

Exhibit No.:  
Issues: Declining Usage  
Witness: Gary A. Naumick  
Exhibit Type: Rebuttal  
Sponsoring Party: Missouri-American Water Company  
Case No.: WR-2011-0337  
SR-2011-0338  
Date: January 19, 2012

**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO. WR-2011-0337  
CASE NO. SR-2011-0338**

**REBUTTAL TESTIMONY**

**OF**

**GARY A. NAUMICK**

**ON BEHALF OF**

**MISSOURI-AMERICAN WATER COMPANY**

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

IN THE MATTER OF MISSOURI-AMERICAN )	
WATER COMPANY FOR AUTHORITY TO )	
FILE TARIFFS REFLECTING INCREASED )	CASE NO. WR-2011-0337
RATES FOR WATER AND SEWER )	CASE NO. SR-2011-0338
SERVICE )	

AFFIDAVIT OF GARY A. NAUMICK

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


  
\_\_\_\_\_  
Gary A. Naumick

State of New Jersey

County of Mercer

SUBSCRIBED and sworn to

Before me this 17 day of January 2012.

  
\_\_\_\_\_  
Notary Public

JAN 17 2012

DAVID E. LEACH IV  
COMMISSION EXPIRES 03/25/14  
ID #2223562

My commission expires:

**REBUTTAL TESTIMONY**

**OF**

**GARY A. NAUMICK**

**WITNESS IDENTIFICATION AND BACKGROUND**

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

2 **A.** My name is Gary A. Naumick. My business address is 1025 Laurel Oak Road, Voorhees,  
3 New Jersey 08043.

4

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 **A.** I am employed by the American Water Works Service Company, Inc. (“Service Company”)  
7 as the Senior Director of American Water Engineering.

8

9 **Q. DID YOU PROVIDE DIRECT TESTIMONY IN THIS PROCEEDING?**

10 **A.** Yes, I provided Direct Testimony addressing the causes of the continuing decline in  
11 residential usage per customer that has been experienced by Missouri-American Water  
12 Company (Missouri-American or Company) in recent years.

13

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

15 **A.** I will respond to the testimonies of Ms. Jermaine Green and Mr. Jerry Scheible on behalf of  
16 the Missouri Public Service Commission Staff (Staff), and Mr. Brian C. Collins on behalf of  
17 the Missouri Industrial Energy Customers (MIEC).

1           Specifically, I will respond to Sections VIII 2 and 3a of the Staff Report (pages 41-  
2 43), and the “Normalized Residential Revenues” and “Normalized Commercial Revenues”  
3 portions of Mr. Collins’ testimony (pages 6-8).

4  
5 **Q. PLEASE SUMMARIZE THE TESTIMONIES OF THE STAFF AND THE MIEC**  
6 **REGARDING RESIDENTIAL WATER USAGE.**

7 A. Staff witness Mr. Scheible recommends that the development of residential usage per  
8 customer figures for the purpose of determining authorized revenues in this case be based on  
9 the four year historic average of the period 2006 through 2010. Mr. Scheible asserts that the  
10 use of the four year historic average will account for possible effects due to weather (page 42,  
11 lines 23-24) and conservation practices, appliance efficiency, and lawn size/irrigation practices  
12 (page 42, lines 25-27).

13           MIEC witness Mr. Collins testifies that Missouri American’s calculations for  
14 residential usage presented by Mr. Dunn result in the understatement of its revenues at current  
15 rates for the St. Louis Metro District (page 7, lines 3-5). Mr. Collins recommends that a six  
16 year historic average (2005-2010) of actual daily usage be used to calculate revenues for the  
17 test year.

18  
19 **Q. DO YOU AGREE WITH THE TESTIMONY AND THE RECOMMENDATIONS OF**  
20 **THE STAFF AND MIEC WITNESSES REGARDING RESIDENTIAL CUSTOMER**  
21 **USAGE?**

22 A. No I do not. Both the Staff and MIEC testimony rely on a historic average of usage, which  
23 ignores the known and measurable decline in base residential usage which Missouri-American  
24 has been experiencing for over a decade.

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**Q. WHY DO YOU FEEL THAT THE RECOMMENDATION TO BASE RESIDENTIAL USAGE ON HISTORIC AVERAGES IS INADEQUATE?**

A. By relying solely on an average of historic consumption, the Staff and the MIEC ignore the reality of declining residential consumption, and inappropriately expose Missouri-American to a revenue shortfall. The Staff calculation puts the Company at least two years behind the ongoing trend, and similarly the MIEC calculation puts the Company at least three years behind the trend.

**Q. DO THE STAFF OR MIEC TESTIMONIES ADDRESS THE IMPACT OF WATER EFFICIENT FIXTURES, CONSERVATION ETHIC, OR PRICE ELASTICITY?**

A. No, they do not. Conspicuous by its absence is the lack of discussion by the Staff or MIEC to address strong drivers that are exerting strong downward pressure on residential usage per customer. I address each of these drivers in detail in my Direct Testimony. They are readily apparent, and easy to understand. For instance, when a resident replaces an older toilet in their home with a new one, the new fixture will result in less water being used in the home (a new toilet uses 1.6 or less gallons per flush; a pre-1994 toilet uses 3.5 gallons per flush or more).

Mr. Scheible and Mr. Collins simply ignore this reality. They simplistically propose the use of historical averages for projecting consumption in the face of the known and measurable historic trend, and the presence of continuing drivers that will continue to reduce residential consumption. They present testimony regarding weather, which is irrelevant to the “base usage per customer” analysis which Missouri American witness Mr. Kevin Dunn presented. Most importantly, they fail to offer any information about any of the factors

1 causing the decline, such as high efficiency fixtures and appliances or the regulatory  
2 standards on which these originate. Not only do their recommendations ignore the historic  
3 trend that has been occurring for more than a decade and are anticipated to continue by most  
4 industry experts, but they would dissuade Missouri-American from promoting resource  
5 conservation, thereby denying the residents served by Missouri-American the opportunity to  
6 share in the benefits that a progressive regulatory approach to water and energy efficiency  
7 would present. I will provide rebuttal to each of these topics in detail.

8  
9 **Q. BY USING HISTORIC AVERAGES TO PROJECT FUTURE RESIDENTIAL**  
10 **CONSUMPTION, THE STAFF AND MIEC ARE PROPOSING THAT THE WATER**  
11 **USAGE WILL NOT CONTINUE TO DECLINE. WHY ARE YOU CONFIDENT**  
12 **THE REPLACEMENT OF OLDER FIXTURES AND APPLIANCES WILL**  
13 **CONTINUE TO OCCUR, AND WILL CONTINUE TO DRIVE BASE**  
14 **RESIDENTIAL USAGE PER CUSTOMER LOWER?**

15 A. I have conducted several analyses to validate that the replacement of older fixtures and  
16 appliances will continue to reduce residential usage per customer. First, I have analyzed  
17 data reflecting the age of the housing stock in the communities served by Missouri-  
18 American. Based on data provided in the U.S. Census Bureau's 2010 American Community  
19 Survey, approximately 71% of the homes in the areas served by Missouri-American were  
20 built prior to 1990. The U.S. Energy Policy Act first mandated the manufacture of low flow  
21 fixtures in 1992. In some portion of the older homes, customers may have already replaced  
22 their fixtures and appliances with new high efficiency ones; however, the high prevalence of  
23 older homes makes it likely that fixture and appliance replacements will continue to occur  
24 over time for many years to come.

1 Second, I performed a quantitative analysis of the theoretical indoor usage in a fully  
2 conserving home. The basis for the calculation of usage in a fully conserving home is taken  
3 from the data presented in Schedule GAN-1 from my direct testimony in this proceeding.  
4 At full saturation of water efficient fixtures and appliances, indoor usage is estimated to be  
5 reduced to 94 gallons per customer per day (gpcd). This compares to base usage by  
6 Missouri-American residential customers in St. Louis County of 192 gpcd as of 2010.  
7 Therefore, this analysis projects that indoor usage by Missouri-American residential  
8 customers may continue to decline over time by an additional 51%, or 97 gpcd until full  
9 saturation with water efficient fixtures is reached. How long it takes for the Missouri-  
10 American customers to reach this theoretical threshold is dependent on numerous economic,  
11 demographic and price factors that will impact the conversion rates over time.

12 Third, I analyzed the base usage of Missouri-American residential customers in St. Louis  
13 County versus those in other states served by American Water. This comparison shows that  
14 base usage by Pennsylvania American customers is 32% lower (and still declining) when  
15 compared to usage exhibited by Missouri American customers. Similarly, base usage by  
16 West Virginia American customers is 41% lower (and still declining) when compared to  
17 usage exhibited by Missouri American customers. This trend further illustrates that there is  
18 ample opportunity for the customers of Missouri American to continue to reduce usage even  
19 further.

20 Q. MR. SCHEIBLE DISCUSSES THAT TRENDS IN WATER USAGE DUE TO  
21 CONSERVATION PRACTICES, APPLIANCE EFFICINENCY, OR LAWN  
22 SIZE/IRRIGATION PRACTICES, ETC., MAY BE UNIQUE TO ANY GIVEN  
23 SERVICE AREA. DO YOU AGREE WITH THIS STATEMENT?

1 A. Yes. Mr. Dunn’s analysis was performed for each service area separately, and therefore  
2 addresses Mr. Scheible’s concern.

3 Q. **MR. SCHEIBLE DEFENDS HIS METHODOLOGY OF AVERAGING HISTORIC**  
4 **USAGE DATA AS AN APPROPRIATE METHODOLOGY BY STATING: “STAFF**  
5 **HAS USED A VERY SIMILAR METHOD OF AVERAGING CUSTOMER USAGE**  
6 **FROM RECENT YEARS TO PREDICT FUTURE USAGE IN MAWC’S TWO**  
7 **MOST RECENT CASES.” (PAGE 42, LINES 28-31). DO YOU AGREE WITH HIS**  
8 **CONCLUSION THAT THE PRIOR METHODOLOGY IS ADEQUATE TO**  
9 **RESULT IN AN APPROPRIATE PROJECTION OF MISSOURI-AMERICAN’S**  
10 **RESIDENTIAL USAGE PER CUSTOMER?**

11 A. No I do not. Use of an inappropriate method in the past does not justify its continued usage.  
12 While Staff has proposed a similar method in MAWC’s two most recent cases, MAWC has  
13 likewise pointed on the shortcomings of Staff’s approach in both those cases. The declining  
14 trend is strong and unmistakable. In total, Missouri-American usage per residential  
15 customer has declined by 13% since 2000. The drivers for the decline are very evident, and  
16 are continuing, as I point out in both my Direct and Rebuttal Testimonies. It is time to move  
17 beyond the simplistic historic-averaging approach that Staff has used, which has denied  
18 Missouri-American the opportunity to recover adequate revenue in light of declining usage,  
19 and furthermore punishes Missouri-American for taking any measures to further encourage  
20 conservation and resource preservation.

21 Q. **MR. SCHEIBLE FURTHER DEFENDS HIS METHODOLOGY OF AVERAGING**  
22 **HISTORIC USAGE DATA AS AN APPROPRIATE METHODOLOGY BY**  
23 **STATING: “FURTHER, IN SOME RATE CASES, MAWC ITSELF UTILIZED A**



1 **VERY SIMILAR METHOD OF AVERAGING CUSTOMER USAGE FOR**  
2 **SEVERAL OF THE CUSTOMER CLASSES” (PAGE 42, LINES 29-31). IS THIS**  
3 **ARGUMENT RELEVANT TO THE RESIDENTIAL USAGE ANALYSIS UNDER**  
4 **DISCUSSION IN THIS CASE?**

5 A. No, it is not. Missouri-American continues to study consumption trends in its various  
6 customer classes, and uses methodology that is most appropriate for each of those classes,  
7 based on the information at hand and the analyses it has completed. The residential  
8 customer class of customers is much more homogenous than other customer classifications,  
9 which has enabled the Company to quantify the usage trend with high confidence for this  
10 customer classification. In future proceedings, Missouri-American will continue to advance  
11 its research on customer usage trends in all classifications and if appropriate will quantify its  
12 usage and revenue analyses accordingly.

13 **Q. WHY DID MISSOURI-AMERICAN SELECT A DIFFERENT METHOD THAN**  
14 **PREVIOUS SUBMISSIONS FOR THEIR RESIDENTIAL WATER USAGE**  
15 **PROJECTIONS IN THIS CASE?**

16 A. The methodology that is being utilized by Missouri-American in this proceeding is both  
17 easily understandable by parties involved in this proceeding, and is rigorous enough to  
18 capture and quantify the underlying declining residential usage trend that is occurring in  
19 Missouri-American service areas, and in fact is occurring broadly across the entire water  
20 utility industry. By studying base usage, Missouri-American has isolated the underlying  
21 usage pattern that is occurring. This approach is “weather neutral”; that is, it isolates base  
22 (generally speaking, indoor) usage that is not weather dependent from discretionary outdoor  
23 usage that is dependent on weather during the warmer months of the year.

1 Q. **HOW IS MISSOURI-AMERICAN’S ANALYSIS “WEATHER NEUTRAL”, AND**  
2 **HOW DOES ITS APPROACH COMPARE TO THE CONSIDERATION OF**  
3 **WEATHER GIVEN BY THE STAFF AND MIEC?**

4 A. Missouri American calculated the average “non base” usage that has occurred over the last  
5 ten years, and adds this to the projected base usage. In other words, Missouri-American is  
6 not claiming that there is a trend in discretionary outdoor usage over time, rather a year to  
7 year variation due to weather variations. This is a conservative assumption, as there are  
8 certain drivers which may serve to reduce outdoor consumption by residential customers.  
9 These include: (1) price elasticity – customers may cut back on discretionary outdoor usage  
10 such as lawn irrigation as the price of water or wastewater services goes up, (2) conservation  
11 ethic – reducing discretionary outdoor water use is a primary opportunity for residents  
12 wishing to improve their environmental sustainability and reduce their impact on natural  
13 resources, (3) technology – continuing technology advances such as “smart” irrigation  
14 sensors and drought resistant turf and landscape products have the potential to help residents  
15 reduce their outdoor water use).

16 By averaging the ten years of non-base usage, Missouri-American minimizes the  
17 impact of weather variation in its projection of future residential usage. The Staff and MIEC  
18 witnesses both take a similar approach as Missouri-American’s to addressing weather.

19 Missouri-American then adds the non-trended discretionary usage to the trended  
20 base usage to project future usage. It is this trend in indoor base usage that the Staff and  
21 MIEC witnesses ignore, in spite of compelling evidence that this is a strong and continuing  
22 trend.

23

1 **Q. YOU STATE THAT THE RECOMMENDATION OF THE STAFF AND MIEC**  
2 **WOULD DISSUADE MISSOURI-AMERICAN FROM PROMOTING RESOURCE**  
3 **CONSERVATION. PLEASE ELABORATE ON THAT STATEMENT.**

4 A. As I have described, a significant reduction in residential usage per customer is occurring.  
5 These reductions have primarily occurred due to improved efficiency in usage, for instance  
6 through the use of water efficient fixtures as I have described in both my Direct and Rebuttal  
7 Testimonies. The benefits from more efficient water use by residential customers include  
8 better stewardship of finite water resources, energy savings both within the home and at the  
9 water utility, and the opportunity for shared cost savings, since treating and pumping less  
10 water results in lower chemical and power costs.

11 It is relevant to note how closely linked that water and energy conservation are. For  
12 instance, a customer that purchases a new washing machine or dishwasher will save both  
13 water and energy. So, even if a customer's primary motivation for installing a high-  
14 efficiency fixture is reducing their energy usage, they will reduce their water usage also.

15 The Staff and MIEC recommend basing future revenue on historic usage that is as  
16 much as four to six years removed from today's usage patterns and demographics. This not  
17 only dissuades the Company from promoting resource conservation, it in fact punishes the  
18 Company financially for doing so.

19 **Q. IS THE RECOMMENDATION OF THE STAFF AND THE MIEC ALIGNED WITH**  
20 **THE PRIORITIES OF THE STATE OF MISSOURI?**

21 A. No, their recommendation runs counter to initiatives the State is implementing. The State  
22 of Missouri is implementing an appliance rebate program. Since April, 2010, consumers in

1 Missouri have claimed more than 33,000 rebates on energy efficient appliances, worth more  
2 than \$4.8 million. ENERGY STAR<sup>®</sup> qualified clothes washers and dishwashers account for  
3 nearly 80% of the rebates (select ENERGY STAR qualified water heaters, central air  
4 conditioners, air source heat pumps, and gas furnaces account for the rest).<sup>1</sup>

5 As I have discussed, water and energy savings are interconnected, and both offer the  
6 opportunity for improved efficiency and shared savings. To saddle Missouri-American with  
7 a revenue projection that ignores these realities is unfair and regressive.

8  
9 **Q. YOU STATE THAT THE STAFF AND MIEC IGNORE THE TREND IN**  
10 **DECLINING RESIDENTIAL CONSUMPTION, AND THAT THIS TREND IS**  
11 **BEING OBSERVED ACROSS THE WATER UTILITY INDUSTRY, BEYOND**  
12 **MISSOURI-AMERICAN. WHAT EVIDENCE DO YOU HAVE THAT THE**  
13 **DECLINING TREND IN RESIDENTIAL USAGE PER CUSTOMER IS**  
14 **IMPACTING OTHER WATER UTILITIES?**

15 A. I discussed this matter in detail in my Direct Testimony; however, a recent initiative by the  
16 Water Research Foundation (WRF), which is the non-profit research association for water  
17 utilities across the country, helps underscore the importance and pervasiveness of the  
18 declining residential usage trend. On December 6, 2011, the WRF hosted a webcast entitled  
19 “Assessing Changes in Single Family Water Use”. The WRF issued the following synopsis  
20 of the webcast:

21 “Where did the demand go? Residential water use has declined across North America. This  
22 Webcast will present results from residential end use studies conducted over the past 15  
23 years that show where changes have occurred. While the economic downturn may have

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<sup>1</sup> U.S. Department of Energy. Missouri Appliance Rebates. Accessed on December 20, 2011.  
[http://www.energysavers.gov/financial/rebates/state\\_MO.cfm](http://www.energysavers.gov/financial/rebates/state_MO.cfm)

1 contributed to recent demand reductions, a careful examination of water use patterns since  
2 the 1990s shows that the lion's share of demand reductions in recent years are related to  
3 water efficiency efforts, beginning with the federal plumbing code changes approved in  
4 1992. This Webcast will look beyond periodic billing data to describe how Americans use  
5 water on a daily basis and what conservation potential remains to be captured. If you are  
6 interested in water use trends, don't miss this exciting and timely Webcast."

7 Utilities across the country are coming to grips with the revenue impact of declining  
8 residential usage per customer, and I urge the Commission to support Missouri-American's  
9 efforts to do so as well.

10  
11 **Q. PLEASE SUMMARIZE THE TESTIMONY OF MIEC REGARDING**  
12 **COMMERCIAL WATER USAGE.**

13 A. MIEC witness Collins testifies that Missouri American's calculations for commercial usage  
14 result in the understatement of its revenues at current rates for the St. Louis County  
15 (quarterly) customers and St. Charles customers (page 9, lines 3-5). Mr. Collins  
16 recommends that a six year historic average (2001-2007) of actual daily usage be used to  
17 calculate revenues for the test year.

18  
19 **Q. DO YOU AGREE WITH THE TESTIMONY AND THE RECOMMENDATIONS**  
20 **REGARDING COMMERCIAL CUSTOMER USAGE?**

21 A. No, I do not. The MIEC testimony not only relies on a historic average of usage, which  
22 ignores the decline in commercial usage which Missouri-American has been experiencing  
23 but it also uses a six year average of usage from 2002 through 2007, a period that does not  
24 include the economic decline from 2008 to current.

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**Q. WHY DO YOU FEEL THAT THE RECOMMENDATION TO BASE COMMERCIAL USAGE ON HISTORIC AVERAGES IS INADEQUATE?**

A. The overall commercial usage in St. Louis Metro has decreased between 2007 and 2010. St. Louis County (quarterly), commercial total annual usage has decreased from 7.63 billion gallons in 2007 to 5.87 billion gallons in 2010. The St. Charles total usage decreased from 0.42 billion gallons in 2007 to 0.29 billion gallons in 2010. However the St. Louis County (monthly) total usage increased from 2.75 billion in 2007 to 2.83 billion in 2010. (Note that MIEC did not suggest a change in the St. Louis County monthly.)The primary driver for this change is that customers have left the system. St. Louis overall commercial customer count went from 19,427 in 2007 to 16,914 in 2010 and St. Charles commercial customer count went from 909 in 2007 to 664 customers. This drastic change in customers not only reduces the total usage but there will be a change in usage per customer depending upon the profile of the customers who left the system. Therefore, using historical average from 2002 through 2007 is not valid as it would not represent the customer group of today. Based on this fact Missouri-American decided to use the test year usage for each district's commercial customers.

**Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.**

A. Mr. Dunn's Direct Testimony in this proceeding has shown that there is a continuing annual decline in usage per residential customer across all Missouri-American districts, ranging from 682 gallons per customer per year (gpcy) in the Mexico district to 3,169 gpcy in the Platte County district. In the Company's largest district, St. Louis County, the rate of decline is 1,137 gpcy, or approximately 3.1 gallons per customer per day (gpcd).

1 Furthermore, there are strong drivers for the decline, and these will continue to be prominent  
2 for years to come. The arguments provided by Staff and the MIEC in this proceeding  
3 related to usage per customer adjustments ignore the overwhelming trend that is occurring.  
4 Missouri-American wishes to partner with the Commission to move past traditional barriers,  
5 and unlock the multiple shared benefits that reduced consumption by Missouri-American  
6 residential customers can bring. Improved water usage efficiency, energy savings,  
7 optimized management of water resources and reduced operating costs are all benefits of  
8 lower usage per customer.

9

10 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

11 **A.** Yes, it does.