

Exhibit No.:
Issues: Declining Usage, Total Revenues
Witness: Charles B. Rea
Exhibit Type: Rebuttal
Sponsoring Party: Missouri-American Water Company
Case No.: WR-2022-0303
SR-2022-0304
Date: January 18, 2023

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2022-0303

CASE NO. SR-2022-0304

REBUTTAL TESTIMONY

OF

CHARLES B. REA

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

AFFIDAVIT

I, Charles B. Rea, under penalty of perjury, and pursuant to Section 509.030, RSMo, state that I am Senior Director for American Water Works Service Company, 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.

Charles B. Rea

[Witness Name]

January 18, 2023

Dated

**DIRECT TESTIMONY
CHARLES B. REA
MISSOURI-AMERICAN WATER COMPANY
CASE NO. WR-2022-0303
CASE NO. SR-2022-0304**

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REBUTTAL TESTIMONY

CHARLES B. REA

I. INTRODUCTION

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

2 A. My name is Charles B. Rea. My business address is 5201 Grand Avenue, Davenport, IA
3 52801.

4 **Q. Are you the same Charles B. Rea who previously submitted Direct Testimony in this
5 proceeding?**

6 A. Yes.

7 **Q. What is the purpose of your Rebuttal Testimony in this proceeding?**

8 A. The purpose of my Rebuttal Testimony is to respond to various Public Service Commission
9 Staff (“MoPSC” or “Staff”) witnesses regarding the following issues:

- 10 - Residential Usage Normalization
11 - General Revenue Calculations

12 Specifically, I will be addressing the Direct Testimony filings of MoPSC witness Courtney
13 Horton, MoPSC witness Ashley Sarver, and MoPSC witness Jarrod Robertson.

14 **II. RESIDENTIAL USAGE NORMALIZATION**

15 **Q. Please briefly describe the Company's approach to forecasting residential water
16 consumption in this proceeding.**

17 A. The Company is using a statistical linear regression analysis to model monthly residential
18 usage over an historical 10-year period for both St. Louis County and non-St. Louis County
19 customers and uses that statistical analysis to normalize the effects of weather and COVID-
20 related usage anomalies to project residential use for the 12-month period ended June 30,

1 2022 and to project usage on a forward basis on the identified trends in declining use for
2 the 12-month periods ended December 31, 2022 and May 31, 2023. I described this
3 statistical analysis in my Direct Testimony.¹

4 **Q. Does Staff also make a projection of residential customer usage since in their revenue**
5 **calculations?**

6 A. Yes. Staff witness Robertson presents Staff's method of normalizing residential customer
7 usage.

8 **Q. What is Mr. Robertson's approach to forecasting residential usage in his Direct**
9 **Testimony?**

10 A. Staff proposes to use a five-year average of actual usage for the period July 2017 through
11 June 2022 to calculate per residential customer, per day, and per district averages for
12 residential usage.²

13 **Q. What rationale does Mr. Robertson offer for his preferred methodology?**

14 A. Mr. Robertson states that averaging the data over the most recent five-year period
15 represents reliable data and provides evidence of recent trends in customer usage. (p. 5,
16 5:7). He states that Staff's method is a reasonable approach that utilizes actual data to
17 support an annualized level of usage and that averaging the data over the most recent five-
18 year period produces reliable data and evidence of recent trends in customer usage such as
19 installation of more efficient appliances, conservation, changes in discretionary practices
20 such as irrigation and law sprinkling which can change over time. He notes that usage may
21 also be affected by external factors, such as climate change and the impacts of the COVID-
22 19 pandemic lawn sprinkling/irrigation, impact water usage. Similarly, climate change and

¹ Rea DT, pp. 24-46.

² Robertson DT, p. 5, lines 3-5.

1 the COVID-19 pandemic have affected usage and that using the most recent five years of
2 data provides for a reasonable determination of customers' usage habits, while avoiding
3 using data too old to reflect the current situation³.

4 **Q. Does Mr. Robertson directly address the Company's statistical approach?**

5 A. He does not.

6 **Q. Do you agree with Mr. Robertson's approach and if not, why not?**

7 A. I do not. The use of a five-year average is appropriate in situations where there are positive
8 and negative fluctuations in usage during the period but there is no significant upward or
9 downward trend in the data. That is not the case for residential use per customer. Chart 5
10 and Chart 6 that I present in my Direct Testimony⁴ demonstrate that there is a pervasive
11 downward trend in normalized use per customer for both St. Louis County and non-St.
12 Louis County customers during the entire ten-year historical period. That pervasive
13 downward trend also exists the last five years. Use of a five-year average over the last five
14 years effectively ignores the effect of that pervasive downward trend and assumes that each
15 of the last five years is representative of what usage is likely to be going forward. That is
16 not what the data demonstrates.

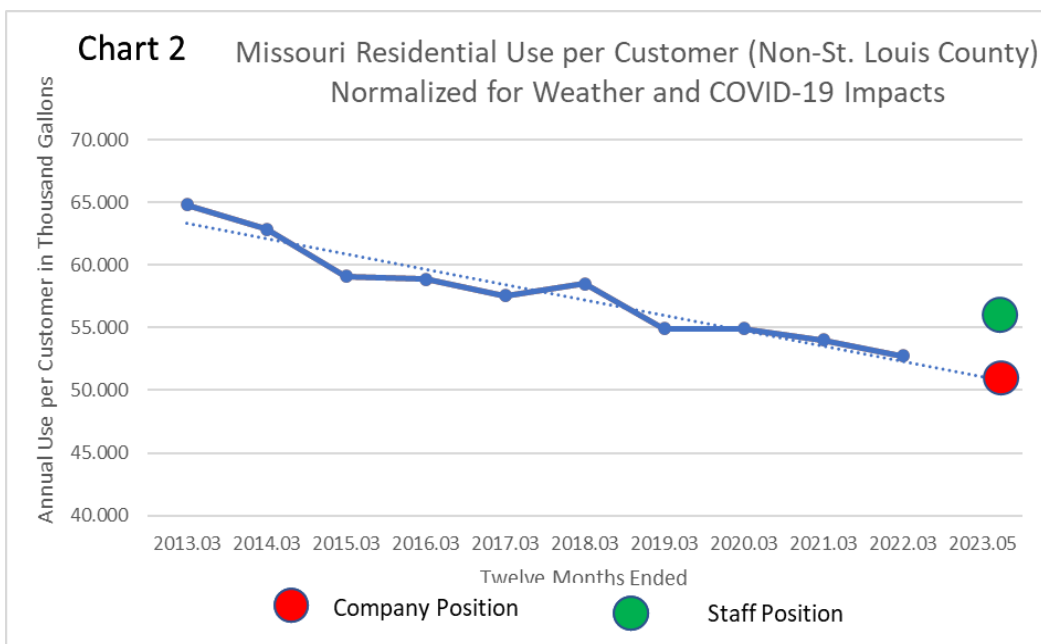
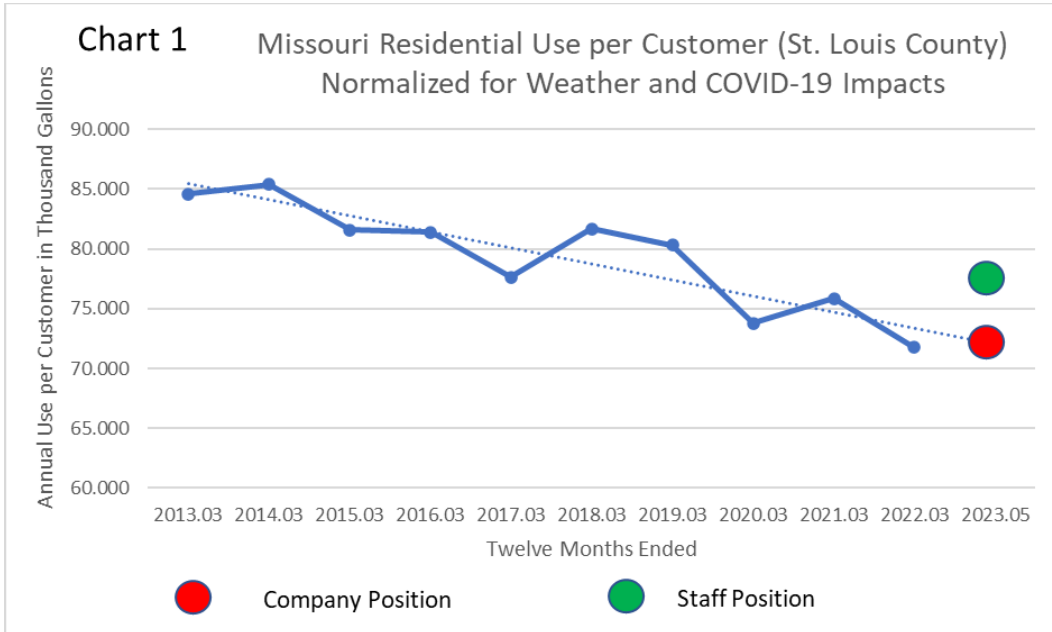
17 I would note that for the purpose of calculating billing determinants the Company
18 has proposed using five-years of customer growth applied to residential, commercial, and
19 OPA customer counts in order to recognize that there is significant and pervasive organic
20 growth in customer counts over time. In the same way, the Company's declining use
21 calculation recognizes that there has been pervasive declines in customer usage over time
22 for the residential class.

³ Robertson DT, p. 5.

⁴ Rea DT, pg. 44.

1 **Q. Can you explain the difference between your approach and Staff's position?**

2 A. Yes. Charts 1 and 2 below for St. Louis County and non-St. Louis County residential usage
3 show historical normalized use per customer over the last 10 years with the Company's
4 projected usage for the 12-months ended May 31, 2023, and the five-year average of
5 residential use per customer proposed by Staff.



1 **Q. What does Chart 2 depict?**

2 A. Chart 2 shows that the residential use per customer estimate for the 12-months period ended
3 May 2023, as calculated by the Company's methodology is much closer to the current level
4 of residential normalized usage than Staff's methodology.

5 **Q. What is the revenue impact associated with the differences in residential usage
6 estimates?**

7 A. The revenue impact associated with the differences in residential usage is significant. For
8 St. Louis County customers, the difference in estimates results in a usage per customer
9 difference of approximately 5,400 gallons per year. Multiplying that by the number of St.
10 Louis County residential customers and the current volumetric rate for St. Louis County
11 Rate A yields a difference of approximately \$9.8 million in present rate revenue between
12 Staff's position and the Company's position, with Staff's methodology yielding a higher
13 present rate revenue amount. The same is true for Non-St. Louis County customers. For
14 Non-St. Louis County customers, the difference in estimates results again in a usage per
15 customer difference of approximately 5,400 gallons per year. Multiplying that by the
16 number of Non-St. Louis County residential customers and the current volumetric rate for
17 Non-St. Louis County Rate A yields a difference of approximately \$4.0 million in present
18 rate revenue between Staff's position and the Company's position, with Staff's
19 methodology yielding a higher present rate revenue amount. The total difference in present
20 rate revenues between Staff's position and the Company's position is approximately \$13.8
21 million.

22 **Q. What is your recommendation regarding the appropriate methodology for
23 calculating residential billing determinants?**

1 A. I recommend that the Commission adopt the Company's approach to calculating residential
2 billing determinants, which includes adjustments for customer growth and adjustments for
3 declining consumption, both of which have been demonstrated through the Company's
4 analysis of usage and customer counts. It is important to recognize both positive and
5 negative trends in usage, or components of usage, for the purpose of developing an accurate
6 set of building determinants for rate making that reflects the current level of normalized
7 usage. The Company's approach does just that. Conversely, using a simple five-year
8 average of residential use per customer, as Staff proposes, ignores the pervasive downward
9 trend in normalized residential usage that has persisted through the last five years.
10 Therefore, Staff's approach should be rejected.

11 III. GENERAL REVENUE CALCULATIONS

12 **Q. Has Staff addressed the general calculation of revenues in this proceeding?**

13 A. Yes, I reviewed the Direct Testimony of Staff witnesses Horton and Sarver, both of which
14 address the calculation of revenues in this proceeding.

15 **Q. Other than the calculation of residential usage that you have already addressed in
16 your Rebuttal Testimony, have you identified any significant differences in the
17 calculation of revenues between the Company's proposed methodologies you outlined
18 in your Direct Testimony and the methodologies described by Ms. Horton and Ms.
19 Sarver?**

20 A. I have not. The methodologies outlined by Ms. Horton and Ms. Sarver are generally
21 consistent with the methodologies proposed by the Company.

22 **Q. Does this conclude your Rebuttal Testimony?**

23 A. Yes.