.03661	0.10198	0.22552	0.44349	0.00408	0.08397	0.04772	0.01025	0.03662	1.00000		
Rate Base	\$ 1,668,076,711	6	\$ 18,634,072	\$ 69,642,589	\$ 194,083,847	\$ 415,708,659	\$ 643,318,649	\$ 7,937,420	\$ 155,120,584	\$ 79,617,277	\$ 18,831,410	\$ 65,182,205	\$ 1,668,076,711	\$ 1,668,076,711	
			0.01117	0.04175	0.11635	0.24921	0.38566	0.00476	0.09299	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	0.44	0.21		1.00	1.00	N/A	
Average Hourly Usage	26,279	8,685	1,634	383	-	-	60	37,041	hundred gallons
Max Hour Capacity Factor	3.98	3.52	1.38	1.24	1.26			---	
Max Hour Usage	104,589	30,572	2,256	475	-	13,964	4,036	155,892	hundred gallons
Extra Capacity	78,310	21,887	622	92	-	13,964	3,977	118,851	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

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	99,083	max hour - thousand gallons per day	
System Load Factor (Hourly fire)	0.3165	117,023	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	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
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	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
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	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
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	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
Average Hourly Use	26,279	8,685	1,634	383	-	-	60	37,041	hundred gallons	
Extra Capacity	78,310	21,887	622	92	-	13,964	3,977	118,851	hundred gallons	
System Capacity Factor	0.3165	assuming fire protection								
Average Day Allocator	0.2246	0.0742	0.0140	0.0033	-	-	0.0005	0.3165		
Extra Capacity Allocator	0.4503	0.1259	0.0036	0.0005	-	0.0803	0.0229	0.6835		
Combined Allocator	0.6749	0.2001	0.0175	0.0038	-	0.0803	0.0234	1.0000		

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

5. STORAGE

Item	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
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	0.3165 assuming fire protection									
Average Day Allocator	0.1918	0.0634	0.0272	0.0135	0.0202		0.0004		0.3165	
Extra Capacity Allocator	0.5208	0.1456	0.0094	0.0029	0.0048				0.6835	
Allocator	0.7126	0.2090	0.0366	0.0164	0.0250		0.0004		1.0000	
Non-Fire Allocation of Storage	0.88541									
Fire Allocaton of Storage	0.11459									
Non-Fire Allocator	0.6309	0.1850	0.0324	0.0145	0.0222	-	0.0004		0.8854	
Fire Allocator	-	-	-	-	-	-	0.1146		0.1146	
Combined Allocator	0.6309	0.1850	0.0324	0.0145	0.0222	-	0.1150		1.0000	

6. MAINS

Item	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
Factor 4	0.6032	0.2111	0.0608	0.0272	0.0415	0.0436	0.0126		1.0000	hundred gallons
Factor 5	0.6749	0.2001	0.0175	0.0038	-	0.0803	0.0234		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	0.6681	0.2011	0.0216	0.0060	0.0039	0.0768	0.0224		1.0000	

7. HYDRANTS

Item	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
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	Non		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Weighting
	Residential	Residential					Private Fire	Public Fire		
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	Non		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Weighting
	Residential	Residential					Private Fire	Public Fire		
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	Non		Rate J	Rate B	Rate P	Public Fire	Rate F		Total
	Residential	Residential					Private Fire	Public Fire	
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
Class Cost of Service Study - Functional Allocators to Customer Class
Case No: WR-2022-0303, SR-2022-0304

	Functional COS	Alloc	Description	Non					Rate F		Total	Variance
				Residential	Residential	Rate J	Rate B	Rate P	Public Fire	Private Fire		
Source of Supply Expense												
Fixed	\$ 6,299,329	2	Base/Extra Daily	\$ 2,872,016	\$ 1,552,420	\$ 1,115,213	\$ 390,379	\$ 367,917	\$ -	\$ 1,384	\$ 6,299,329	\$ -
Variable	\$ 3,037,105	1	Total Usage	\$ 1,239,930	\$ 641,439	\$ 686,169	\$ 248,149	\$ 220,482	\$ -	\$ 936	\$ 3,037,105	\$ -
Power and Pumping Expenses												
Fixed	\$ 9,413,503	2	Base/Extra Daily	\$ 4,291,844	\$ 2,319,884	\$ 1,666,536	\$ 583,369	\$ 549,803	\$ -	\$ 2,068	\$ 9,413,503	\$ -
Variable	\$ 1,470,978	1	Total Usage	\$ 600,542	\$ 310,672	\$ 332,336	\$ 120,187	\$ 106,787	\$ -	\$ 454	\$ 1,470,978	\$ -
Water Treatment												
Fixed	\$ 24,223,558	2	Base/Extra Daily	\$ 11,044,105	\$ 5,969,704	\$ 4,288,460	\$ 1,501,172	\$ 1,414,795	\$ -	\$ 5,321	\$ 24,223,558	\$ -
Variable	\$ 4,260,614	1	Total Usage	\$ 1,739,440	\$ 899,845	\$ 962,595	\$ 348,116	\$ 309,304	\$ -	\$ 1,314	\$ 4,260,614	\$ -
Transmission	\$ 13,445,459	3	Base/Extra Daily w/ Fire	\$ 5,697,604	\$ 3,091,875	\$ 2,126,122	\$ 740,894	\$ 703,906	\$ 817,198	\$ 267,859	\$ 13,445,459	\$ -
Distribution	\$ 28,295,301	4	Base/Extra Hourly w/ Fire	\$ 12,426,125	\$ 5,586,643	\$ 152,926	\$ 250,802	\$ -	\$ 7,446,830	\$ 2,431,974	\$ 28,295,301	\$ -
Storage	\$ 3,856,328	5	Storage	\$ 2,133,413	\$ 945,721	\$ 146,098	\$ 44,854	\$ 52,854	\$ -	\$ 533,387	\$ 3,856,328	\$ -
Meters	\$ 14,263,415	8	Meters	\$ 11,838,849	\$ 2,190,634	\$ 190,467	\$ 43,465	\$ -	\$ -	\$ -	\$ 14,263,415	\$ -
Services	\$ 10,610,982	9	Services	\$ 7,995,193	\$ 1,641,727	\$ 54,647	\$ 13,508	\$ -	\$ -	\$ 905,906	\$ 10,610,982	\$ -
Customers	\$ 6,779,196	10	Customers	\$ 6,077,516	\$ 559,221	\$ 3,896	\$ 1,025	\$ 154	\$ -	\$ 137,383	\$ 6,779,196	\$ -
Hydrants	\$ 5,973,800	7	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,843,139	\$ 130,661	\$ 5,973,800	\$ -
Total	\$ 131,929,567			\$ 67,956,576	\$ 25,709,786	\$ 11,725,467	\$ 4,285,922	\$ 3,726,002	\$ 14,107,168	\$ 4,418,647	\$ 131,929,567	\$ -
				51.51%	19.49%	8.89%	3.25%	2.82%	10.69%	3.35%	100.00%	
Rate Year Water Revenue	\$ 84,624,643			\$ 48,975,492	\$ 21,037,197	\$ 9,050,666	\$ 3,006,411	\$ 1,113,066	\$ -	\$ 1,441,810	\$ 84,624,643	\$ -
Other Water Operating Revenues	\$ 1,665,284											
Increase	\$ 47,304,925			\$ 18,981,084	\$ 4,672,589	\$ 2,674,801	\$ 1,279,510	\$ 2,612,936	\$ 14,107,168	\$ 2,976,837	\$ 47,304,925	\$ 0
Percent Increase	55.9%			38.76%	22.21%	29.55%	42.56%	234.75%	0.00%	206.47%	55.90%	
Rate Year Revenue				\$ 48,975,492	\$ 21,037,197	\$ 9,050,666	\$ 3,006,411	\$ 1,113,066	\$ -	\$ 1,441,810	\$ 84,624,643	
Cost of Service Increase				\$ 18,981,084	\$ 4,672,589	\$ 2,674,801	\$ 1,279,510	\$ 2,612,936	\$ 14,107,168	\$ 2,976,837	\$ 47,304,925	
Allocation of Public Fire				\$ 11,744,953	\$ 2,173,259	\$ 188,956			\$ (14,107,168)	\$ -	\$ -	
Revenue Target				\$ 79,701,529	\$ 27,883,045	\$ 11,914,423	\$ 4,285,921	\$ 3,726,002	\$ -	\$ 4,418,647	\$ 131,929,568	
Percent Increase				62.7%	32.5%	31.6%	42.6%	234.8%	0.0%	206.5%	55.9%	

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	\$ 1,018,421	A	Source of Supply	\$ 1,018,421	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,018,421	\$ -
Fuel and Power	\$ 2,018,684	A	Source of Supply	\$ 2,018,684	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,018,684	\$ -
Salaries and Wages	\$ 9,922	A	Source of Supply	\$ 9,922	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,922	\$ -
Contract Services - Other	\$ 59,614	A	Source of Supply	\$ 59,614	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 59,614	\$ -
Building Maintenance and Services	\$ 183,322	A	Source of Supply	\$ 183,322	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 183,322	\$ -
Miscellaneous	\$ 1,068	A	Source of Supply	\$ 1,068	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,068	\$ -
Telecommunications	\$ 60,329	A	Source of Supply	\$ 60,329	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 60,329	\$ -
Postage	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Office supplies and services	\$ 1,711	A	Source of Supply	\$ 1,711	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,711	\$ -
Materials & Supplies	\$ 3,767	A	Source of Supply	\$ 3,767	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,767	\$ -
Rents-Property	\$ 275	A	Source of Supply	\$ 275	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 275	\$ -
Rents-Equipment	\$ 3,218	A	Source of Supply	\$ 3,218	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,218	\$ -
Transportation	\$ 2,563	A	Source of Supply	\$ 2,563	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,563	\$ -
	\$ 3,362,894			\$ 3,362,894	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,362,894	\$ -
Maintenance Expense															
Salaries and Wages	\$ 92,259	A	Source of Supply	\$ 92,259	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 92,259	\$ -
Materials & Supplies	\$ 17,465	A	Source of Supply	\$ 17,465	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,465	\$ -
Transportation	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous	\$ 4,149	A	Source of Supply	\$ 4,149	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,149	\$ -
Contract Services - Eng	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services - Other	\$ 38,526	A	Source of Supply	\$ 38,526	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 38,526	\$ -
	\$ 152,399			\$ 152,399	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 152,399	\$ -
Total SS Expense	\$ 3,515,293			\$ 3,515,293	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,515,293	\$ -
Power and Pumping Expenses															
Operating Expense															
Fuel and Power	\$ 1,470,978	B	Pumping	\$ -	\$ 1,470,978	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,470,978	\$ -
Salaries and Wages	\$ 478,840	B	Pumping	\$ -	\$ 478,840	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 478,840	\$ -
Employee Benefits	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Maintenance and Services	\$ 2,360	B	Pumping	\$ -	\$ 2,360	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,360	\$ -
Miscellaneous	\$ 899	B	Pumping	\$ -	\$ 899	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 899	\$ -
Office supplies and services	\$ 25	B	Pumping	\$ -	\$ 25	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25	\$ -
Materials & Supplies	\$ 2,583	B	Pumping	\$ -	\$ 2,583	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,583	\$ -
Rents-Equipment	\$ 1,522	B	Pumping	\$ -	\$ 1,522	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,522	\$ -
Transportation	\$ 83,761	B	Pumping	\$ -	\$ 83,761	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 83,761	\$ -
	\$ 2,040,968			\$ -	\$ 2,040,968	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,040,968	\$ -
Maintenance Expense															
Salaries and Wages	\$ 126,959	B	Pumping	\$ -	\$ 126,959	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 126,959	\$ -
Transportation	\$ 143	B	Pumping	\$ -	\$ 143	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 143	\$ -
Contract Services - Eng	\$ 781	B	Pumping	\$ -	\$ 781	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 781	\$ -
Contract Services - Other	\$ 36,912	B	Pumping	\$ -	\$ 36,912	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36,912	\$ -
Miscellaneous	\$ 1,104	B	Pumping	\$ -	\$ 1,104	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,104	\$ -
Materials & Supplies	\$ 27,268	B	Pumping	\$ -	\$ 27,268	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 27,268	\$ -
	\$ 193,167			\$ -	\$ 193,167	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 193,167	\$ -
Total Pumping Expense	\$ 2,234,135			\$ -	\$ 2,234,135	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,234,135	\$ -
Water Treatment															
Operating Expense															
Fuel and Power	\$ 229,652	C	Water Treatment	\$ -	\$ -	\$ 229,652	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 229,652	\$ -
Chemicals	\$ 3,497,762	C	Water Treatment	\$ -	\$ -	\$ 3,497,762	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,497,762	\$ -
Waste Disposal	\$ 533,200	C	Water Treatment	\$ -	\$ -	\$ 533,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 533,200	\$ -
Salaries and Wages	\$ 1,100,468	C	Water Treatment	\$ -	\$ -	\$ 1,100,468	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,100,468	\$ -
Employee Benefits	\$ 5	C	Water Treatment	\$ -	\$ -	\$ 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5	\$ -
Contract Services - Eng	\$ 6,408	C	Water Treatment	\$ -	\$ -	\$ 6,408	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,408	\$ -
Contract Services - Other	\$ 30,257	C	Water Treatment	\$ -	\$ -	\$ 30,257	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,257	\$ -
Building Maintenance and Services	\$ 32,767	C	Water Treatment	\$ -	\$ -	\$ 32,767	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 32,767	\$ -
Miscellaneous	\$ 79,276	C	Water Treatment	\$ -	\$ -	\$ 79,276	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 79,276	\$ -
Telecommunications	\$ 5,021	C	Water Treatment	\$ -	\$ -	\$ 5,021	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,021	\$ -
Postage	\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Office supplies and services	\$ 6,526	C	Water Treatment	\$ -	\$ -	\$ 6,526	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,526	\$ -
Materials & Supplies	\$ 18,640	C	Water Treatment	\$ -	\$ -	\$ 18,640	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,640	\$ -
Rents-Property	\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rents-Equipment	\$ 3,702	C	Water Treatment	\$ -	\$ -	\$ 3,702	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,702	\$ -
Transportation	\$ 484	C	Water Treatment	\$ -	\$ -	\$ 484	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 484	\$ -
	\$ 5,544,168			\$ -	\$ -	\$ 5,544,168	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,544,168	\$ -

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	\$ 521,527	C	Water Treatment	\$ -	\$ -	\$ 521,527	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 521,527	\$ -
Transportation	\$ 3,671	C	Water Treatment	\$ -	\$ -	\$ 3,671	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,671	\$ -
Contract Services - Eng	\$ 1,666	C	Water Treatment	\$ -	\$ -	\$ 1,666	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,666	\$ -
Contract Services - Other	\$ 466,387	C	Water Treatment	\$ -	\$ -	\$ 466,387	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 466,387	\$ -
Miscellaneous	\$ 21,924	C	Water Treatment	\$ -	\$ -	\$ 21,924	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,924	\$ -
Materials & Supplies	\$ 339,232	C	Water Treatment	\$ -	\$ -	\$ 339,232	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 339,232	\$ -
	\$ 1,354,407			\$ -	\$ -	\$ 1,354,407	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,354,407	\$ -
Total Water Treatment Expense	\$ 6,898,575			\$ -	\$ -	\$ 6,898,575	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,898,575	\$ -
Transmission & Distribution Expense															
Operating Expense															
Fuel and Power	\$ 223,813	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 12,454	\$ 139,718	\$ -	\$ 71,641	\$ -	\$ -	\$ -	\$ 223,813	\$ -
Salaries and Wages	\$ 1,654,080	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 92,043	\$ 1,032,580	\$ -	\$ 529,457	\$ -	\$ -	\$ -	\$ 1,654,080	\$ -
Employee Benefits	\$ 5,315	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 296	\$ 3,318	\$ -	\$ 1,701	\$ -	\$ -	\$ -	\$ 5,315	\$ -
Contract Services - Eng	\$ 18,067	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 1,005	\$ 11,279	\$ -	\$ 5,783	\$ -	\$ -	\$ -	\$ 18,067	\$ -
Contract Services - Other	\$ 605,885	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 33,715	\$ 378,231	\$ -	\$ 193,939	\$ -	\$ -	\$ -	\$ 605,885	\$ -
Building Maintenance and Services	\$ 64,021	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 3,563	\$ 39,966	\$ -	\$ 20,493	\$ -	\$ -	\$ -	\$ 64,021	\$ -
Miscellaneous	\$ 40,874	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 2,274	\$ 25,516	\$ -	\$ 13,083	\$ -	\$ -	\$ -	\$ 40,874	\$ -
Telecommunications	\$ 34,196	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 1,903	\$ 21,347	\$ -	\$ 10,946	\$ -	\$ -	\$ -	\$ 34,196	\$ -
Postage	\$ -	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Office supplies and services	\$ 21,546	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 1,199	\$ 13,450	\$ -	\$ 6,897	\$ -	\$ -	\$ -	\$ 21,546	\$ -
Materials & Supplies	\$ 50,426	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 2,806	\$ 31,479	\$ -	\$ 16,141	\$ -	\$ -	\$ -	\$ 50,426	\$ -
Rents-Property	\$ 113	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 6	\$ 71	\$ -	\$ 36	\$ -	\$ -	\$ -	\$ 113	\$ -
Rents-Equipment	\$ 2,869	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 160	\$ 1,791	\$ -	\$ 918	\$ -	\$ -	\$ -	\$ 2,869	\$ -
Transportation	\$ 49,988	1	T/D Oper. Expense	\$ -	\$ -	\$ -	\$ 2,782	\$ 31,206	\$ -	\$ 16,001	\$ -	\$ -	\$ -	\$ 49,988	\$ -
	\$ 2,771,193			\$ -	\$ -	\$ -	\$ 154,206	\$ 1,729,951	\$ -	\$ 887,036	\$ -	\$ -	\$ -	\$ 2,771,193	\$ -
Maintenance Expense															
Salaries and Wages	\$ 624,164	2	T/D Maint.. Expense	\$ -	\$ -	\$ -	\$ 13,292	\$ 149,113	\$ -	\$ 86,263	\$ 209,546	\$ -	\$ 165,950	\$ 624,164	\$ -
Contract Services - Eng	\$ 45,267	2	T/D Maint.. Expense	\$ -	\$ -	\$ -	\$ 964	\$ 10,814	\$ -	\$ 6,256	\$ 15,197	\$ -	\$ 12,035	\$ 45,267	\$ -
Contract Services - Other	\$ 1,076,551	2	T/D Maint.. Expense	\$ -	\$ -	\$ -	\$ 22,925	\$ 257,189	\$ -	\$ 148,785	\$ 361,423	\$ -	\$ 286,229	\$ 1,076,551	\$ -
Transportation	\$ 244,108	2	T/D Maint.. Expense	\$ -	\$ -	\$ -	\$ 5,198	\$ 58,318	\$ -	\$ 33,737	\$ 81,953	\$ -	\$ 64,903	\$ 244,108	\$ -
Miscellaneous	\$ 526,115	2	T/D Maint.. Expense	\$ -	\$ -	\$ -	\$ 11,204	\$ 125,689	\$ -	\$ 72,712	\$ 176,629	\$ -	\$ 139,882	\$ 526,115	\$ -
Materials & Supplies	\$ 479,082	2	T/D Maint.. Expense	\$ -	\$ -	\$ -	\$ 10,202	\$ 114,453	\$ -	\$ 66,211	\$ 160,839	\$ -	\$ 127,377	\$ 479,082	\$ -
	\$ 2,995,287			\$ -	\$ -	\$ -	\$ 63,786	\$ 715,576	\$ -	\$ 413,963	\$ 1,005,586	\$ -	\$ 796,376	\$ 2,995,287	\$ -
Total T&D Expense	\$ 5,766,480			\$ -	\$ -	\$ -	\$ 217,991	\$ 2,445,527	\$ -	\$ 1,300,999	\$ 1,005,586	\$ -	\$ 796,376	\$ 5,766,480	\$ -
General Mains Expense															
Operations															
Salaries and Wages	\$ 384,240	K	Mains	\$ -	\$ -	\$ -	\$ 31,447	\$ 352,793	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 384,240	\$ -
Miscellaneous	\$ 926	K	Mains	\$ -	\$ -	\$ -	\$ 76	\$ 850	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 926	\$ -
	\$ 385,166			\$ -	\$ -	\$ -	\$ 31,523	\$ 353,643	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 385,166	\$ -
Maintenance Expense															
Salaries and Wages	\$ 87,624	K	Mains	\$ -	\$ -	\$ -	\$ 7,171	\$ 80,453	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 87,624	\$ -
Miscellaneous	\$ (550)	K	Mains	\$ -	\$ -	\$ -	\$ (45)	\$ (505)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (550)	\$ -
	\$ 87,074			\$ -	\$ -	\$ -	\$ 7,126	\$ 79,948	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 87,074	\$ -
General Mains Expense	\$ 472,240			\$ -	\$ -	\$ -	\$ 38,650	\$ 433,590	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 472,240	\$ -
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	\$ 180,511	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 180,511	\$ -	\$ -	\$ -	\$ 180,511	\$ -
Miscellaneous	\$ 820	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 820	\$ -	\$ -	\$ -	\$ 820	\$ -
	\$ 181,331			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 181,331	\$ -	\$ -	\$ -	\$ 181,331	\$ -
Maintenance Expense															
Salaries and Wages	\$ 44,806	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,806	\$ -	\$ -	\$ -	\$ 44,806	\$ -
Miscellaneous	\$ 1,444	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,444	\$ -	\$ -	\$ -	\$ 1,444	\$ -
	\$ 46,250			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 46,250	\$ -	\$ -	\$ -	\$ 46,250	\$ -

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	\$ 9,782,724	5	Net Plant (less gen. ar	\$ 499,009	\$ 618,753	\$ 1,436,362	\$ 1,468,898	\$ 3,023,659	\$ 402,774	\$ 927,040	\$ 871,272	\$ 145,443	\$ 389,513	\$ 9,782,724	\$ -
Payroll Taxes	\$ 791,209	4	Labor	\$ 14,053	\$ 83,318	\$ 223,080	\$ 19,799	\$ 222,110	\$ -	\$ 115,672	\$ 43,922	\$ 34,139	\$ 35,116	\$ 791,209	\$ -
Utility Reg Assessment	\$ 803,274	6	Rate Base	\$ 49,153	\$ 60,427	\$ 140,010	\$ 134,539	\$ 180,518	\$ 39,777	\$ 89,316	\$ 60,555	\$ 14,014	\$ 34,964	\$ 803,274	\$ -
Other Taxes	\$ (27,814)	6	Rate Base	\$ (1,702)	\$ (2,092)	\$ (4,848)	\$ (4,659)	\$ (6,251)	\$ (1,377)	\$ (3,093)	\$ (2,097)	\$ (485)	\$ (1,211)	\$ (27,814)	\$ -
	\$ 11,349,393			\$ 560,514	\$ 760,406	\$ 1,794,605	\$ 1,618,577	\$ 3,420,036	\$ 441,174	\$ 1,128,935	\$ 973,652	\$ 193,110	\$ 458,383	\$ 11,349,393	\$ -
Total Taxes Other Than Income Taxes (Other Water)	\$ 11,349,393			\$ 560,514	\$ 760,406	\$ 1,794,605	\$ 1,618,577	\$ 3,420,036	\$ 441,174	\$ 1,128,935	\$ 973,652	\$ 193,110	\$ 458,383	\$ 11,349,393	\$ -
Plant Depreciation															
Intangible Plant															
Organization	\$ -	5	Net Plant (less gen. ar	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Franchises	\$ -	5	Net Plant (less gen. ar	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other P/E-Intangible	\$ -	5	Net Plant (less gen. ar	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Source of Supply															
Land & Land Rights	\$ -	A	Source of Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Structures & Improvements	\$ 280,168	A	Source of Supply	\$ 280,168	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 280,168	\$ -
Collection & Impound Reservoirs	\$ 590	A	Source of Supply	\$ 590	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 590	\$ -
Lake, River, & Other Intakes	\$ 263,834	A	Source of Supply	\$ 263,834	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 263,834	\$ -
Wells & Springs	\$ 278,286	A	Source of Supply	\$ 278,286	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 278,286	\$ -
Infiltration Galleries & Tunnels	\$ 32	A	Source of Supply	\$ 32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 32	\$ -
Supply Mains	\$ 239,971	A	Source of Supply	\$ 239,971	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 239,971	\$ -
Other P/E-Supply	\$ 20,829	A	Source of Supply	\$ 20,829	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,829	\$ -
Water Pumping															
Pumping Land & Land Rights	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pumping Structures & Improvements	\$ 682,607	B	Pumping	\$ -	\$ 682,607	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 682,607	\$ -
Boiler Plant Equipment	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Power Generation Equipment	\$ 101,442	B	Pumping	\$ -	\$ 101,442	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 101,442	\$ -
Steam Pumping Equipment	\$ 4,426	B	Pumping	\$ -	\$ 4,426	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,426	\$ -
Electric Pumping Equipment	\$ 617,300	B	Pumping	\$ -	\$ 617,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 617,300	\$ -
Diesel Pumping Equipment	\$ 9,059	B	Pumping	\$ -	\$ 9,059	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,059	\$ -
Pump Equip Hydraulic	\$ 6,881	B	Pumping	\$ -	\$ 6,881	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,881	\$ -
Other Pumping Equipment	\$ 62,542	B	Pumping	\$ -	\$ 62,542	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 62,542	\$ -
Water Treatment															
Water Treatment Land & Land Rights	\$ -	C	Water Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Treatment Structures & Improvements	\$ 1,628,925	C	Water Treatment	\$ -	\$ -	\$ 1,628,925	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,628,925	\$ -
Water Treatment Equipment	\$ 1,607,412	C	Water Treatment	\$ -	\$ -	\$ 1,607,412	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,607,412	\$ -
Water Treatment - Other	\$ 49,058	C	Water Treatment	\$ -	\$ -	\$ 49,058	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 49,058	\$ -
T&D															
Transmission & Distribution Land	\$ -	K	Mains	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transmission & Distribution Structures & Impr	\$ 106,455	K	Mains	\$ -	\$ -	\$ -	\$ 8,713	\$ 97,742	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 106,455	\$ -
TD Mains 4in & Less	\$ 104,929	E	Distribution	\$ -	\$ -	\$ -	\$ -	\$ 104,929	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 104,929	\$ -
TD Mains 6in to 8in	\$ 3,586,130	E	Distribution	\$ -	\$ -	\$ -	\$ -	\$ 3,586,130	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,586,130	\$ -
TD Mains 10in to 16in	\$ 1,125,994	D	Transmission	\$ -	\$ -	\$ -	\$ 1,125,994	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,125,994	\$ -
TD Mains 18in & Grtr	\$ 807,147	D	Transmission	\$ -	\$ -	\$ -	\$ 807,147	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 807,147	\$ -
Other Transmission & Distribution Plant	\$ 2,707	K	Mains	\$ -	\$ -	\$ -	\$ 222	\$ 2,486	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,707	\$ -
Storage															
Distribution Reservoirs & Standpipes	\$ 726,777	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 726,777	\$ -	\$ -	\$ -	\$ -	\$ 726,777	\$ -
Distribution Reservoirs & Standpipes - Tank Coating	\$ -	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Meters															
Meters	\$ 1,217,701	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,217,701	\$ -	\$ -	\$ -	\$ 1,217,701	\$ -
Meter Installation	\$ 530,540	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 530,540	\$ -	\$ -	\$ -	\$ 530,540	\$ -
Meter Vaults	\$ -	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Services															
Services	\$ 2,353,629	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,353,629	\$ -	\$ -	\$ 2,353,629	\$ -
Hydrants															
Hydrants	\$ 577,730	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 577,730	\$ 577,730	\$ -
Fire Mains	\$ 9,679	J	Mains	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,679	\$ 9,679	\$ -

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
Plant Account															
Intangible Plant															
Organization	\$ 84,857	5	Net Plant (less gen. ar	\$ 4,328	\$ 5,367	\$ 12,459	\$ 12,741	\$ 26,228	\$ 3,494	\$ 8,041	\$ 7,558	\$ 1,262	\$ 3,379	\$ 84,857	\$ -
Franchises	\$ 43,698	5	Net Plant (less gen. ar	\$ 2,229	\$ 2,764	\$ 6,416	\$ 6,561	\$ 13,506	\$ 1,799	\$ 4,141	\$ 3,892	\$ 650	\$ 1,740	\$ 43,698	\$ -
Other P/E-Intangible	\$ 441,406	5	Net Plant (less gen. ar	\$ 22,516	\$ 27,919	\$ 64,810	\$ 66,278	\$ 136,430	\$ 18,174	\$ 41,829	\$ 39,313	\$ 6,563	\$ 17,575	\$ 441,406	\$ -
Source of Supply															
Land & Land Rights	\$ 2,388,986	A	Source of Supply	\$ 2,388,986	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,388,986	\$ -
Structures & Improvements	\$ 12,268,003	A	Source of Supply	\$ 12,268,003	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,268,003	\$ -
Collection & Impound Reservoirs	\$ 67,585	A	Source of Supply	\$ 67,585	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 67,585	\$ -
Lake, River, & Other Intakes	\$ 5,112,876	A	Source of Supply	\$ 5,112,876	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,112,876	\$ -
Wells & Springs	\$ 8,004,095	A	Source of Supply	\$ 8,004,095	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,004,095	\$ -
Infiltration Galleries & Tunnels	\$ 1,263	A	Source of Supply	\$ 1,263	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,263	\$ -
Supply Mains	\$ 10,964,100	A	Source of Supply	\$ 10,964,100	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,964,100	\$ -
Other P/E-Supply	\$ 372,232	A	Source of Supply	\$ 372,232	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 372,232	\$ -
Water Pumping															
Pumping Land & Land Rights	\$ 187,679	B	Pumping	\$ -	\$ 187,679	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 187,679	\$ -
Pumping Structures & Improvements	\$ 12,528,668	B	Pumping	\$ -	\$ 12,528,668	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,528,668	\$ -
Boiler Plant Equipment	\$ -	B	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Power Generation Equipment	\$ 2,764,331	B	Pumping	\$ -	\$ 2,764,331	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,764,331	\$ -
Steam Pumping Equipment	\$ 261,985	B	Pumping	\$ -	\$ 261,985	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 261,985	\$ -
Electric Pumping Equipment	\$ 27,703,694	B	Pumping	\$ -	\$ 27,703,694	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 27,703,694	\$ -
Diesel Pumping Equipment	\$ 341,503	B	Pumping	\$ -	\$ 341,503	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 341,503	\$ -
Pump Equip Hydraulic	\$ 314,613	B	Pumping	\$ -	\$ 314,613	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 314,613	\$ -
Other Pumping Equipment	\$ 3,532,085	B	Pumping	\$ -	\$ 3,532,085	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,532,085	\$ -
Water Treatment															
Water Treatment Land & Land Rights	\$ 1,457,375	C	Water Treatment	\$ -	\$ -	\$ 1,457,375	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,457,375	\$ -
Water Treatment Structures & Improvements	\$ 50,681,306	C	Water Treatment	\$ -	\$ -	\$ 50,681,306	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,681,306	\$ -
Water Treatment Equipment	\$ 52,445,905	C	Water Treatment	\$ -	\$ -	\$ 52,445,905	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 52,445,905	\$ -
Water Treatment - Other	\$ 734,821	C	Water Treatment	\$ -	\$ -	\$ 734,821	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 734,821	\$ -
T&D															
Transmission & Distribution Land	\$ 1,462,217	K	Mains	\$ -	\$ -	\$ -	\$ 119,673	\$ 1,342,544	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,462,217	\$ -
Transmission & Distribution Structures & Impr	\$ 5,135,130	K	Mains	\$ -	\$ -	\$ -	\$ 420,276	\$ 4,714,854	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,135,130	\$ -
TD Mains 4in & Less	\$ 6,577,534	E	Distribution	\$ -	\$ -	\$ -	\$ -	\$ 6,577,534	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,577,534	\$ -
TD Mains 6in to 8in	\$ 224,798,407	E	Distribution	\$ -	\$ -	\$ -	\$ -	\$ 224,798,407	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 224,798,407	\$ -
TD Mains 10in to 16in	\$ 70,583,540	D	Transmission	\$ -	\$ -	\$ -	\$ 70,583,540	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 70,583,540	\$ -
TD Mains 18in & Grtr	\$ 50,596,438	D	Transmission	\$ -	\$ -	\$ -	\$ 50,596,438	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,596,438	\$ -
Other Transmission & Distribution Plant	\$ 73,992	K	Mains	\$ -	\$ -	\$ -	\$ 6,056	\$ 67,936	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 73,992	\$ -
Storage															
Distribution Reservoirs & Standpipes	\$ 33,768,545	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33,768,545	\$ -	\$ -	\$ -	\$ -	\$ 33,768,545	\$ -
Distribution Reservoirs & Standpipes - Tank Coating	\$ -	F	Storage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Meters															
Meters	\$ 53,285,112	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 53,285,112	\$ -	\$ -	\$ -	\$ 53,285,112	\$ -
Meter Installation	\$ 15,941,998	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,941,998	\$ -	\$ -	\$ -	\$ 15,941,998	\$ -
Meter Vaults	\$ -	G	Meters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Services															
Services	\$ 66,833,866	H	Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 66,833,866	\$ -	\$ -	\$ 66,833,866	\$ -
Hydrants															
Hydrants	\$ 27,329,094	J	Hydrants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 27,329,094	\$ 27,329,094	\$ -
Fire Mains	\$ 406,875	J	Mains	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 406,875	\$ 406,875	\$ -
													\$ -	\$ -	\$ -

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	\$ 566,497	1	\$ -	\$ -	\$ -	\$ -	\$ 31,523	\$ 353,643	\$ -	\$ 181,331	\$ -	\$ -	\$ -	\$ 566,497	1.00000
				-	-	-	0.05565	0.62426	-	0.32009	-	-	-		
Miscellaneous T&D Maintenance Expense	\$ 334,648	2	\$ -	\$ -	\$ -	\$ 7,126	\$ 79,948	\$ -	\$ 46,250	\$ 112,349	\$ -	\$ -	\$ 88,975	\$ 334,648	1.00000
				-	-	-	0.02130	0.23890	-	0.13820	0.33572	-	0.26588		
Fixed O&M	\$ 12,740,860	3	\$ 478,188	\$ 763,157	\$ 2,637,961	\$ 256,641	\$ 2,879,117	\$ -	\$ 1,528,580	\$ 1,117,935	\$ 2,193,929	\$ 885,351	\$ 12,740,860	1.00000	
			0.03753	0.05990	0.20705	0.02014	0.22598	-	0.11997	0.08774	0.17220	0.06949			
Labor	\$ 4,642,301	4	\$ 102,181	\$ 605,799	\$ 1,621,995	\$ 143,954	\$ 1,614,938	\$ -	\$ 841,037	\$ 319,356	\$ 248,218	\$ 255,326	\$ 5,752,804	1.00000	
			0.01776	0.10530	0.28195	0.02502	0.28072	-	0.14620	0.05551	0.04315	0.04438			
Net Plant	\$ 820,183,286	5	\$ 41,836,927	\$ 51,876,214	\$ 120,424,531	\$ 123,152,404	\$ 253,503,520	\$ 33,768,545	\$ 77,723,019	\$ 73,047,395	\$ 12,193,945	\$ 32,656,785	\$ 820,183,286	1.00000	
			0.05101	0.06325	0.14683	0.15015	0.30908	0.04117	0.09476	0.08906	0.01487	0.03982			
Rate Base	\$ 627,060,523	6	\$ 38,370,602	\$ 47,171,462	\$ 109,296,492	\$ 105,025,259	\$ 140,917,717	\$ 31,051,295	\$ 69,723,102	\$ 47,271,141	\$ 10,939,584	\$ 27,293,871	\$ 627,060,523	1.00000	
			0.06119	0.07523	0.17430	0.16749	0.22473	0.04952	0.11119	0.07539	0.01745	0.04353			
Variable Cost	\$ 8,768,697		\$ 3,037,105	\$ 1,470,978	\$ 4,260,614	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,768,697	

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

	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Total	
Total Usage	56,529,219	29,243,641	31,282,916	11,313,268	10,051,909		42,694	138,463,648	hundred gallons
Average Day Usage	154,875	80,120	85,707	30,995	27,539	-	117	379,352	hundred gallons
Max Day Capacity Factor	1.97	2.09	1.17	1.11	1.22			---	
Max Day Usage	304,431	167,077	100,277	34,405	33,598	54,268	17,732	711,788	hundred gallons
Extra Capacity	149,556	86,957	14,570	3,409	6,059	54,268	17,615	332,435	hundred gallons
Fire Allocator						0.7537	0.2463	1.0000	12,000 gpm for 10 hours
Distribution Multiplier	1.00	1.00	0.11	0.56		1.00	1.00	N/A	
Average Hourly Usage	6,453	3,338	400	719	-	-	5	10,916	hundred gallons
Max Hour Capacity Factor	3.98	3.52	1.17	1.11	1.22			---	
Max Hour Usage	25,699	11,762	469	798	-	13,567	4,433	56,727	hundred gallons
Extra Capacity	19,246	8,423	68	79	-	13,567	4,428	45,812	hundred gallons
Customers	118,557	10,909	76	20	3		2,680	132,245	
Hydrants						11,180	250	11,430	
Revenue	\$ 48,975,492	\$ 21,037,197	\$ 9,050,666	\$ 3,006,411	\$ 1,113,066		\$ 1,441,810	\$ 84,624,643	

	Residential	Non Residential	Rate J	Rate B	Rate P	Public Fire	Rate F Private Fire	Meter Weighting	Service Weighting
5/8-METER	110,816	5,926	9	-	-		-	1.0	1.0
3/4-METER	1,582	184	1	-	-		-	1.5	1.0
1-METER	5,944	2,054	8	2	-		-	2.5	2.9
1.5-METER	149	429	-	-	-		-	5.0	4.0
2-METER	130	2,111	56	13	-		84	8.0	5.6
3-METER	3	103	12	4	-		3	16.0	5.6
4-METER	-	132	31	9	-		350	25.0	6.4
6-METER	-	30	21	6	-		731	50.0	9.9
8-METER	1	28	7	1	-		437	80.0	9.9
10-METER	3	1	3	-	-		68	115.0	9.9
12-METER	-	-	-	-	-		21	215.0	12.2
16-METER	255	-	-	-	-		-	320.0	12.2

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

System Load Factor:	0.7124	532,488	max day - thousand gallons per day
System Load Factor (fire):	0.6277	604,371	max day with fire - thousand gallons per day
System Load Factor (Hourly)	0.1363	80,071	max hour - thousand gallons per day
System Load Factor (Hourly fire)	0.1113	98,067	max hour with fire - thousand gallons per day

Average system hourly flow on max day
Average system hourly flow on max day

Mains Statistics

Type		Pct
10-Inch and Larger	1,008,782	0.0818
Under 10-inch	11,316,982	0.9182
Total	12,325,764	1.0000

Storage Statistics

Total Capacity	519,817	hundred gallons (2021 annual report)
Fire Allocation	0.1383	percentage of storage needed for maximum fire protection day
Non-Fire Allocation	0.8617	

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

1. VARIABLE COST

Item	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
Total Usage	56,529,219	29,243,641	31,282,916	11,313,268	10,051,909	-	42,694	138,463,648	hundred gallons	
Allocator	0.4083	0.2112	0.2259	0.0817	0.0726	-	0.0003	1.0000		

2. BASE/EXTRA DAILY

Item	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
Average Daily Use	154,875	80,120	85,707	30,995	27,539	-	117	379,352	hundred gallons	
Extra Capacity	149,556	86,957	14,570	3,409	6,059	-	-	260,552	hundred gallons	
System Capacity Factor	0.7124									
Average Day Allocator	0.2909	0.1505	0.1610	0.0582	0.0517	-	0.0002	0.7124		
Extra Capacity Allocator	0.1651	0.0960	0.0161	0.0038	0.0067	-	-	0.2876		
Allocator	0.4559	0.2464	0.1770	0.0620	0.0584	-	0.0002	1.0000		

3. BASE/EXTRA DAILY (w FIRE PROTECTION)

Item	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
Average Daily Use	154,875	80,120	85,707	30,995	27,539	-	117	379,352	hundred gallons	
Extra Capacity	149,556	86,957	14,570	3,409	6,059	54,268	17,615	332,435	hundred gallons	
System Capacity Factor	0.6277	assuming fire protection								
Average Day Allocator	0.2563	0.1326	0.1418	0.0513	0.0456	-	0.0002	0.6277		
Extra Capacity Allocator	0.1675	0.0974	0.0163	0.0038	0.0068	0.0608	0.0197	0.3723		
Combined Allocator	0.4238	0.2300	0.1581	0.0551	0.0524	0.0608	0.0199	1.0000		

4. BASE/EXTRA HOURLY (w FIRE PROTECTION)

Item	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
Average Hourly Use	6,453	3,338	400	719	-	-	5	10,916	hundred gallons	
Extra Capacity	19,246	8,423	68	79	-	13,567	4,428	45,812	hundred gallons	
System Capacity Factor	0.1113	assuming fire protection								
Average Day Allocator	0.0658	0.0340	0.0041	0.0073	-	-	0.0000	0.1113		
Extra Capacity Allocator	0.3734	0.1634	0.0013	0.0015	-	0.2632	0.0859	0.8887		
Combined Allocator	0.4392	0.1974	0.0054	0.0089	-	0.2632	0.0859	1.0000		

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

5. STORAGE

Item	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
Average Hourly Use	6,453	3,338	3,571	1,291	1,147		5		15,806	
Extra Capacity	19,246	8,423	607	142	252		----		28,671	
Fire Allocator							1.00000		1.00000	
System Capacity Factor	0.1113 assuming fire protection									
Average Day Allocator	0.0454	0.0235	0.0251	0.0091	0.0081		0.0000		0.1113	
Extra Capacity Allocator	0.5966	0.2611	0.0188	0.0044	0.0078				0.8887	
Allocator	0.6420	0.2846	0.0440	0.0135	0.0159		0.0000		1.0000	
Non-Fire Allocation of Storage	0.86171									
Fire Allocaton of Storage	0.13829									
Non-Fire Allocator	0.5532	0.2452	0.0379	0.0116	0.0137	-	0.0000		0.8617	
Fire Allocator	-	-	-	-	-	-	0.1383		0.1383	
Combined Allocator	0.5532	0.2452	0.0379	0.0116	0.0137	-	0.1383		1.0000	

6. MAINS

Item	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
Factor 4	0.4238	0.2300	0.1581	0.0551	0.0524	0.0608	0.0199		1.0000	hundred gallons
Factor 5	0.4392	0.1974	0.0054	0.0089	-	0.2632	0.0859		1.0000	hundred gallons
Tranmission Weighting	0.0818 Average system hourly load									
Distribution Weighting	0.9182 Average system hourly load - max day with fire protection (incremental)									
Combined Allocator	0.4379	0.2001	0.0179	0.0126	0.0043	0.2466	0.0805		1.0000	

7. HYDRANTS

Item	Non Residential		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Units
	Residential	Residential					Private Fire	Public Fire		
Total Hydrants	-	-	-	-	-	11,180	250		11,430	
Allocator	-	-	-	-	-	0.97813	0.02187		1.00000	

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

8. METERS

Item	Non		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Weighting
	Residential	Residential					Private Fire	Public Fire		
5/8-METER	110,816	5,926	9	-	-				116,751	1.0
3/4-METER	1,582	184	1	-	-				1,766	1.5
1-METER	5,944	2,054	8	2	-				8,008	2.5
1.5-METER	149	429	-	-	-				578	5.0
2-METER	130	2,111	56	13	-				2,311	8.0
3-METER	3	103	12	4	-				122	16.0
4-METER	-	132	31	9	-				171	25.0
6-METER	-	30	21	6	-				57	50.0
8-METER	1	28	7	1	-				37	80.0
10-METER	3	1	3	-	-				7	115.0
12-METER	-	-	-	-	-				-	215.0
16-METER	255	-	-	-	-				255	320.0
Total	211,908	39,211	3,409	778	-				255,306	-----
Allocator	0.83002	0.15358	0.01335	0.00305	-				1.00000	

9. SERVICES

Item	Non		Rate J	Rate B	Rate P	Public Fire	Rate F		Total	Weighting
	Residential	Residential					Private Fire	Public Fire		
5/8-METER	110,816	5,926	9	-	-				116,751	1.0
3/4-METER	1,582	184	1	-	-				1,766	1.0
1-METER	5,944	2,054	8	2	-				8,008	2.9
1.5-METER	149	429	-	-	-				578	4.0
2-METER	130	2,111	56	13	-		84		2,395	5.6
3-METER	3	103	12	4	-		3		125	5.6
4-METER	-	132	31	9	-		350		521	6.4
6-METER	-	30	21	6	-		731		788	9.9
8-METER	1	28	7	1	-		437		474	9.9
10-METER	3	1	3	-	-		68		75	9.9
12-METER	-	-	-	-	-		21		21	12.2
16-METER	255	-	-	-	-		-		255	12.2
Total	134,353	27,588	918	227	-		15,223		178,310	-----
Allocator	0.75348	0.15472	0.00515	0.00127	-		0.08537		1.00000	

10. CUSTOMERS

Item	Non		Rate J	Rate B	Rate P	Public Fire	Rate F		Total
	Residential	Residential					Private Fire	Public Fire	
Total Customers	118,557	10,909	76	20	3		2,680		132,245
Allocator	0.89650	0.08249	0.00057	0.00015	0.00002		0.02027		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	118,557	10,909	76	20	3		2,680	132,245
Allocator	0.89650	0.08249	0.00057	0.00015	0.00002		0.02027	1.00000

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	Collection Only	Collection & Treatment	Total	Variance
Intangible	\$ 3,399	1	Wastewater Flows	\$ 1,779	\$ 1,620	\$ 3,399	\$ -
Collection	\$ 6,410,667	1	Wastewater Flows	\$ 3,355,031	\$ 3,055,636	\$ 6,410,667	\$ -
Pumping	\$ 1,134,233	1	Wastewater Flows	\$ 593,602	\$ 540,631	\$ 1,134,233	\$ -
Treatment & Disposal	\$ 8,997,468	3	Treatment	\$ -	\$ 8,997,468	\$ 8,997,468	\$ -
General	\$ 2,223,757	1	Wastewater Flows	\$ 1,163,806	\$ 1,059,951	\$ 2,223,757	\$ -
Customers	\$ 257,734	2	Customers	\$ 94,900	\$ 162,834	\$ 257,734	\$ -
Total	\$ 19,027,258			\$ 5,209,118	\$ 13,818,140	\$ 19,027,258	\$ -
				27.38%	72.62%	100.00%	

Rate Year Water Revenue \$ 17,671,542
Other Water Operating Revenues \$ 91,120
Increase \$ 1,264,596
Percent Increase 7.7%

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

	Post Test Year	Alloc	Description	Treatment and						Total	Variance
				Intangible	Collection	Pumping	Disposal	General	Customer		
Miscellaneous	\$ -	C	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Telecommunications	\$ -	C	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Postage	\$ -	C	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Office supplies and services	\$ -	C	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Materials & Supplies	\$ 165	C	Pumping	\$ -	\$ -	\$ 165	\$ -	\$ -	\$ -	\$ 165	\$ -
Rents-Property	\$ -	C	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rents-Equipment	\$ -	C	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transportation	\$ -	C	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 13,619			\$ -	\$ -	\$ 13,619	\$ -	\$ -	\$ -	\$ 13,619	\$ -

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

	Post Test Year	Alloc	Description	Treatment and						Total	Variance
				Intangible	Collection	Pumping	Disposal	General	Customer		
Regulatory Expense	\$ 1,456	E	General	\$ -	\$ -	\$ -	\$ -	\$ 1,456	\$ -	\$ 1,456	\$ -
Insurance	\$ 32,030	E	General	\$ -	\$ -	\$ -	\$ -	\$ 32,030	\$ -	\$ 32,030	\$ -
	\$ 1,132,194			\$ -	\$ -	\$ -	\$ -	\$ 1,132,194	\$ -	\$ 1,132,194	\$ -
Maintenance Expense											
Salaries and Wages	\$ -	E	General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Materials & Supplies	\$ 33	E	General	\$ -	\$ -	\$ -	\$ -	\$ 33	\$ -	\$ 33	\$ -
Miscellaneous	\$ 3,389	E	General	\$ -	\$ -	\$ -	\$ -	\$ 3,389	\$ -	\$ 3,389	\$ -
Transportation	\$ -	E	General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services - Eng	\$ 583	E	General	\$ -	\$ -	\$ -	\$ -	\$ 583	\$ -	\$ 583	\$ -
Contract Services - Other	\$ 132,761	E	General	\$ -	\$ -	\$ -	\$ -	\$ 132,761	\$ -	\$ 132,761	\$ -
	\$ 136,766			\$ -	\$ -	\$ -	\$ -	\$ 136,766	\$ -	\$ 136,766	\$ -
Total General Expense	\$ 1,268,960			\$ -	\$ -	\$ -	\$ -	\$ 1,268,960	\$ -	\$ 1,268,960	\$ -
Customer Accounts											
Operating Expense											
Purchased Water	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fuel and Power	\$ 1,154	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,154	\$ 1,154	\$ -
Chemicals	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Waste Disposal	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Salaries and Wages	\$ 335	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 335	\$ 335	\$ -
Building Maintenance and Services	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer accounting, other	\$ 6,710	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,710	\$ 6,710	\$ -
Telecommunications	\$ 2	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2	\$ 2	\$ -
Office supplies and services	\$ 2,320	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,320	\$ 2,320	\$ -
Materials & Supplies	\$ 600	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 600	\$ 600	\$ -
Rents-Equipment	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Uncollectible Accounts	\$ 188,534	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 188,534	\$ 188,534	\$ -
	\$ 199,655			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 199,655	\$ 199,655	\$ -
Maintenance Expense											
Salaries and Wages	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services - Eng	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Services - Other	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transportation	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Materials & Supplies	\$ -	F	Customer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Customer Accounts Expense	\$ 199,655			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 199,655	\$ 199,655	\$ -
Total Operations & Maintenance Exp. (Wastewater)	\$ 5,855,614			\$ -	\$ 57,266	\$ 14,611	\$ 4,315,122	\$ 1,268,960	\$ 199,655	\$ 5,855,614	\$ -

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

	Post Test Year	Alloc	Description	Treatment and					Total	Variance	
				Intangible	Collection	Pumping	Disposal	General			Customer
General Plant											
Transmission & Distribution Structures & Impr	\$ 110	E	General	\$ -	\$ -	\$ -	\$ -	\$ 110	\$ -	\$ 110	\$ -
Distribution Reservoirs & Standpipes	\$ 56	E	General	\$ -	\$ -	\$ -	\$ -	\$ 56	\$ -	\$ 56	\$ -
Transmission & Distribution Mains	\$ 1,747	E	General	\$ -	\$ -	\$ -	\$ -	\$ 1,747	\$ -	\$ 1,747	\$ -
Meters	\$ -	E	General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Hydrants	\$ -	E	General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
General Land & Land Rights	\$ -	E	General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stores Shops Equipment Structures	\$ 60,766	E	General	\$ -	\$ -	\$ -	\$ -	\$ 60,766	\$ -	\$ 60,766	\$ -
Office Structures	\$ 21	E	General	\$ -	\$ -	\$ -	\$ -	\$ 21	\$ -	\$ 21	\$ -
General Structures - HVAC	\$ -	E	General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous Structures	\$ -	E	General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Structures & Improvements - Leasehold	\$ 5,660	E	General	\$ -	\$ -	\$ -	\$ -	\$ 5,660	\$ -	\$ 5,660	\$ -
Office Furniture and Equipment	\$ 5,726	E	General	\$ -	\$ -	\$ -	\$ -	\$ 5,726	\$ -	\$ 5,726	\$ -
Computers & Peripheral Equipment	\$ 50,665	E	General	\$ -	\$ -	\$ -	\$ -	\$ 50,665	\$ -	\$ 50,665	\$ -
Computer Hardware & Software	\$ 54,242	E	General	\$ -	\$ -	\$ -	\$ -	\$ 54,242	\$ -	\$ 54,242	\$ -
Computer Software	\$ 124,254	E	General	\$ -	\$ -	\$ -	\$ -	\$ 124,254	\$ -	\$ 124,254	\$ -
Personal Computer Software	\$ -	E	General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Office Equipment	\$ 2,161	E	General	\$ -	\$ -	\$ -	\$ -	\$ 2,161	\$ -	\$ 2,161	\$ -
BTS Initial Investment	\$ 83,218	E	General	\$ -	\$ -	\$ -	\$ -	\$ 83,218	\$ -	\$ 83,218	\$ -
Transportation Equipment	\$ 94,278	E	General	\$ -	\$ -	\$ -	\$ -	\$ 94,278	\$ -	\$ 94,278	\$ -
Transportation Equipment - Light Trucks	\$ 10,075	E	General	\$ -	\$ -	\$ -	\$ -	\$ 10,075	\$ -	\$ 10,075	\$ -
Transportation Equipment - Heavy Trucks	\$ -	E	General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transportation Equipment - Cars	\$ -	E	General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transportation Equipment - Other	\$ 5,789	E	General	\$ -	\$ -	\$ -	\$ -	\$ 5,789	\$ -	\$ 5,789	\$ -
Stores Equipment	\$ 1,016	E	General	\$ -	\$ -	\$ -	\$ -	\$ 1,016	\$ -	\$ 1,016	\$ -
Tools, Shop, & Garage Equipment	\$ 28,926	E	General	\$ -	\$ -	\$ -	\$ -	\$ 28,926	\$ -	\$ 28,926	\$ -
Laboratory Equipment	\$ 9,415	E	General	\$ -	\$ -	\$ -	\$ -	\$ 9,415	\$ -	\$ 9,415	\$ -
Power Operated Equipment	\$ 16,493	E	General	\$ -	\$ -	\$ -	\$ -	\$ 16,493	\$ -	\$ 16,493	\$ -
Communication Equipment	\$ 43,378	E	General	\$ -	\$ -	\$ -	\$ -	\$ 43,378	\$ -	\$ 43,378	\$ -
Communication Equipment (non telephone)	\$ 1,111	E	General	\$ -	\$ -	\$ -	\$ -	\$ 1,111	\$ -	\$ 1,111	\$ -
Telephone Equipment	\$ 408	E	General	\$ -	\$ -	\$ -	\$ -	\$ 408	\$ -	\$ 408	\$ -
Miscellaneous Equipment	\$ 8,289	E	General	\$ -	\$ -	\$ -	\$ -	\$ 8,289	\$ -	\$ 8,289	\$ -
Other Tangible Property	\$ 3	E	General	\$ -	\$ -	\$ -	\$ -	\$ 3	\$ -	\$ 3	\$ -
Plant Depreciation (Wastewater)	\$ 3,453,068			\$ -	\$ 1,277,041	\$ 423,452	\$ 1,144,770	\$ 607,805	\$ -	\$ 3,453,068	\$ -
CIAC-Non Taxable - Mains	\$ (425,430)	6	Rate Base	\$ (150)	\$ (223,543)	\$ (30,661)	\$ (154,149)	\$ (14,402)	\$ (2,525)	\$ (425,430)	\$ -
CIAC-Non Taxable - Ext Dep	\$ (26,852)	6	Rate Base	\$ (9)	\$ (14,109)	\$ (1,935)	\$ (9,729)	\$ (909)	\$ (159)	\$ (26,852)	\$ -
CIAC-Non Taxable - Services	\$ (5,983)	6	Rate Base	\$ (2)	\$ (3,144)	\$ (431)	\$ (2,168)	\$ (203)	\$ (36)	\$ (5,983)	\$ -
CIAC-Non Taxable - Meters	\$ 6	6	Rate Base	\$ 0	\$ 3	\$ 0	\$ 2	\$ 0	\$ 0	\$ 6	\$ -
CIAC-Non Taxable - Hydrants	\$ -	6	Rate Base	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIAC-Non Taxable - Other	\$ (157,895)	6	Rate Base	\$ (56)	\$ (82,966)	\$ (11,380)	\$ (57,211)	\$ (5,345)	\$ (937)	\$ (157,895)	\$ -
CIAC-Non Taxable - WIP	\$ (0)	6	Rate Base	\$ (0)	\$ (0)	\$ (0)	\$ (0)	\$ (0)	\$ (0)	\$ (0)	\$ -
CIAC-Taxable - Mains	\$ (8,676)	6	Rate Base	\$ (3)	\$ (4,559)	\$ (625)	\$ (3,144)	\$ (294)	\$ (51)	\$ (8,676)	\$ -
CIAC-Taxable - Extension Deposits	\$ (444)	6	Rate Base	\$ (0)	\$ (233)	\$ (32)	\$ (161)	\$ (15)	\$ (3)	\$ (444)	\$ -
CIAC-Taxable - Services	\$ (10,040)	6	Rate Base	\$ (4)	\$ (5,276)	\$ (724)	\$ (3,638)	\$ (340)	\$ (60)	\$ (10,040)	\$ -
CIAC-Taxable - Meters	\$ -	6	Rate Base	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIAC-Taxable - Hydrants	\$ -	6	Rate Base	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIAC-Taxable - Other	\$ (13,281)	6	Rate Base	\$ (5)	\$ (6,979)	\$ (957)	\$ (4,812)	\$ (450)	\$ (79)	\$ (13,281)	\$ -
CIAC-Taxable - WIP	\$ -	6	Rate Base	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIAC-Taxable - Services SIT	\$ -	6	Rate Base	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Amortization of CIAC (Wastewater)	\$ (648,596)			\$ (228)	\$ (340,806)	\$ (46,745)	\$ (235,010)	\$ (21,957)	\$ (3,850)	\$ (648,596)	\$ -
Wastewater Acquisition Depreciation	\$ 412,410	6	Rate Base	\$ 145	\$ 216,701	\$ 29,723	\$ 149,431	\$ 13,961	\$ 2,448	\$ 412,410	\$ -
Total Depreciation Expense (Wastewater)	\$ 3,216,882			\$ (83)	\$ 1,152,937	\$ 406,429	\$ 1,059,191	\$ 599,810	\$ (1,402)	\$ 3,216,882	\$ -
Amortization Expense											
COVID AAO	\$ 58,474	6	Rate Base	\$ 21	\$ 30,725	\$ 4,214	\$ 21,187	\$ 1,980	\$ 347	\$ 58,474	\$ -
Property Tax Tracker	\$ 23,536	6	Rate Base	\$ 8	\$ 12,367	\$ 1,696	\$ 8,528	\$ 797	\$ 140	\$ 23,536	\$ -
Rogue Creek Sewer	\$ 28,908	6	Rate Base	\$ 10	\$ 15,190	\$ 2,083	\$ 10,474	\$ 979	\$ 172	\$ 28,908	\$ -

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

	Post Test Year	Alloc	Description	Treatment and							Total	Variance
				Intangible	Collection	Pumping	Disposal	General	Customer			
Purcell Sewer Operations	\$ 12,223	6	Rate Base	\$ 4	\$ 6,423	\$ 881	\$ 4,429	\$ 414	\$ 73	\$ 12,223	\$ -	
Amortize MSD Arnold	\$ 935,976	6	Rate Base	\$ 329	\$ 491,810	\$ 67,457	\$ 339,139	\$ 31,686	\$ 5,555	\$ 935,976	\$ -	
Enterprise Solutions	\$ 350	6	Rate Base	\$ 0	\$ 184	\$ 25	\$ 127	\$ 12	\$ 2	\$ 350	\$ -	
Monsees Lake	\$ -	6	Rate Base	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Low Income Costs	\$ 391	6	Rate Base	\$ 0	\$ 205	\$ 28	\$ 142	\$ 13	\$ 2	\$ 391	\$ -	
Total Amortization Expense (Wastewater)	\$ 1,059,858			\$ 373	\$ 556,904	\$ 76,385	\$ 384,026	\$ 35,880	\$ 6,290	\$ 1,059,858	\$ -	
Total Amortization Expense	\$ 1,059,858			\$ 373	\$ 556,904	\$ 76,385	\$ 384,026	\$ 35,880	\$ 6,290	\$ 1,059,858	\$ -	

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

	Post Test Year	Alloc	Description	Treatment and							Total	Variance
				Intangible	Collection	Pumping	Disposal	General	Customer			
Plant Account												
Intangible Plant												
Organization	\$ 12,491	A	Intangible	\$ 12,491	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,491	\$ -
Franchise & Consents	\$ 5,562	A	Intangible	\$ 5,562	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,562	\$ -
Miscellaneous Intangible Plant Studies	\$ 19,091	A	Intangible	\$ 19,091	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 19,091	\$ -
Collection Plant												
Collection Land & Land Rights	\$ 117,550	B	Collection	\$ -	\$ 117,550	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 117,550	\$ -
Collection Structures & Improvements	\$ 2,180,807	B	Collection	\$ -	\$ 2,180,807	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,180,807	\$ -
Collections Sewers	\$ -	B	Collection	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collections Sewers - Force	\$ 5,485,742	B	Collection	\$ -	\$ 5,485,742	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,485,742	\$ -
Collections Sewers - Gravity	\$ 43,849,705	B	Collection	\$ -	\$ 43,849,705	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 43,849,705	\$ -
Special Collecting Structures	\$ -	B	Collection	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Services to Customers	\$ 3,407,372	B	Collection	\$ -	\$ 3,407,372	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,407,372	\$ -
Flow Measuring Devices	\$ 194,080	B	Collection	\$ -	\$ 194,080	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 194,080	\$ -
Flow Measuring Installations	\$ -	B	Collection	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Collection Plant Facilities	\$ 119,623	B	Collection	\$ -	\$ 119,623	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 119,623	\$ -
Pumping												
Pumping Land & Land Rights	\$ 156,005	C	Pumping	\$ -	\$ -	\$ 156,005	\$ -	\$ -	\$ -	\$ -	\$ 156,005	\$ -
Pumping Structures & Improvements	\$ 3,252,184	C	Pumping	\$ -	\$ -	\$ 3,252,184	\$ -	\$ -	\$ -	\$ -	\$ 3,252,184	\$ -
Receiving Wells	\$ 329,163	C	Pumping	\$ -	\$ -	\$ 329,163	\$ -	\$ -	\$ -	\$ -	\$ 329,163	\$ -
Electric Pumping Equipment	\$ 3,654,956	C	Pumping	\$ -	\$ -	\$ 3,654,956	\$ -	\$ -	\$ -	\$ -	\$ 3,654,956	\$ -
Diesel Pumping Equipment	\$ -	C	Pumping	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Pumping Equipment	\$ 202,753	C	Pumping	\$ -	\$ -	\$ 202,753	\$ -	\$ -	\$ -	\$ -	\$ 202,753	\$ -
Treatment and Disposal												
T&D Land & Land Rights	\$ 1,194,035	D	Treatment and Disposal	\$ -	\$ -	\$ -	\$ 1,194,035	\$ -	\$ -	\$ -	\$ 1,194,035	\$ -
Oxidation Lagoon Land & Land Rights	\$ -	D	Treatment and Disposal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Land & Land Rights	\$ -	D	Treatment and Disposal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Structures & Improvements	\$ 10,147,362	D	Treatment and Disposal	\$ -	\$ -	\$ -	\$ 10,147,362	\$ -	\$ -	\$ -	\$ 10,147,362	\$ -
Treatment and Disposal Plant Equipment	\$ 13,801,754	D	Treatment and Disposal	\$ -	\$ -	\$ -	\$ 13,801,754	\$ -	\$ -	\$ -	\$ 13,801,754	\$ -
Plant Sewers	\$ 9,592,649	D	Treatment and Disposal	\$ -	\$ -	\$ -	\$ 9,592,649	\$ -	\$ -	\$ -	\$ 9,592,649	\$ -
Outfall Sewer Line	\$ 321,202	D	Treatment and Disposal	\$ -	\$ -	\$ -	\$ 321,202	\$ -	\$ -	\$ -	\$ 321,202	\$ -
Other Treatment and Disposal Plant Equip	\$ -	D	Treatment and Disposal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Treatment Structures & Improvements	\$ (3)	D	Treatment and Disposal	\$ -	\$ -	\$ -	\$ (3)	\$ -	\$ -	\$ -	\$ (3)	\$ -
Water Treatment Equipment	\$ 128,989	D	Treatment and Disposal	\$ -	\$ -	\$ -	\$ 128,989	\$ -	\$ -	\$ -	\$ 128,989	\$ -

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

	Post Test Year	Alloc	Description	Treatment and						Total	Variance
				Intangible	Collection	Pumping	Disposal	General	Customer		
CIAC-Taxable - Services	\$ (354,943)	5	Net Plant	\$ (123)	\$ (183,940)	\$ (25,223)	\$ (129,563)	\$ (13,817)	\$ (2,277)	\$ (354,943)	\$ -
CIAC-Taxable - Meters	\$ -	5	Net Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIAC-Taxable - Hydrants	\$ -	5	Net Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIAC-Taxable - Other	\$ (421,624)	5	Net Plant	\$ (146)	\$ (218,495)	\$ (29,962)	\$ (153,903)	\$ (16,413)	\$ (2,705)	\$ (421,624)	\$ -
CIAC-Taxable - WIP	\$ -	5	Net Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CIAC-Taxable - Services SIT	\$ -	5	Net Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accum Amort CIAC	\$ 21,524,921	5	Net Plant	\$ 7,467	\$ 11,154,720	\$ 1,529,610	\$ 7,857,113	\$ 837,936	\$ 138,075	\$ 21,524,921	\$ -
Allocated MAWC Corporate - CIAC	\$ (66,622)	5	Net Plant	\$ (23)	\$ (34,525)	\$ (4,734)	\$ (24,319)	\$ (2,594)	\$ (427)	\$ (66,622)	\$ -
										\$ -	\$ -
Deferred Income Tax (Wastewater)	\$ (9,302,514)	5	Net Plant (less gen. and int.)	\$ (3,227)	\$ (4,820,781)	\$ (661,058)	\$ (3,395,641)	\$ (362,134)	\$ (59,672)	\$ (9,302,514)	\$ -
Pension/OPEB Tracker (Wastewater)	\$ (612,272)	4	Labor	\$ -	\$ (20,925)	\$ (1,707)	\$ (405,106)	\$ (184,336)	\$ (197)	\$ (612,272)	\$ -
Total Reductions	\$ (22,614,658)			\$ (7,632)	\$ (11,423,079)	\$ (1,565,247)	\$ (8,436,506)	\$ (1,040,859)	\$ (141,335)	\$ (22,614,658)	\$ -
TOTAL RATE BASE (Wastewater)	\$ 84,583,770			\$ 29,771	\$ 44,444,688	\$ 6,096,029	\$ 30,647,815	\$ 2,863,451	\$ 502,016	\$ 84,583,770	\$ -

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

	Post Test Year	Alloc	Description	Intangible	Collection	Pumping	Treatment and Disposal	General	Customer	Total	Variance
Fixed O&M	\$ 2,572,884	3		\$ -	\$ 38,815	\$ 4,043	\$ 1,126,882	\$ 1,204,643	\$ 198,501	\$ 2,572,884	
				-	0.01509	0.00157	0.43798	0.46821	0.07715	1.00000	
Labor	\$ 1,040,414	4		\$ -	\$ 35,558	\$ 2,900	\$ 688,384	\$ 313,237	\$ 335	\$ 1,040,414	
				-	0.03418	0.00279	0.66164	0.30107	0.00032	1.00000	
Net Plant	\$ 107,075,784	5		\$ 37,144	\$ 55,489,187	\$ 7,609,051	\$ 39,085,234	\$ 4,168,315	\$ 686,854	\$ 107,075,784	
				0.00035	0.51822	0.07106	0.36502	0.03893	0.00641	1.00000	
Rate Base	\$ 84,583,770	6		\$ 29,771	\$ 44,444,688	\$ 6,096,029	\$ 30,647,815	\$ 2,863,451	\$ 502,016	\$ 84,583,770	
				0.00035	0.52545	0.07207	0.36234	0.03385	0.00594	1.00000	
Variable Cost	\$ 3,282,730			\$ -	\$ 18,451	\$ 10,568	\$ 3,188,240	\$ 64,317	\$ 1,154	\$ 3,282,730	

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

1. WASTEWATER FLOWS

Class	Collection Only	Collection & Treatment
Wastewater Flows	8,824,885	8,037,375
Allocator	0.5234	0.4766

2. CUSTOMERS

Class	Collection Only	Collection & Treatment
Customers	8,321	14,278
Allocator	0.3682	0.6318

3. TREATMENT

Class	Collection Only	Collection & Treatment
Allocator	-	1.0000

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

Alloc	Description	Intangible Plant	Collection	Pumping	Treatment & Disposal	General	Customer	Total	Notes
A	Intangible	1.00000	-	-	-	-	-	1.00000	
B	Collection	-	1.00000	-	-	-	-	1.00000	
C	Pumping	-	-	1.00000	-	-	-	1.00000	
D	Treatment and Disposal	-	-	-	1.00000	-	-	1.00000	
E	General	-	-	-	-	1.00000	-	1.00000	
F	Customer	-	-	-	-	-	1.00000	1.00000	
3	Fixed O&M	-	0.01509	0.00157	0.43798	0.46821	0.07715	1.00000	
4	Labor	-	0.03418	0.00279	0.66164	0.30107	0.00032	1.00000	
5	Net Plant (less gen. and int.)	0.00035	0.51822	0.07106	0.36502	0.03893	0.00641	1.00000	
6	Rate Base	0.00035	0.52545	0.07207	0.36234	0.03385	0.00594	1.00000	

Alloc	Description	Collection Only	Collection & Treatment	Total
1	Wastewater Flows	0.52335	0.47665	1.00000
2	Customers	0.36821	0.63179	1.00000
3	Treatment	-	1.00000	1.00000