

**Exhibit No.:**

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**Witness/Type of Exhibit:**

**Sponsoring Party:**

**Case No.:**

Normalized Usage/ RSM

Mantle/Rebuttal

Public Counsel

WR-2020-0344

**REBUTTAL TESTIMONY**

**OF**

**LENA M. MANTLE**

Submitted on Behalf of the Office of the Public Counsel

**MISSOURI-AMERICAN WATER COMPANY**

CASE NO. WR-2020-0344

January 15, 2021

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of Missouri-American            )  
Water Company's Request for                )  
Authority to Implement General Rate        ) Case No. WR-2020-0344  
Increase for Water and Sewer Service     )  
Provided in Missouri Service Areas        )

**VERIFICATION OF LENA M. MANTLE**

Lena M. Mantle, under penalty of perjury, states:

1. Attached hereto and made a part hereof for all purposes is my rebuttal testimony in the above-captioned case.
2. My answer to each question in the attached rebuttal testimony is true and correct to the best of my knowledge, information, and belief.

/s/Lena M. Mantle  
Lena M. Mantle  
Senior Analyst  
Office of the Public Counsel

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**REBUTTAL TESTIMONY**

**OF**

**LENA M. MANTLE, P.E.**

**MISSOURI AMERICAN WATER COMPANY**

**CASE NO. WR-2020-0344**

1 **Q. What is your name?**

2 A. Lena M. Mantle.

3 **Q. Are you the same Lena M. Mantle who filed direct testimony in this case?**

4 A. Yes, I am.

5 **Q. Why are you filing rebuttal testimony?**

6 A. In this testimony I respond to the direct testimony of Missouri American Water  
7 Company (“MAWC”) witness Gregory P. Roach showing the Commission why it  
8 should not use the average usage per customer calculated by Mr. Roach to  
9 determine MAWC’s normalized residential and commercial revenues.

10 I also respond to the direct testimony of MAWC witness John M. Watkins  
11 describing why the Commission should not approve a revenue stabilization  
12 mechanism (“RSM”) in general and the RSM proposed by MAWC in particular.

13 **Q. Would you summarize your recommendations in this rebuttal testimony?**

14 A. I recommend the Commission not use MAWC’s recommended normalized usage  
15 per customer for its residential classes and its St. Louis County commercial class.  
16 Instead, the Commission should order the use of a three year average in these  
17 classes to determine normal annual usage to calculate normalized revenue and for  
18 billing units for rate design.

19 I also recommend that the Commission not approve a revenue stabilization  
20 mechanism for MAWC.

**MAWC Recommended Usage is Not Representative of Normal Usage**

**Q. Would you summarize the methodologies used to determine normalized usage of residential and commercial classes of the parties in this case?**

A. Yes. The following table contains the methodologies used by the parties to this case that have a position on usage normalization.

		Residential		Commercial	
	Witness	St. L County	Other	St. L County	Other
MAWC	Roach	Regression	Regression	Regression	3 year avg
Staff	Robertson	5 year avg	5 year avg	5 year avg	5 year avg
MIEC	Meyer	3 year avg	3 year avg	3 year avg	3 year avg
OPC	Mantle	3 year avg	3 year avg	3 year avg	3 year avg

**Q. What should the Commission glean from this table?**

A. This table shows that MAWC chose to use regression analysis to determine its customers' normalized water usage for its residential classes and its St. Louis County commercial class. For its non-St. Louis County commercial class, it chose to use a three year average. The other parties all chose to use averages for all four classes with MIEC and OPC using three year averages and Staff using a five year average.

**Q. Is regression analysis a good methodology for normalizing usage?**

A. Not in this case with MAWC's limited data. Regression models can be used to provide information such as whether or not there is a decline in usage over time and how usage changes with the weather. However, having a regression model does not automatically mean that the usage from the model is the best estimate of normalized usage. The results of the regression model should be evaluated for reasonableness and the quality of the input data should be reviewed. As is often said - garbage in, garbage out.

1           Given my review of MAWC’s regression model results and the data that  
2           was used in the model, I recommend the Commission not use MAWC’s normalized  
3           usage for the residential classes and the St. Louis County commercial class. Instead,  
4           the Commission should order the use of the average of three years of annual average  
5           usage per customer in these classes to determine normal annual usage to calculate  
6           normalized revenue and for billing units for rate design.

7 **Q.    What did your review reveal to support your conclusion that the Commission**  
8 **should not use the results of MAWC’s regression models to determine**  
9 **normalized usage?**

10 A.    As I provided in my direct testimony, residential and commercial usage per  
11       customer, while showing a decrease in usage from 2010 through 2014, began to  
12       increase in 2015. For the four years of 2015 through 2018, usage stabilized and  
13       actually increased a bit. Of the five years of 2015 through 2019, usage per  
14       customers only decreased in the last of these five years. However, because  
15       MAWC’s regression model used data from 2010 to 2018, it estimates a continuing  
16       decline in usage from 2015 through 2018 despite recent usage data.

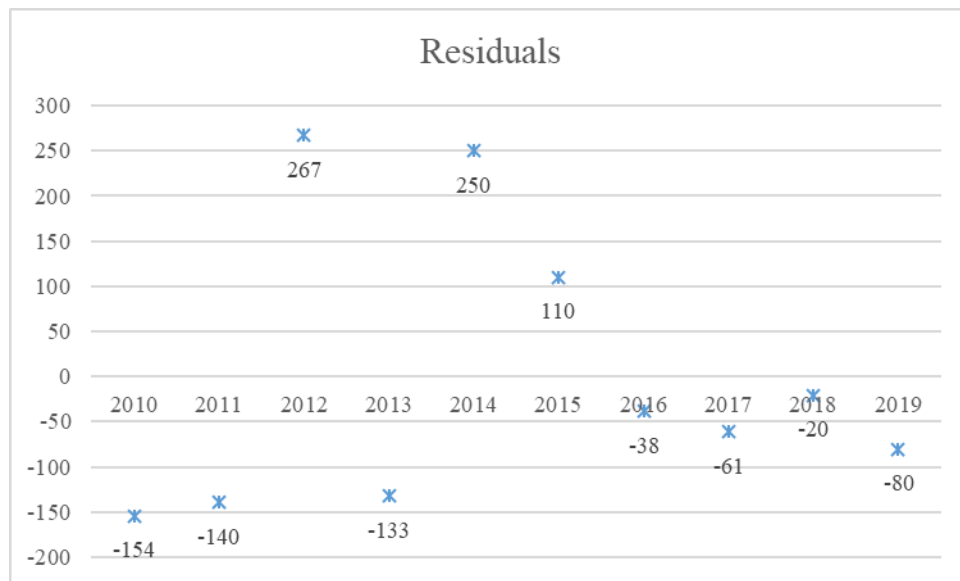
17 **Q.    MAWC’s normalization models all have high R-squared values. Doesn’t this**  
18 **indicate a good model?**

19 A.    Not necessarily. R-square is a statistical measure of how close *data* are to the fitted  
20       regression line. A high R-square does not necessarily indicate that *the model* is a  
21       good predictor. It does not tell the entire story. In addition, other model statistics,  
22       residual plots, data review, and intuitive knowledge should be used to determine if  
23       the model is in fact accurate enough to be used to estimate normalized usage.

24           My review of the data used and the model results show me that the  
25       regression methodology used by MAWC does not give a reasonable normalized  
26       usage for either of the residential classes or the St. Louis County commercial class.

1 **Q. What from your review makes you question the models’ accuracy to estimate**  
2 **normalized usage?**

3 A. One indication of a poor model with a good R-square is to look at the difference  
4 between the predicted values and the actual values, often referred to as the  
5 “residuals.” A good predictor will have positive and negative residuals randomly  
6 scattered around zero. A plot of the residuals for the MAWC model of St. Louis  
7 County residential customer class usage per customer is shown in the graph below.



8  
9 **Q. Would you explain how this graph shows the model is not an accurate**  
10 **predictor of usage?**

11 A. A good model should have approximately the same number of positive and negative  
12 residuals randomly scattered across the time period. In this case, because the model  
13 used 10 annual data points, a good model would have five positive and five negative  
14 residuals with no more than two years of positive or negative in a row. This residual  
15 plot shows that, of the ten residual data points, there are only three positive residuals  
16 that occur and those three are in a four year time period.

1                   Another sign of a poor model is the wide variation in the absolute values<sup>1</sup>  
2                   of the residuals. Extremes in the absolute values indicate the model is not a good  
3                   fit. Two of the three positive residuals are extreme (250 and 267) while the absolute  
4                   values of the rest of the residuals are 154 and below.

5 **Q.     What do the extreme values signify?**

6 A.     This indicates there is some explanatory variable that was not included in the model  
7           or it could be there is problem in the data itself.

8 **Q.     Could a regression model be developed to take these outlier data points into**  
9 **consideration?**

10 A.    It could, but the model would be limited because of the limited number of data  
11         points available.

12 **Q.     Is there anything else that indicates that the Commission should not use**  
13 **MAWC’s models to estimate normalized usage?**

14 A.    Yes. These models are estimated using annual data. While it is intuitive that water  
15         usage is influenced by how hot and dry it is, the weather impacts usage on a daily,  
16         weekly or seasonal basis. This is consistent with Mr. Roach’s testimony that short-  
17         term summer weather patterns influence water usage of residential and commercial  
18         customers.<sup>2</sup> To get an accurate model of the relationship between weather and  
19         water usage, less aggregated data should be used. Annual data cannot accurately  
20         capture the relationship between water usage and weather.

21 **Q.     Why is annual data insufficient?**

22 A.    When data is aggregated, information on the relationship between weather and  
23         usage is lost. For example, consider a cold month where the weather had little

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<sup>1</sup> Absolute value is a measure of how far a number is from zero. The absolute value of a negative number is the same number without a negative sign.

<sup>2</sup> Roach direct testimony, page 7.



1 impact on usage following a hot month where the weather resulted in considerable  
2 usage. When combined, the temperature and rainfall amounts for these two months  
3 looks normal even though one month had higher than normal usage and the other  
4 month did not. If modeled together, these the two months are “normal” and no  
5 adjustment for weather is necessary. However, if modeled separately there would  
6 have been a downward adjustment in the hot month and no adjustment in the cooler  
7 month resulting in a downward adjustment to the total of the usage of the two  
8 months combined.

9 Also, intuitively, the response to a dry day with a mean temperature of 80  
10 degrees Fahrenheit (“° F”) in the month of June is completely different from a dry  
11 day with a mean temperature of 80° F in August. These differing responses cannot  
12 be captured in an annual model.

13 Finally, customer water usage changes vary to different extremes depending  
14 on the relative one- cooling degree day (“CDD”)<sup>3</sup> change. One CDD difference at  
15 66° F does not have the same impact on water usage as one CDD at 80° F. However,  
16 Mr. Roach’s measure of weather is the same at 66° F as it is at 80° F resulting in an  
17 estimate of the same change in usage for one CDD whether it is measured at 66 or  
18 80. A regression analysis on daily data could give an estimate of how usage is  
19 effected by a degree day at 66° versus a degree day at 80°, but these relationships  
20 cannot be determined with a regression analysis using annual data.

21 **Q. Is a model that uses annual data that accounts for weather better than using a**  
22 **simple average of usage over the last three years?**

23 A. Not in this case. A more complex methodology does not necessarily mean a better  
24 normalization.

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<sup>3</sup> When the mean daily temperature is above 65, cooling degree days are calculated as the mean daily temperature minus 65. When the mean daily temperature is below 65, cooling degree days are zero.

1 **Q. Why not?**

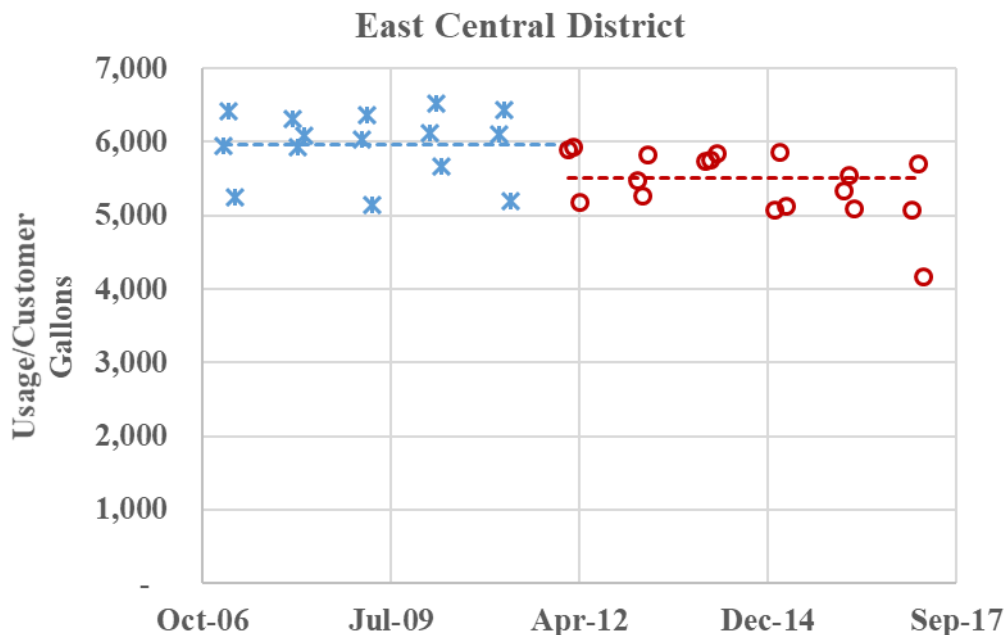
2 A. To determine a trend, the more data used, the better the resulting model. However,  
3 the relationship between usage and the trend variables in the model needs to be  
4 consistent across the time period used. In Mr. Roach’s analysis, the data used was  
5 the annual usage per customer for 2010 through 2019. As I have previously  
6 described, this annual data shows a distinct change in the “trend” of usage. The  
7 declining trend in the data in 2010 through 2014 changed in the last five years to a  
8 slight increasing or no change in usage with the exception of the annual data for  
9 2019.

10 **Q. Had you seen a change in the trend prior to this rate case?**

11 A. Yes. In the last MAWC rate case, WR-2017-0285, MAWC’s normalization model  
12 was based off the difference between summer and a base usage that was calculated  
13 using the billing months of February, March, and April. In that case, I also  
14 recommended the Commission use a simple average after I reviewed the billing  
15 months used to calculate the base usage. In my direct testimony in WR-2017-0285,  
16 I showed how the usage in these base months was flat up through 2011 and then  
17 took a distinct drop and remained constant in 2012 and afterwards. The graph  
18 below from my direct testimony in WR-2017-0285<sup>4</sup> shows this disconnect.

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<sup>4</sup> WR-2017-0285, Direct testimony of Lena M. Mantle, page 3.



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This graph also shows that the usage for April 2017 was unusually low. Mr. Roach provided a correction of the usage for April 2017 in his rebuttal testimony in that case.

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**Q. Did you find any other usage data problems in the last MAWC rate case, WR-2017-0285?**

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**A.** Yes. In my rebuttal testimony I discussed additional problems with the input data used to develop the models for that case. Also, in that case, WR-2017-0285, OPC witness Dr. Geoff Marke described inconsistencies in water billing and usage data findings from *Staff's Report Regarding the Investigation of Missouri-American Water Company ("MAWC") with Respect to MAWCs Faulty Meter and Negative Reserve Balance issues as Disclosed during Rate Case No. WR-2015-0301*.<sup>5</sup>

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<sup>5</sup> WO-2017-0012.

1 **Q. Did MAWC use the same data in this case as it did in the last case?**

2 A. It used the same data through December 2014 so the disconnect I identified in the  
3 last rate case between 2011 and 2012 is still in the data used by Mr. Roach in this  
4 case. However, in Mr. Roach's data for this case, WR-2020-0344, the number of  
5 residential customers for 2015 and 2016 is slightly higher than the number of  
6 customers used in the last case. When I asked MAWC what caused the difference,  
7 its response was:

8 In WR-2017-0285, Anna Meadows and Jaxson Estates were  
9 included as flat rate customers and not reflected in the customer  
10 count for the average use file. In 2018, they began billing as metered  
11 customers and should have been excluded from the average use prior  
12 to 2018. This will be corrected with the next update to the average  
13 use file.<sup>6</sup>

14 **Q. Would this correction of the data referred to in the data request response  
15 change Mr. Roach's model?**

16 A. Very little if at all due to the level of aggregation of the data. If it did change his  
17 model, it would reduce the decline in usage his model estimates, i.e. the decline in  
18 usage would be less.

19 **Q. Then why is this discrepancy in the data a concern?**

20 A. Because it undermines any overall confidence the Commission should place in the  
21 data used by MAWC's models. MAWC's use of different data between two rate  
22 cases is indicative that there may be numerous other problems with the usage per  
23 customer data across the ten years used by Mr. Roach in his analysis.

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<sup>6</sup> OPC DR 8013.

1 **Q. Could problems exist in the three years of data OPC used to calculate**  
2 **normalized usage?**

3 A. Yes. However, using data across a shorter time-period lessens the opportunity for  
4 problems in the data and, if there are problems, the problems are more likely to be  
5 consistent across all of the data.

6 **Q. Was there anything in your testimony in the last case, WR-2017-0285, that**  
7 **supports your contradiction of Mr. Roach’s testimony in this case that usage**  
8 **is declining?**

9 A. In my surrebuttal testimony in the last MAWC rate case, I described how MAWC  
10 had explained to its customers that its new meters were more efficient and more  
11 accurate than their old meters. This suggested that previous meters were incorrectly  
12 recording usage lower than it actually was.<sup>7</sup> The usage data since that time shows  
13 a stabilization of the usage per customer supporting MAWC’s suggestion in the last  
14 case that its old meters were inaccurate.

15 **Q. What does that have to do with the normalized usage for this case?**

16 A. Perhaps the decline in usage prior to the installation of the new meters was not due  
17 to customers reducing their usage but by inaccurate meters that MAWC was  
18 replacing. Since installing more accurate meters, usage has not been declining.  
19 Roach fails to account for this change in his modeling.

20 **Q. Are there any other reasons that the Commission should not adopt Mr.**  
21 **Roach’s recommended usage per customer for the residential and St. Louis**  
22 **County commercial classes?**

23 A. Yes. Mr. Roach uses a “lag” variable of the annual usage from the previous calendar  
24 year in his model. By using this lag variable, Mr. Roach is indicating that a  
25 customer’s *annual* usage for 2019 was influenced by their *annual* usage in 2018.

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<sup>7</sup> Local Public Hearing, Volume 8, January 29, 2018, P.52:4-17.

1 Including this lag variable in his modelling does result in a higher R-square value  
2 but the t-statistic on this lag variable supplied by MAWC, in addition to not having  
3 a good intuitive foundation, shows this variable was not statistically significant.

4 Finally, in this case Mr. Roach was tasked, not with *normalizing* test year  
5 usage but with *predicting* the usage for a forecasted test year. The usage per  
6 customer he is recommending is a predicted amount, not a normalized amount. Mr.  
7 Roach calculated it using MAWC's estimates of normal weather and normal  
8 rainfall, and the decline in usage per day estimated by the model at a point in time  
9 in the future. The residuals previously shown in this testimony show for each year,  
10 how much of the usage the model did not capture. Using a predicted number as a  
11 normalized number indicates that in a "normal" year, nothing other than the  
12 variables in the model impact usage. Using an average, as OPC and other parties  
13 have recommended, averages these other factors that Mr. Roach's model did not  
14 capture. Averaging those factors accounts for them in the normalized usage.

15 **Q. Mr. Roach testifies on pages 26 through 43 of his direct testimony about how**  
16 **usage per customer is declining. How do you respond to Mr. Roach's**  
17 **testimony that usage is declining?**

18 A. Mr. Roach's testimony is at odds with a recent Nasdaq.com article that includes the  
19 following statement:

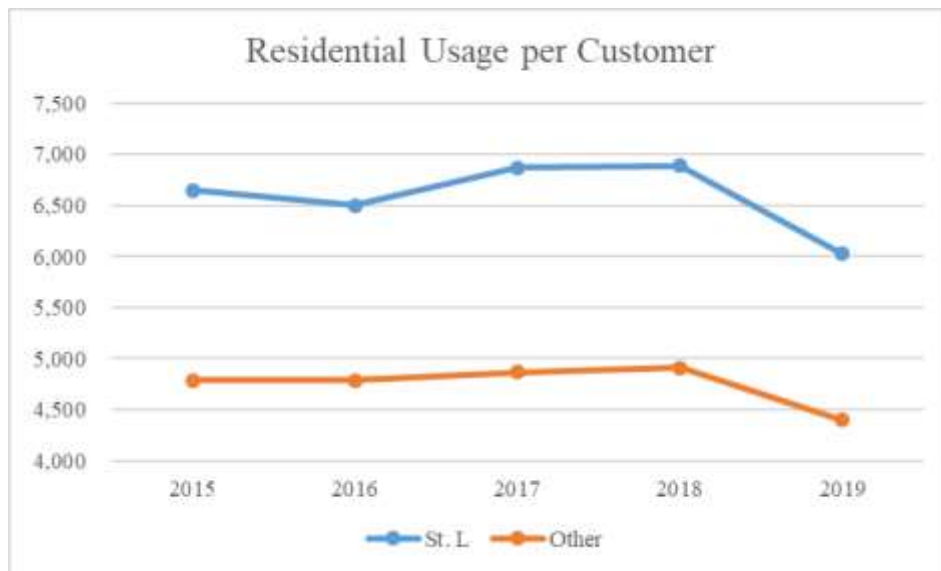
20 American Water reported 5.5% and 6.5% growth in sales in its  
21 second and third quarters, respectively, as demand for its water and  
22 wastewater services, which are essential in nature, remained strong.<sup>8</sup>

23 A review of the per customer usage data of MAWC customers provided by  
24 MAWC for the last five years also conflicts with the testimony of Mr. Roach as  
25 shown in the graphs below.

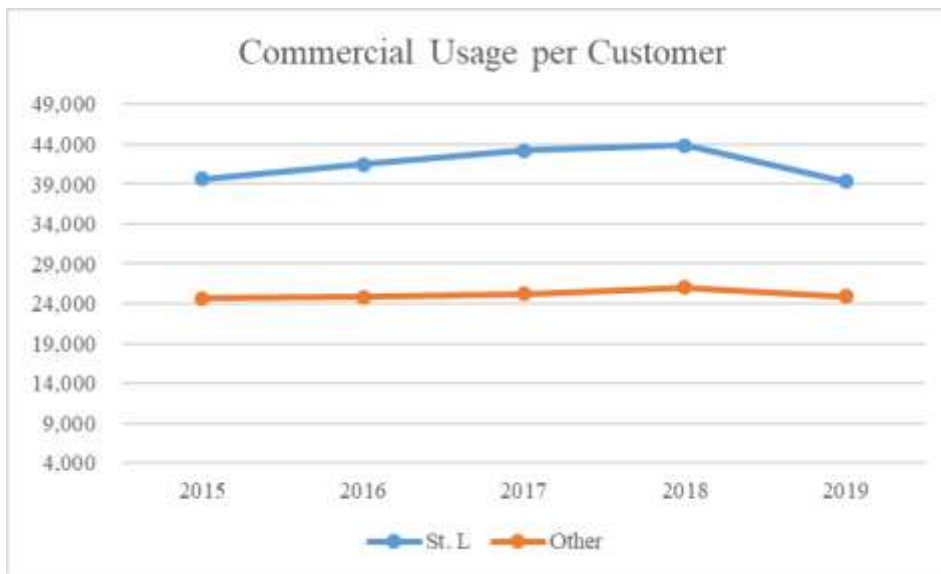
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<sup>8</sup> Neha Chamaria, Why American Water Works Stock Shot up 24.9% in 2020, NASDAQ,  
<https://www.nasdaq.com/articles/why-american-water-works-stock-shot-up-24.9-in-2020-2021-01-08>.

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These graphs do not show great declines in usage per customer over the last 5 years. From 2015 through 2018, there actually was growth in the usage per customer ranging from 2.63% to 10.63% for these groups of customers. None of these customer classes show consistent decline, despite variations in weather across these

1 five years.<sup>9</sup> Nothing in the data over the five most recent years indicates a  
2 precipitous decline in usage for MAWC customers.

3 Much of Mr. Roach’s testimony on the decline in usage looks at national  
4 trends and trends in other states. He includes California in particular, which was in  
5 a severe drought for much of the last decade. My review of the usage data for  
6 MAWC customers shows that usage here is not declining.

7 **The Commission Should Not Approve a Revenue Stabilization Mechanism**

8 **Q. Would you summarize the RSM proposed by MAWC in Mr. Watkins**  
9 **testimony?**

10 A. Section 386.266.4 RSMo. allows MAWC to ask the Commission for a mechanism  
11 that changes rates outside of general rate case to ensure actual revenues as  
12 established by the Commission in a rate case are collected.

13 **Q. Does the statute require the Commission to grant a mechanism simply because**  
14 **MAWC asks for one?**

15 A. While I am not an attorney, Section 386.266.5 Mo. requires the Commission to  
16 approve, modify, or reject MAWC. This is one of the customer protections  
17 included in Section 386.266 RSMo.

18 **Q. What is your recommendation regarding MAWC’s proposed RSM?**

19 A. I recommend that the Commission reject the RSM proposed by MAWC.

20 A rate stabilization mechanism changes the balance of risk and  
21 responsibility that has served customers of regulated utilities in Missouri well for  
22 over a century. A utility comes to the Commission and proves to the Commission  
23 what it needs to pay its bills and to earn a return on capital expenditures it makes to  
24 serve its captive customers. The Commission then allows the utility to determine

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<sup>9</sup> Annual precipitation varied from 37 to 61 inches and Annual Cooling Degree Days (a measure of how hot it was) varied by 305 Cooling Degree Days across these five years.



1           how to spend the revenue that it collects from its customers. If it can find ways to  
2           efficiently meet its customers' needs at lower costs, it gets to keep the money that  
3           it saved even as expenses covered by rates fall. This relationship drives efficiency  
4           in the utility's expenditures.

5           If, between rate cases, revenues increase due to increased customer usage,  
6           the revenue above what the Commission determined appropriate in the last rate case  
7           is not returned to the customers. This risk-reward relationship is just part of doing  
8           business, and what we would expect of any company in a free market.  
9           Alternatively, if the utility believes it needs more revenue than it is collecting, then  
10          it can come back to the Commission and prove that an increase in revenues is  
11          necessary to provide safe and adequate service to its captive customers while  
12          earning a return on its investments.

13          On the customers' side, they have stability in their rates. They are assured  
14          that their rates will not change without a thorough review by the Commission.  
15          Changes in their bills are a result of their action or inaction. Because they have an  
16          understanding of the impact of a change in their behavior, they can decide to reduce  
17          their bills by reducing their usage or, knowing the impact on their bill, choose to  
18          water their lawn for an additional hour or two, thus increasing their bill. They have  
19          available to them information on which to make these types of decisions.

20          A RSM distorts the incentives that have worked well for both the utility and  
21          customers, while distorting the risk-reward relationship customers have with the  
22          utility. A RSM provides certainty for the utility because the utility is assured that  
23          it will receive the revenues set by the Commission, but customers get no  
24          commensurate benefit. Instead, customers lose the certainty of how their actions  
25          will affect their bills. While a reduction in usage will result in a decrease in a  
26          customer's bill in the short-run, it may also contribute to an increase in their bills  
27          in the long-run. With a RSM, customers' bills will be affected by other customers'  
28          decisions and actions of which they have no control over.

1 **Q. In his direct testimony, MAWC witness John M. Watkins states “An RSM will**  
2 **provide Missouri-American with revenue stability for ongoing programs and**  
3 **investments necessary to maintain and improve efficiency and service**  
4 **reliability.”<sup>10</sup> Is an RSM necessary for MAWC to be able to maintain and**  
5 **improve efficiency and service reliability?**

6 A. No. MAWC has shown that it is able to maintain and improve efficiency and  
7 service reliability without a RSM. It has paid its expenses and earned a high return  
8 on its capital expenditures as evidenced by Staff’s testimony in this case. In its  
9 direct case, Staff shows that, even though MAWC has filed for an increase in its  
10 revenues in this case, MAWC could cover its water company expenses and earn a  
11 return on its equity of 9.55% *with a \$25.8 million revenue decrease in its revenue*  
12 *requirement*. This indicates that, on a normalized basis with its current rates and  
13 no RSM, MAWC is covering its expenses and earning a return greater than the  
14 9.55% Staff is recommending in its direct filing.

15 **Q. How do you reconcile this with MAWC witness Gregory Roach remarks on**  
16 **page 45 of his testimony that “MAWC has collected revenue that is less than**  
17 **the revenue levels used to set revenue requirements in rate cases since 2010 for**  
18 **each post-case year of those proceedings from 2010 to 2019 except for 2012”?**

19 A. What this tells me is that traditional utility regulation, without a RSM, has been  
20 working well for MAWC since 2010. In a rate case, a revenue requirement to  
21 recover normalized costs is determined and then rates are set to recover that revenue  
22 requirement. MAWC’s actual revenues have been below the revenues set by the  
23 Commission. Mr. Roach is only looking at one side of the equation - revenues.

24 This means, to achieve the overearnings that MAWC is currently  
25 experiencing, MAWC’s costs have been less than the normalized costs included in  
26 the revenue requirement set by the Commission. If there had been a RSM, the

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<sup>10</sup> Direct testimony of John Watkins, page 5.

1 overearnings would have been greater and the bills of the customers would have  
2 been higher.

3 Furthermore, the Commission should note that Mr. Roach’s language is  
4 couched in terms of “revenues” instead of “profit” or “income.” He did not say that  
5 MAWC has been under-earning for ten years or has been taking a loss. He is  
6 complaining that revenues are not as high as what he thinks they should have been.

7 **Q. On page 4 of his testimony, Mr. Watkins states “the RSM aligns the**  
8 **ratemaking process with reality by avoiding windfalls or shortfalls based on**  
9 **the unpredictability of abnormal weather, while providing the Company with**  
10 **a realistic opportunity to collect the revenues necessary to recover the amount**  
11 **included in authorized rates (“Authorized Revenues”), independent of sales**  
12 **volume.” Is that an accurate description of the RSM?**

13 **A.** No. The RSM is more than just a mechanism to avoid the windfalls or shortfalls in  
14 revenue due to abnormal weather. It assures that MAWC recovers lost revenue  
15 from customers leaving its system. It assures that MAWC recovers 100% of its  
16 uncollectibles. It moves all risk associated with recovery of revenues from MAWC  
17 to its customers, without a commensurate reduction in return on equity or other rate  
18 reduction in exchange for less risk.

19 While it increases certainty to MAWC, it decreases certainty to the  
20 customers by breaking the customers’ known predictability of the effects of  
21 abnormal weather. The customer would have no certainty as to what their rate will  
22 be and they have no certainty that the rates have been set only after a thorough  
23 review by the Commission.

24 **Q. Did MAWC recognize its decreased risk and ask for a lower return when it**  
25 **asked for a RSM?**

26 **A.** No. It asked for a higher return on its capital investment than it did in its last rate  
27 case.

1 **Q. Since it would not have any more uncollectibles if the RSM is approved, did**  
2 **MAWC remove uncollectible expenses from its requested revenue**  
3 **requirement?**

4 A. No. It asked for a higher uncollectible expense than what was included in current  
5 rates.<sup>11</sup>

6 **Q. What does the customer get from the RSM proposed by MAWC?**

7 A. In the event that MAWC collects more revenue than the Commission sets in this  
8 rate case, the customers will get a credit on their bills. MAWC touts this as a  
9 customer benefit, but also says that usage is declining. If you believe MAWC's  
10 testimony as a whole, the RSM provides no benefit to the customers because  
11 customers would never receive a credit.

12 **Q. Is Mr. Watkins wrong when he says in his testimony “No matter what happens**  
13 **with sales, customers who use less will pay less”?**<sup>12</sup>

14 A. Technically no. However, what Mr. Watkins is not telling the Commission is that  
15 customers can use less and their bill can be higher if the Commission approves an  
16 RSM. The total volumetric rate seen by the customer, which is the price signal to  
17 the customer, will change every year.

18 **Q. Is Mr. Watkins’ statement on page 3 of his direct testimony correct where he**  
19 **states that “the RSM is a symmetrical mechanism that will ensure that the**  
20 **Company receives, and the customers pay, the revenue level found**  
21 **appropriate in this case; no more and no less”?**

22 A. No. The only symmetry to this mechanism is that the revenues set by the  
23 Commission are maintained. There is no symmetry for the shifting of risk to the  
24 customers.

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<sup>11</sup> Direct testimony of Todd P. Wright, pages 12 – 14.

<sup>12</sup> Page 18.

1 Customers are responsible for any reduction in revenue if their neighbors  
2 reduce their usage between rate changes, and hence pay more than what the  
3 Commission determined was appropriate for the average customer in the rate case.  
4 A customer can reduce usage and see a temporary reduction in their bills only to  
5 see their bills increase in the next year partially because they reduced their usage.

6 The price signals to customers in the year after a revenue shortfall will be  
7 distorted. Customers could see higher bills in a cool summer because the revenues  
8 were not achieved the year before.

9 In addition, the design of the RSM is not symmetrical for the individual  
10 customers. When revenue is above authorized levels, customers with a large  
11 amount of usage get the same amount credited to them as a small customer with  
12 little to no usage. However, if there is a revenue shortfall, these large customers  
13 are charged according to their usage.

14 **Q. Would you further explain the asymmetry of the credits and assignment of**  
15 **revenue shortfalls in the RSM proposed by MAWC?**

16 A. MAWC is proposing the RSM be applicable to residential, commercial, other  
17 public authority (“OPA”) and sale for resale (“SFR”) customers as if they were  
18 homogeneous.<sup>13</sup> The number and size of the OPA and SFR customers are  
19 considerably different from the residential and commercial customers as shown in  
20 the table below.

	# of Cust in Dec 2019	Avg 2019 Use/Cust
Residential	431,524	5,594
Commercial	26,280	34,214
Other Public Authorities	1,853	43,367
Sale for Resale	26	15,923,539

21  

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<sup>13</sup> This list is consistent with the classes listed in Section 386.266.4 RSMo. According to this statute, an  
mechanism under this statute cannot apply to the industrial class.

1 **Q. Why does this matter?**  
2 A. In MAWC’s proposed RSM, if the actual revenues collected from these classes are  
3 greater than the revenues set in this case, the amount to be returned is divided by  
4 the total number of customers regardless of class. Each customer would receive  
5 the same refund, i.e. the SFR customer with an average usage of 15,923,539 kgal  
6 would get the exact same refund as a residential customer with an average usage of  
7 5,594 kgal. MAWC witness Watkins, on page 18 of his testimony, states that in  
8 2012, when there would have been \$11.2 million credited to customers, each  
9 customer, regardless of how much they had paid MAWC over the year, would have  
10 gotten a credit of \$23.82. This means each residential, commercial, OPA, and SFR  
11 customer would have received a credit of \$23.82 regardless of how much each had  
12 overpaid in the accumulation period.

13 **Q. Mr. Watkins testifies that this would reward customers who conserve water at**  
14 **a higher percentage than those that use more water.<sup>14</sup> Do you agree?**

15 A. Mathematically he is correct. However, MAWC’s proposed method to return an  
16 over-collection “rewards” every customer, whether they conserved or not, exactly  
17 the same amount. The purpose of the RSM is not to promote conservation by  
18 customers. It is to make sure that MAWC collects the same amount of revenues  
19 despite its customers’ efforts to conserve water. If MAWC wants to incent its  
20 customers to conserve energy, there are other, more direct methods that provide  
21 incentives to only to those customers who actually conserve water.

22 **Q. Do you have concerns with customers all being lumped together if there is a**  
23 **revenue shortfall?**

24 A. Yes. If a Sale for Resale customer left MAWC, all the other customers would be  
25 required to make up the revenue that this one large customer was estimated to  
26 provide in the previous rate case. This means that residential customers would be

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<sup>14</sup> Direct testimony of John Watkins, Page 18.

1 required to pay more to recover *all* costs and return on investment that was allocated  
2 to the SFR class in the rate case.

3 **Q. Mr. Watkins devotes a significant amount of his direct testimony describing**  
4 **how volumetric rates and fluctuating sales impact MAWC’s revenues. Does**  
5 **the RSM recommended by MAWC only apply to revenues collected from the**  
6 **volumetric components of rates?**

7 A. No. I found nothing in MAWC’s direct testimony or the proposed RSM tariff  
8 sheets that restrict the RSM to recover only the revenues associated with the  
9 volumetric charges.

10 **Q. Why is it important to understand this aspect of MAWC’s RSM?**

11 A. Including the fixed charge portion of the revenues in the RSM shifts a greater  
12 amount of risk away from MAWC and more to the customers. Section  
13 386.266.5(2) requires a true up of any mechanism approved by the Commission to  
14 be accurate, assuring MAWC that all the revenues will be collected and assuring  
15 the customers that MAWC will increase their bills without a thorough review of all  
16 costs and revenues.

17 **Q. MAWC included an upward adjustment for uncollectibles in its revenue**  
18 **requirement in this case.<sup>15</sup> Why would there be any uncollectibles with a**  
19 **RSM?**

20 A. A RSM would ensure MAWC that it collects a set amount of revenues. Any  
21 revenue not collected in a given year is recovered in the next. Therefore, the only  
22 amount for uncollectibles that should be included in the revenue requirement are

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<sup>15</sup> Direct testimony of Todd P. Wright, pgs 12-14.

1 uncollectibles associated with the industrial class because all of the other customer  
2 classes are included in the RSM.<sup>16</sup>

3 **Q. Is the uncollectible amount proposed to be included in rates by MAWC only**  
4 **associated with the industrial class?**

5 A. I did not see a distinction by class in my review of the uncollectible workpapers  
6 provided by MAWC. Therefore, I believe that the uncollectible amount included  
7 in MAWC’s revenue requirement request is for all customer classes.

8 **Q. Did MAWC bring up the reduction in uncollectibles as a benefit of the RSM?**

9 A. No. According to its workpapers, MAWC has included over \$4 million in its  
10 revenue requirement request for uncollectibles while also wanting a RSM that  
11 assures it will collect revenues.

12 **Q. With MAWC’s RSM design, Mr. Watkins testifies that customers that**  
13 **conserve are rewarded through the RSM when there are excess revenues.<sup>17</sup>**  
14 **What is the impact on these customers when there is an under-collection of**  
15 **revenues?**

16 A. Despite their best efforts of conservation to reduce their bills, their bills could  
17 actually increase because the previous summer cool and rainy summer. Or their  
18 bills could increase because many of the other customers are conserving due to a  
19 recession. Or their bills may increase because customers are leaving the system.  
20 This is the asymmetry of the RSM. This certainly is not an appropriate “reward”  
21 for customers that conserve.

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<sup>16</sup> In addition ,these costs should be directly assigned to the Industrial class in the determination of each class’ revenue requirement.

<sup>17</sup> Direct testimony of John Watkins, Page 18.



1 **Conclusion**

2 **Q. In his testimony regarding the RSM, MAWC witness Watkins, makes the**  
3 **statement that “If the Commission approves both the RSM and the declining**  
4 **usage adjustment, and the Company projects too great a decline in usage, the**  
5 **Company will credit the over-collection of the revenues to customers through**  
6 **the RSM.”<sup>18</sup> Does this mean that it is okay for the Commission to approve the**  
7 **lowest normalized usage per customer to calculate revenues and to set rates**  
8 **because it will all work out correctly in the end?**

9 **A.** No. It will only work out in the end for MAWC. There are two reasons why the  
10 Commission should be vigilant in the determination of normalized usage.

11 First of all, in the situation provided by Mr. Watkins of MAWC over-  
12 collecting because normalized usage was set too low, MAWC gets the use of that  
13 over-collection until it is returned to the customers. I have already discussed the  
14 inequalities with MAWC’s proposed method to return an over-collection to the  
15 customers. In addition to these concerns, new customers will get the same credit  
16 as customers that were on the system for the whole year. Customer that have left  
17 the system after they overpaid do not receive a credit. For many customers, it does  
18 all work out the same in the end.

19 Secondly, the lower the normalized usage, the greater the rate increase and  
20 the larger the volumetric rate. The volumetric rate is the price signal sent to the  
21 customers. Theoretically, the higher the rate, the more incentive to conserve and  
22 the more likely usage is going to decline. That pattern makes MAWC’s forecast of  
23 declining usage a self-fulfilling prophecy. Again, for the customers, it does not  
24 work out the same in the end.

25 The Commission should choose the usage per customer that best normalizes  
26 usage in the test year to provide the proper efficiency incentives to MAWC and

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<sup>18</sup> Direct testimony of John Watkins, Page 19.

1 proper price signals to the customers. That normalized usage should be the average  
2 of the last three years of annual usage per customer.

3 **Q. Is the RSM necessary for MAWC and its parent company American Water**  
4 **Works to remain financially stable?**

5 A. No. A cursory review of American Water Works stock price shows that it and its  
6 affiliates have done remarkably well over the last four years. The table below from  
7 just putting American Water Works stock into Google's search engine shows that  
8 its stock price has more than doubled over the past four years.

Market Summary > American Water Works Company Inc  
NYSE: AWK

156.98 USD +4.85 (3.19%) ↑

Closed: Jan 8, 5:07 PM EST · Disclaimer  
After hours 155.45 -1.53 (0.97%)

1 day 5 days 1 month 6 months YTD 1 year 5 years Max



Open	152.09	Div yield	1.40%
High	157.37	Prev close	152.13
Low	151.50	52-wk high	172.56
Mkt cap	28.46B	52-wk low	92.00
P/E ratio	43.01		

9

1           The stock price shot up nearly 25% in 2020 alone.<sup>19</sup> This Commission’s previous  
2           orders without a RSM have not put American Water Works and MAWC in financial  
3           jeopardy.

4           **Q.     Should the Commission approve the RSM proposed by MAWC?**

5           A.     No. In addition to the RSM not being needed, the RSM proposed by MAWC is  
6           fraught with inequities.

7           **Q.     Does this conclude your rebuttal testimony?**

8           A.     Yes, it does.

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<sup>19</sup> Neha Chamaria, Why American Water Works Stock shot up 24.9% in 2020,  
<https://www.nasdaq.com/articles/why-american-water-works-stock-shot-up-24.9-in-2020-2021-01-08>.