Exhibit No.:	
Issues:	Revenue Stabilization Mechanism, Future Test Year
Witness:	John M. Watkins
Exhibit Type:	Direct
Sponsoring Party:	Missouri-American Water Company
Case No.:	WR-2020-0344 SR-2020-0345
Date:	June 30, 2020

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2020-0344
CASE NO. SR-2020-0345

DIRECT TESTIMONY

OF

JOHN M. WATKINS

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

AFFIDAVIT

I, John M Watkins, under penalty of perjury, and pursuant to Section 509.030, RSMo, state that I am Senior Director Regulatory Services 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.

John M. Watkins

6/30/2020

Dated

DIRECT TESTIMONY
JOHN M. WATKINS
MISSOURI-AMERICAN WATER COMPANY
CASE NO. WR-2020-0344
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TABLE OF CONTENTS

DIRECT TESTIMONY

JOHN M. WATKINS

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is John M. Watkins. My business address is 1 Water Street, Camden, NJ 08102.

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

A. I am employed by American Water Works Service Company (the "Service Company") as Senior Director Regulatory Services. My duties consist of reviewing, preparing and assisting in regulatory filings and related activities for all of the regulated subsidiaries of American Water Works Company, Inc. ("American Water"). My responsibilities and my team's responsibilities include the preparation of written testimony, exhibits and work papers in support of rate applications and other regulatory filings as well as responses to data requests for Missouri-American Water Company ("Missouri-American" or "the Company") and its regulated utility affiliates.

Q. Please summarize your educational background and business experience.

A. I am a graduate of Trenton State College with a Bachelor of Science Degree in Finance and minors in Mathematics and Economics. I received a Masters in Business Administration, with a concentration in Accounting, from Drexel University.

Q. What has been your business experience?

A. From May 1996 to October 1998, I was employed by U.S. Vision as a Staff Accountant. I began my employment with Service Company as a Rate Analyst for the Region in November 1998. At that time, the Region included American Water subsidiaries located

in the states of Connecticut, Iowa, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New York, Ohio, Tennessee and Virginia. In May 2000, I transferred to Haddon Heights, New Jersey, in conjunction with the transfer of the Service Company's responsibility for the New England companies which at that time, together with New Jersey-American Water, comprised American Water's Northeast Region. In July 2000, I was promoted to Financial Analyst-Intermediate. In March 2003, I was promoted to Senior Financial Analyst. In September 2007, I was promoted to Principal Financial Analyst. In November 2010, I was promoted to Senior Manager – Rates & Regulation. In this position I led the Rates and Regulation group in supporting rate case filings for all American Water regulated subsidiaries. At that time, I supported filings for American Water subsidiary companies located in the states of Arizona, California, Hawaii, Indiana, Illinois, Iowa, Kentucky, Maryland, Michigan, Missouri, New Jersey, New Mexico, New York, Pennsylvania, Ohio, Tennessee, Texas, Virginia and West Virginia. In April 2012, I was promoted to Director Regulatory Services. In this position my duties consisted of reviewing, preparing and assisting in regulatory filings and related activities for all of the regulated subsidiaries of American Water. In June 2014, I transferred into the position of Director Rates and Regulatory Support. In January 2017, I was promoted into my current position of Senior Director Regulatory Services.

Q. Have you previously testified before a regulatory body?

A. Yes. I have testified before the Missouri Public Service Commission (the "Commission") in Cases Nos. WR-2000-281, WR-2015-0301, and WR-2017-0285. I have also testified before regulatory commissions in Connecticut (Case 99-08-32), Massachusetts (DTE 00-105), New Jersey (WR03070511, WR06030257, WR08010020, WR10020149,

WR10040260 and WR-19121516), New York (Case 04-W-0577, Case 07-W-0508 and Case 11-W-0200), Illinois (Docket No 16-0093), Iowa (RPU-2016-002), and Indiana (Cause No. 45032).

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

A. My Direct Testimony supports two proposals of the Company that are in the best interests of all stakeholders in this proceeding, including our customers, the Company, and the general public. First, Missouri-American proposes a Revenue Stabilization Mechanism ("RSM"). The RSM is a symmetrical mechanism that will ensure that the Company receives, and the customers pay, the revenue level found appropriate in this case; no more and no less. This proposal is in the best interests of all stakeholders by reducing revenue volatility due to unpredictable weather and providing stable cash flows necessary to finance the infrastructure investments to serve our communities. The Company's second proposal is a future test year. It is also in the best interest of all stakeholders to set rates that properly balance revenues, expenses and investment. Regulatory commissions have long recognized that just and reasonable rates are those that properly balance the interests of the customers, investors and the general public. The future test year, especially under the circumstances described in this rate filing, best achieves this balance.

Q. Are you sponsoring any Schedules with your Direct Testimony?

A. Yes, I am sponsoring the following Schedules:

- Schedule JMW-1 - Analysis of Operation of RSM
- Schedule JMW-2 – RSM Tariff

II. REVENUE STABILIZATION MECHANISM (RSM)

Q. Please generally describe the purpose of the Company's proposed RSM.

A. The Company's proposed RSM is designed to align the Company's revenues with the level the Commission uses to set rates in this case going forward. The mechanism effectively addresses the unpredictable changes in volume of water sold due to factors beyond the control of the Company. Currently, the Company uses well established and sound methods to set new rates based on normalized and historical sales to establish pro forma revenue levels. This method, however, cannot precisely predict changes in volumes of water sold due to factors outside of the control of the Company or the Commission. Stated differently, the RSM aligns the ratemaking process with reality by avoiding windfalls or shortfalls based on the unpredictability of abnormal weather, while providing the Company with a realistic opportunity to collect the revenues necessary to recover the amount included in authorized rates ("Authorized Revenues"), independent of sales volume. The RSM will ensure that the Company collects the amount of Authorized Revenues and that customers pay no more or less than the revenue level found appropriate to produce just and reasonable rates. If revenue is higher than expected, the net difference will be credited to customers. Conversely, if revenue is lower than expected, the RSM will make up the net difference to the Company. Once the revenue requirement is set, the RSM allows the price to flow up or down as sales volumes change in between rate cases.

Q. Is an RSM for water corporations authorized by statute?

A. Yes. It is my understanding that Section 386.266.4, RSMo, provides as follows:

> Subject to the requirements of this section, a water corporation with more than eight thousand Missouri retail customers may make an application to the commission to approve rate schedules authorizing periodic rate adjustments outside of general rate proceedings to ensure revenues billed by such water corporation for regulated services equal the revenue requirement for regulated services as established in the water corporation's most recent general rate proceeding or complaint proceeding, excluding any other commission-approved surcharges and gross receipts tax, sales tax, and other similar pass-through taxes not included in tariffed rates, <u>due to any revenue variation</u> resulting from increases or decreases in residential, commercial, public authority, and sale for resale usage.

Q. Why is the Company seeking an RSM?

A. Although most of Missouri-American Water's costs are fixed, its rate structure is based, largely, on volumetric charges. Consequently, any factors that affect sales, either positively or negatively, will necessarily drive a wedge between Authorized Revenues in this case and the actual level experienced on a going forward basis. Historically, rate regulation assumes that the regulator approves sales volumes that, on average, do a fair job of predicting actual sales going forward. (The term *fair* refers to an estimated level of sales that, on average, neither overestimates nor underestimates the actual level of sales over time.) The reason this is important is that if pro forma revenues are an accurate estimate of future sales, the Company would only need to file a rate case if its costs increase and not for the purpose of updating its sales forecast. For reasons that are further explained below, it is becoming difficult to project a level of pro forma sales that are actually achieved. An RSM will provide Missouri-American with revenue stability for ongoing programs and investments necessary to maintain and improve efficiency and service reliability by removing a disincentive for Missouri-American to promote end-use efficiency.

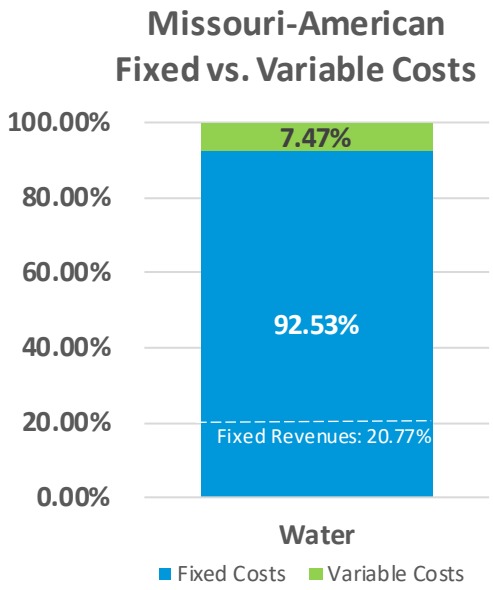
Q. Is this reliance on sales volumes a cause of concern?

A. Yes, as shown in the Direct Testimony of Company Witness Gregory Roach, Missouri-American's usage from existing residential and commercial customers is affected by a long-term trend of declining use per customer. Continued reduction in revenues constrains the utility's ability to make investments in its facilities and improvements in its operations. Furthermore, it is a given that water usage is materially affected by seasonal weather variability. The need to fund significant, non-revenue producing investments and fund the Company's operations, however, doesn't vary with usage. Water utilities, moreover,

operate their source of supply, treatment, and transmission and distribution systems to provide water service to a customer's premises, whether that customer uses a minimal amount of water per month or a much larger amount. Water utilities must be ready to provide service to customers if and when called on. To do so, water utilities must invest in and maintain a capital-intensive infrastructure system to provide and deliver water service to customers, as well as to provide customer service, to administer accounting and billing systems and to provide other critical services.

Q. How does this situation affect the Company's ability to recover its fixed costs?

A. The chart below shows, rather starkly, that most of the Company's costs to provide water service are fixed, while most of its revenues are variable. The chart shows the relationship between fixed and variable costs and revenues for water customers based on data from the Company's 2017 Rate Case, File No. WR-2017-0285.



The chart above shows that approximately 93 percent of the Company's water system costs are fixed and only 7 percent of the Company's costs are variable. In contrast, only approximately 21 percent of the revenues are fixed (including fire protection and miscellaneous revenues), while approximately 79 percent of the revenues are variable. The Company, therefore, relies very heavily on variable (or volumetric) revenues for collecting fixed costs.

The Company's Commission-approved rate schedules and rate design incorporate fixed customer charges based on meter size and volumetric usage charges. The result is that the Company must rely heavily on its variable (or volumetric) revenues for collecting close to three-quarters of its fixed costs. This presents a challenge because, as Mr. Roach explains in his Direct Testimony, declines in customer usage patterns can have a substantial, negative impact on a water utility's actual revenues. Also, changes in customer usage patterns can reflect seasonal variation in usage (e.g., from winter to summer) as well as long-term water use trends (for example, as a result of sustained water efficiency and conservation efforts). This is true for the Company and other water utilities across the country. Although the effect of weather can be random and work either in favor of or against the Company from a financial standpoint, the declining use per customer is another factor that introduces a long-term trend of lower revenue, even if it may be obscured from time to time by higher, temporary weather-driven usage.

Q. Are Missouri-American's sales volumes variable?

A. Yes. Both weather and declining usage per customer cause Missouri-American Water's sales volumes and revenues to vary from the Authorized Revenues. As explained in the Direct Testimony of Company witness Mr. Roach, the variability in weather and customer

usage patterns has had a substantial impact on Missouri-American's actual sales volumes and therefore, revenues.

Q. Please explain how weather variability affects Missouri-American.

A. Mr. Roach explains that, as a general rule, customers use more water during hot, dry weather (primarily in the summer months) and less during cool, wet weather. A rate design that relies heavily on sales volumes to recover costs results in 1) greater revenues for the utility and increased costs to customers when the weather is hot and dry and 2) less revenues to the utility and lower costs to customers when the weather is wet and cool. In short, a water utility's revenue is significantly influenced by the randomness of weather, which is outside the utility's control, but more importantly, bears only a limited relationship to the cost of providing water service.

Q. How does declining usage per customer affect Missouri-American?

A. Notwithstanding weather variability, Missouri-American customers are using less water per customer than they have in the past. As Mr. Roach explains, Missouri-American's experience is consistent with a national trend of declining water usage per customer. Reduced water sales and the resulting reduction in revenues are having an adverse financial impact on Missouri-American. In fact, as further discussed below, Missouri-American has not collected the Authorized Revenues in 8 of the last 10 calendar years. See Table GPR-11 of Mr. Roach's Direct Testimony.

Q. How does the RSM differ from Missouri-American's current ratemaking structure?

A. Although Missouri-American's current ratemaking structure sets prices based on costs and a fixed level of expected revenues, the utility's revenues actually flow up or down as water

sales volumes change between rate cases. In contrast, once the revenue requirement is set, the RSM allows the price to flow up or down as sales volumes change in between rate cases.

Q. Why is an RSM necessary when declining usage can be factored into the rate case sales forecast?

A. For several reasons. First, because consumption per customer continues to decline (which suppresses sales volume in each subsequent year after the conclusion of a rate case), unless the Company files annual rate cases, it will experience an increasing under-recovery of its revenues year after year. The RSM protects against this deterioration because it stabilizes revenues, and hence rates between base rate cases. Furthermore, revenue is based in part on a forecast of normal weather conditions, which implicitly includes such factors as heat and rainfall. Sales, however, can increase from that level in a hot, dry year or decrease significantly in a cool, wet year. Any deviation from the normalized usage forecast can be captured by the RSM, both positive and negative.

Q. What is the impact of the disconnect between projected and actual sales revenues on the Company?

A. The persistent trend of declining usage, combined with weather-related variability, has created fiscal stress for the Company. The nature of investment has shifted largely from plant needed for serving new customers to non-revenue producing infrastructure replacement and compliance with new drinking water standards. Now and in the future, most of the Company's needed investments will not be intended to serve new growth from either increasing consumption or a population boom on the horizon; they will resemble the infrastructure replacement and renewal investments the Company has made through the

Infrastructure System Replacement Surcharge (ISRS) and other non-revenue generating assets. The State has been progressive in its adoption of the ISRS mechanism. That alone, however, covers only one side of the equation. We are, consequently, asking the Commission to be equally forward looking with respect to revenue erosion. With such a heavy reliance on variable volumetric sales, as consumption slows down, the Company is unable to recover the costs of operating its water systems.

Furthermore, tying revenues to volumetric sales serves to incentivize water utilities to sell more water and disincentivize water conservation efforts. Conservationists, for their part, have decried the fact that the traditional incentive for utilities to increase sales may hurt wider sustainability and conservation efforts. Mr. Roach addresses this "conservation conundrum" in his Direct Testimony.

Q. Has the Company conducted an analysis on the revenue levels proposed for purposes of establishing pro forma revenues during previous rate case proceedings and the revenue levels actually experienced by the Company?

A. Yes, Schedule JMW-1 shows what the over/under collection of revenues net of production costs would have been for the Company from 2010-2019. This Schedule shows that from 2010-2019 the Company collected less revenue, net of production costs, than what was included in Authorized Revenues in 7 out of 10 years. In total for the 7 years, the actual dollars collected were less than authorized by over $74.2 million, or an average of approximately $10.6 million per year. The revenues net of production costs were less than authorized by over $51.9 million, or an average of approximately $5.2 million per year for the 10 years (2010-2019).

Q. What is the impact of declining sales?

A. Mr. Roach's Direct Testimony explains that the Company's usage from existing residential customers has been declining by 2.04% per year, or approximately 122 gallons per customer per day ("gpcd") and that this trend will continue for many years; certainly well beyond the pro forma revenues forecasted in this case. Similarly, Mr. Roach's testimony also explains that the Company's usage from existing St Louis commercial customers has been declining by 0.36% per year, or approximately 4.9 gpcd, and will also continue well beyond into the future. Based on this continuing trend of declining sales, we also know that after this rate case is finalized, sales used to set rates will be higher than the actual sales experienced in each succeeding, normal year. Because sales are the primary driver of revenues, if sales are lower than forecasted, actual revenues collected will also be lower than Authorized Revenues. Furthermore, unless rate relief is sought to recover the sales declines, the situation will worsen each successive year after new rates are implemented. This constrains the Company's investment planning efforts, because it cannot count on revenue levels that are impaired by declining usage. Given that much of Missouri-American's costs are in its fixed assets - source of supply, treatment, and transmission and distribution facilities - that do not vary with volumes, any mismatch in revenues will create unnecessary pressure on the ability of the utility to invest in a timely manner.

Q. Will the RSM guarantee that the Company earns a profit?

A. No. The RSM only ensures that the Company will receive the amount of Authorized Revenues, nothing more, nothing less. If, for example, the Company fails to control its costs (e.g., labor, contractors, capital investment, etc.), its revenues will not change, and its net income will decline. Therefore, even with an RSM, the Company must still manage all of its costs in order to have a reasonable opportunity to effectively earn its allowed rate of

return on equity.

Q. Does the RSM protect both the Company and customers?

A. Yes. The RSM is symmetrical. If the actual revenue is greater than the Authorized Revenue, customers will see a credit. These credits will help to offset higher customer bills generally associated with use during hot and dry periods. If actual revenue is less, the Company will be permitted a surcharge. Unlike traditional ratemaking, the RSM provides certainty because the customer will pay only the amount that will be authorized by the Commission and the Company will only collect the authorized amount. Said another way, the Commission will be assured that the Company collects, and customers pay, the Authorized Revenue, nothing more; nothing less. An RSM should also improve the ratemaking process – by reducing the complexity of issues. Once the utility's total revenue target is set, the sales volume debates become less critical because any sales volume errors are ultimately trued up. The reduction or elimination of this obstacle in rate proceedings benefits customers in a couple of ways. First, it allows the parties involved in the case to focus on the issues that are pertinent to providing quality service. Secondly, the savings from less-costly rate proceedings will be passed on to the customers.

Q. Are there other benefits to implementing an RSM?

A. Yes. The Company's proposed RSM still encourages and rewards customers for using water more efficiently because reduced consumption will still translate into a reduced bill and increased consumption will still result in a higher bill. At the same time, because the RSM will recover the Company's fixed costs, the RSM will make water companies indifferent to selling less water and will mitigate the adverse effect of weather variability on revenues. As noted above, the nature of water utility investment has shifted largely

from plant needed for serving new customers to non-revenue producing programs and investments to maintain and improve service reliability and comply with new drinking water standards, which also supports job creation in local economies. The Company is engaged in a broad array of efforts to become more efficient, and an RSM supports more consistent planning and deployment of the most efficient resources. Just as prudent energy efficiency investments are the least-cost investments in energy resources; improving water efficiency reduces operating costs (e.g., energy, treatment and residuals handling/storage costs) and reduces the need to develop new supplies and expand our water infrastructure. Improving water efficiency also reduces withdrawals from limited freshwater supplies, leaving more water for future use and improving the ambient water quality and aquatic habit.

Promoting water efficiency is the preferred way to meet the water needs of all Missouri residents and businesses at the least cost and with the greatest reliability, environmental and efficiency benefits. Improving water efficiency is a "win/win/win" providing a wide range of benefits—for consumers, utilities, businesses, and for communities as a whole. Approving an RSM opens the path to achieving that winning combination.

Q. Has the Commission recognized the effect of weather variability on other utilities and adopted a mechanism to address the weather-driven variability of revenue?

A. Yes. Both Spire and Ameren Gas are currently using mechanisms that address weather variability.

Q. Does an RSM mitigate some of the difficulties associated with a weather normalization mechanism for a water utility?

A. Yes, as I noted, as a general rule, usage is increased by hot, dry weather and reduced by cool, wet weather, primarily in the summer months, although the variation is regionally influenced, as well. Variations in heat, precipitation, cloud cover, wind and other factors make predicting the effect of temperature alone on outdoor usage extremely difficult. Although the ratemaking process has historically tried to take this into consideration by basing rates on "normal" weather conditions, as a practical matter, normal weather is never really achieved. In fact, "weather" is difficult to even define in a statistical sense and establishing "normal" weather is even more difficult. A mechanism that mitigates the adverse effect of weather variability on revenues recognizes that normal weather is a condition that will likely never be achieved and effectively negates the adverse impacts of weather variability for both the Company and its customers. Moreover, Missouri residents are using less water every year, consistent with a national trend of declining water usage per customer. The RSM captures actual usage, regardless of the reason and harmonizes it with the Authorized Revenues.

Q. Do you believe that the RSM differs fundamentally from other automatic adjustment clauses?

A. Yes, I do, in several significant ways. First and foremost, the RSM is not a cost adjustment clause. It is a revenue adjustment clause. Although some costs such as power and chemicals may be adjusted in the RSM, they are adjusted simply as an adjunct to revenue collection and not independently. For example, if it takes a certain amount of kwh's to produce x amount of water, then the charge for kwh's in the RSM is simply an adder or deduction to the revenue based on whether more or less water is produced, pumped and sold. In other words, the power cost varies solely based on the volumes of water produced.

This is important because rates are based on an assumption of revenue that the Commission finds is appropriate for the utility to collect. If the utility is collecting more, or less, revenue (as determined by volumetric sales) than found appropriate by the Commission, the RSM does nothing more than to correct the revenue to the amount deemed necessary and appropriate. Second, the RSM adjusts revenue for weather and conservation. Weather is entirely out of the Company's control and water conservation is largely driven by federal and state conservation standards and programs described by Company witness Mr. Roach. Third, to the extent the Company would have some control over sales to its customers, it is in the public's interest to eliminate any incentive to increase sales, to make the Company indifferent to sales losses due to conservation, and to provide an impetus to the Company to foster water efficiency. An RSM would simply allow for recovery of the Commission-approved revenues. That is fundamentally different than adjusting rates to allow for recovery of changing expenses.

Q. Are alternative regulatory mechanisms such as the RSM recognized in the regulatory community as an effective means of addressing the shortcomings of volumetric rate design?

A. Yes. RSMs have been adopted in many states as a way to eliminate the "throughput incentive" to water and energy efficiency initiatives and investment. Clauses similar to the RSM proposed here have been successfully used for some time for water utilities in New York and California, and have been more recently adopted for water utilities in Connecticut, Nevada, Maine and Illinois. In addition, similar revenue stabilization mechanisms have been approved for gas utilities in 23 states and an additional two states plus the District of Columbia have mechanisms pending, according to the December 2016

report from the American Gas Association entitled "Innovative Rates, Non-Volumetric Rates, and Tracking Mechanisms: Current List." [1] The Report also states that Weather Normalization Adjustments have been allowed in 22 states. A December 2017 report by the Institute for Electric Innovation lists 32 states and the District of Columbia that have an approved fixed cost recovery mechanism for electric utilities with an additional state pending approval.

Q. Please describe how the Company proposes to implement the RSM.

A. The Company is seeking Commission approval of Authorized Revenues and production costs in this proceeding. Once approved, the RSM would then compare the Authorized Revenues to actual billed revenues for the residential, commercial, other public authorities (OPA) customer classes and Sale for Resale, and defer/accrue the difference, less the applicable change in production costs, on a monthly basis. Industrial customers would be excluded from the RSM. Production costs would include power, chemicals, purchased water, and water waste disposal (a percentage of usage for Industrial customers would be removed). The annual amounts of metered revenues and the annual amount of expenses for all production costs would be prorated to monthly amounts. The Company proposes that the proration be set using the Company's last two years of system delivery to obtain a reasonable monthly amount of Authorized Revenues and production costs. These monthly amounts would be reset in the next base rate case proceeding.

Q. Why does the RSM consider revenues net of production costs?

[1] An earlier, 2013 study by the Brattle Group entitled "Alternative Regulation and Ratemaking Approaches for Water Companies: Supporting the Capital Investment Needs of the 21st Century," prepared for the National Association of Water Companies, (September 30, 2013) found that 27 states for electricity and 30 states for natural gas delivery, and 5 states for water have this kind of mechanism.

A. Production costs should be taken into account because they vary with sales volumes. Delivering more water costs more and delivering less water costs less. Netting production costs will ensure that both the Company and its customers are made whole; paying only those production costs associated with the actual amount of water delivered.

Q. Please describe the specific accounting treatment for the RSM.

A. Each month the Company would compare the actual metered revenues for the applicable customer classes to the Authorized Revenues for the applicable classes. The Company would also compare the actual production costs to the amount included in authorized rates for production costs associated with the applicable customer classes. If the actual revenues fall short, the difference in the revenue less the production costs would be temporarily deferred to a regulatory asset. If the actual revenues were more, the difference in the revenue less the production costs would be temporarily deferred to a regulatory liability. The ending balance for each month would accrue interest at the Company's short-term borrowing rate.

Q. Please explain the RSM's reconciliation component.

A. Missouri-American proposes an annual reconciliation to occur at the end of each calendar year. The Company proposes to file the first reconciliation by January 30, subject to a 60-day review and approval period. The first filing will reconcile the revenues net of production costs, plus interest for the period when rates become effective through December 31, 2021. Each subsequent filing will be filed as described above but will reconcile the revenues for the entire preceding calendar year.

The Company proposes that any credit be issued as soon as administratively possible; the credit would be determined based on the number of customers at the time the

credit is issued. A one-time credit that is equal to all customers would benefit the lower-usage customers at a greater percentage, rewarding customers who conserve water at a higher percentage than those that use more water. For example, in the 2012 RSM calculation (see Schedule JMW-1), the credit for 2012 would have been $11.2 million. Assuming the customer count for RSM customers is 471,823, then the one-time credit per customer would be $23.82 ($11,239,647/471,823). The Company is proposing that any surcharge be based on a volumetric amount and should be targeted to recover the shortfall within the current calendar year or from April 1 through December 31. An example of the surcharge would be the $4 million shortfall in 2019. Assuming the usage for the applicable customer classes from the rates effective date of June 1, 2021 was 469,025,474 hundred gallons. Prorating this amount to 9 months (April-December), results in an estimated usage of 372,322,197 hundred gallons. The surcharge would have been $0.0108 ($4,018,451/372,322,197) per hundred gallons for nine months[2]. Again, a volumetric surcharge would ensure that the lower-usage customers would continue to benefit from their conservation because the volumetric rate would be equal for the entire Company. Therefore, if a customer conserves water, he or she will save more money not only on the current bill, but also on any adjustment applied the following year. No matter what happens with sales, customers who use less will pay less.

Q. How does the Company propose to treat customer growth through acquisitions?

A. In the event the Company experiences growth through acquisition, the Company proposes to exclude the acquisition revenue and production costs from the RSM until they can be recognized in the Company's next rate case. The Company will track the revenues specific

[2] For an average residential customer using 6,000 gallons per month (60 hundred gallons), the monthly surcharge would be $0.65 (60 x $0.0108) per month or $5.83 ($0.65 x 9 months) per year in this example.

to the acquisition and exclude the revenues in the filing of any subsequent RSM filings until the acquisition is included in the Company's next rate case and rolled into the RSM. The Company will make adjustments to production costs by tracking the actual costs or estimating the costs in relation to any tuck-in acquisitions.

Q. Does the RSM eliminate the need to perform an accurate sales forecast?

A. No. The Company always strives for, and the Commission should always demand, the most accurate sales forecasts possible. The most accurate forecasts achievable should minimize, to the extent possible, the surcharge or credit under the RSM.

Q. How would declining use affect the calculation?

A. Declining usage lowers the actual water sales volume and therefore actual revenues. The RSM would account for any sales declines not reflected in the pro forma revenue forecast. If the Commission approves both the RSM and the declining usage adjustment, and the Company projects too great a decline in usage, the Company will credit the over-collection of the revenues to customers through the RSM.

Q. Could the RSM potentially result in both credits and surcharges to customers from year to year?

A. Yes, the RSM is symmetrical. Actual revenues can deviate from Authorized Revenues, because of inaccurate sales forecasts and weather. Other causes include improved water and energy efficiency, customer conservation, customer growth or attrition, and changing economic conditions.

Q. Have you provided additional information concerning the operation of the RSM?

A. Yes, the proposed water RSM Tariff is attached for convenience to my Direct Testimony as Schedule JMW-2.

Q. Please summarize the reasons supporting the adoption of the RSM.

A. Rate designs that tie a utility's revenue recovery directly to sales volume have prompted two widespread concerns in modern utility regulation. First, rewarding a water utility for selling more water implicitly encourages water use and penalizes a water utility for encouraging end use water efficiency and conservation. This misalignment is troubling because utilities play an important role in helping to improve water efficiency and promote conservation. Second, because of seasonal variability and declining use per customer, volumetric rates do not give water utilities a reasonable opportunity to recover their authorized revenues. Accordingly, these utilities are constrained in their ability to invest in needed infrastructure, or to raise the capital required to do so. By ensuring that the Company can collect the revenues authorized by the Commission, the RSM: 1) makes the Company indifferent to selling less water; 2) removes the disincentive to promote water efficiency; 3) reduces the adverse impact of weather variability for both the utility and its customers; and 4) reasonably ensures that revenues for continued water efficiency investments are available. The result is a better alignment of all stakeholder interests, and the Company respectfully urges the Commission to authorize its proposed RSM.

Q. Is the mechanism reasonably designed to provide the utility with a sufficient opportunity to earn a fair return on equity (Section 386.266.5(1))?

A. Yes.

Q. Please explain.

A. Revenue variation associated with changes in weather and customer usage are of such a magnitude that they materially impact the utility and its ability to earn a fair return on equity. Further, these matters are beyond Missouri-American's control. The RSM provides the Company with a sufficient opportunity to earn such a return as it makes adjustments for these matters beyond Missouri-American's control, while preserving the Company's incentive to manage its expenses and investments.

Q. Does the proposed tariff include provisions for an annual true-up (Section 386.266.5(2))?

A. Yes. Please refer to the testimony above and to the tariff page for RSM (or Schedule JMW-2), which describes the annual true-up.

Q. Does the RSM remedy any over- or under-collections (including interest at the utility's short-term borrowing rate) through subsequent rate adjustments or refunds?

A. Yes.

Q. How?

A. Please refer to the testimony above and to the tariff page for RSM (or Schedule JMW-2), which describes the calculation for the RSM including interest at the Company's short-term interest rate.

III. RATE CASE TEST YEAR

Q. Please define the various test years that you intend to discuss.

A. For ease of reference and consistency, Missouri-American witnesses will use the following terms in the discussion of test years throughout the testimony in this proceeding:

- An **historical test year** is a 12 month period ending prior to the filing date of a rate case, normalized to reflect known and measurable changes that occur after the end of the historical test year;
- A **current test year** is a 12 month period for setting rates which extends beyond the date a rate request is filed and as far as up to the date new rates become effective; and,
- A **future test year** (or fully forecasted test year) is a 12 month period for setting rates that begins on or after the date new rates are effective.

Q. Have rates historically been set in Missouri using an historical test year?

A. Yes, in Missouri, a historical test year has long been used to set rates for the future.

Q. Does the Commission traditionally authorize adjustments to the historical test year?

A. Yes. It is common for the Commission to order an update to the original test year that will include known and measurable changes through a date after the filing of the rate case. Further, the Commission has commonly established a True-Up period. The True-Up period has been described as follows:

> The use of a True-Up audit and hearing in ratemaking is a compromise between the use of a historical test year and the use of a projected or future test year. It involves adjustment of the historical test year figures for known and measurable subsequent or future changes. However, while the "test year as updated" involves all accounts, the True-Up is generally limited to only those accounts necessarily affected by some significant known and measurable change, such as a new labor contract, a new tax rate, or the completion of a new capital asset. Both the "test year as updated" and the True-Up are devices employed to reduce regulatory lag, which is "the lapse of time between a change in revenue requirement and the reflection of that change in rates."

In the Matter of Lake Region Water & Sewer Company, File No. SR-2010-0110, 2010 Mo. PSC LEXIS 794 (August 18, 2010).

Q. What would be a typical date for the end of a true-up period?

A. Typically, that date would be approximately five months before the date new rates would be required to go into effect. For example, in this case, a typical true-up period would end on or about December 31, 2020 – approximately five months prior to the May 28, 2021 operation of law date.

Q. Is there a situation where rates set using historical costs would be appropriate?

A. Yes, where revenue, costs and investment are relatively stable, the historical test year, normalized for known and measurable changes, is an appropriate way to set rates. Where, however, significant changes are expected to occur, the historical test year does become an unsuitable regulatory tool necessitating the use of a different and more accurate measuring tool.

For example, if it is known with certainty that a major plant investment will be placed into service just before new rates become effective (in my example above, any time between the December 31, 2020 true up date and the May 28, 2021 operation of law date), it becomes an almost equal certainty that the new rates – rates that fail to capture the return required on that new investment – will not be fully reflective of the utility's actual cost of service for the period during which they are being set. On the other hand, as the Commission has observed, "[s]ince the Commission uses historical expenses and revenues to set rates, it would be fundamentally unfair to reach forward to grab a single budget item to reduce [a utility's]'s cost of service, while ignoring other anticipated costs that might increase that cost of service."[3] The dilemma, of course, is that, while it may be unfair to

[3] *In Re Union Elec. Co*., 257 P.U.R.4th 259 (Mo. P.S.C. May 22, 2007), order corrected, ER-2007-0002, 2007 WL 2142684 (Mo. P.S.C. June 4, 2007), and decision clarified on denial of reh'g, 260 P.U.R.4th 162 (Mo. P.S.C. July 8, 2007), quoted in *State ex rel. Pub. Counsel v. Pub. Serv. Comm'n,* 274 S.W.3d 569, 586 (Mo.App. W.D. 2009).

reach forward to grab a single cost item, it is equally unfair to fail to recognize known cost or revenue elements and, necessarily, produce rates that do not accurately reflect the revenue, expenses or investments occurring during the time the new rates will be in effect.

Q. Are there circumstances that render the use of a historical test year, even updated as part of the Missouri True Up process, unreliable or unrealistic?

A. There are. From a regulatory and public policy perspective, the rate case test year should produce rates that most accurately reflect the costs during the period the rates are to be effective. A fundamental principle in determining rates is the matching principle, which identifies the relationship between costs and revenues for the test year used, whether historical or projected.

The assumption that costs and revenue remain in balance underlies the matching principle; which requires that the historical test year be a reasonable proxy for the year in which new rates will be in effect (sometimes referred to herein as the "rate year"). Business conditions, however, are likely to change between an historical test year and the rate year, causing both cost and revenue to differ from the historical test year level. For new rates to be fully compensatory to the utility and fair to customers, base period costs, investment, and revenue must differ from their historical test year levels in the same proportion. If they do not, then the imbalance will cause rates to be adopted that are not reflective of the costs, investment and revenue that will exist in the rate year, rendering those rates unreflective of the utility's actual cost of service.

Q. Is it reasonable to expect that the expenses, rate base and revenues from the historical test year will exist in the same relationship, even if selective items are updated as part of a True-Up period?

A. Not in the current environment. If the Company was experiencing a trend of significant customer growth or increasing usage per customer, then it is possible that revenue increases could keep up with rate base growth and expenses, thus preserving the historical relationship. The Company, however, is not experiencing revenue growth and is instead experiencing revenue shortfalls and declines. This simple fact virtually ensures that the historical relationship will not be maintained. When the situation is further compounded by cost pressures and the need for infrastructure investment, it is essentially ensured that the relationship will be significantly skewed.

Q. Have other regulatory commissions addressed the use of a future test year?

A. Yes, for example, the Michigan Public Service Commission commented, in a decision on a future test year rate filing for Consumers Energy, that:

> The basis for using a forward test year is to address the problem of regulatory lag[4] between past and future costs. While the advantage of historical data is its objective and verifiable nature, it lacks the necessary forward perspective required in a changing economic environment. An historical test year is by definition not timely and may fail to adequately consider future demands….What is gained by dealing with data that is "known and measurable" can be lost in forcing a utility to operate with outdated numbers.

Case No. U-15645, Consumers Energy Company 2009. Order issued November 2, 2009, 278 P.U.R.4th, WL 3757080. A future test year solves the fundamental unfairness of "forcing a utility to operate with outdated numbers" that differ disproportionately from their historical test year levels - because it properly aligns the traceable forecast of a utility's revenue, expenses and investment with the first year for which rates are being set.

[4] Regulatory lag is the time between the occurrence of an event that triggers a change in the utility's revenue requirement and its recognition in rates. It is, for example, the time between when an investment in plant is placed into service for the benefit of the customer and when the Company can begin earning a return of and on the investment through the ratemaking process. It also applies to the lag in the recovering in rates changes in expenses and revenues. Regulatory lag has several causes. One is the use of a year of historical data in the rate case filing. Another is the time required to prepare a rate case filing. Still another is the time required to execute the rate case and reach a final decision on new rates.

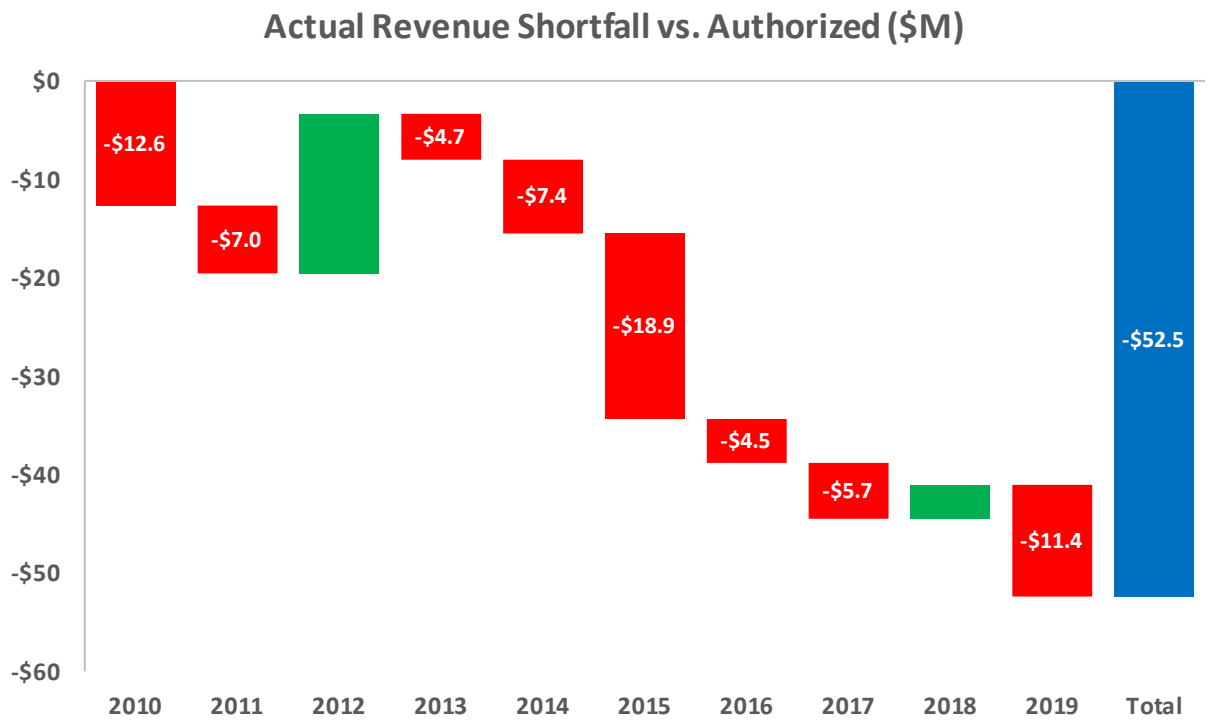
Q. Are there circumstances that make this case particularly suitable for the use of a future test year?

A. Yes. In this case, the historical test year is the twelve months ended December 31, 2019, and the first year new rates will be in effect are the 12 months ending approximately May 31, 2022. Even if selective items are allowed to be updated through a December 31, 2020, True Up period, that period is still far short of the first year new rates will be in effect. For new rates to be aligned with the traditional Missouri historical test year, costs, investment, and revenues must differ from their historical test year levels as adjusted in the same proportion through the rate year. The evidence presented in this case, however, demonstrates almost certainly that business conditions are likely to differ between the historical test year and the rate year, causing both costs and revenues to diverge from the historical test year levels in differing proportions.

Q. What evidence will the Company present?

A. First, the evidence will show that Missouri-American's revenues are declining. The Direct Testimony of Company witness Gregory Roach demonstrates that the Company's revenue is declining due to a persistent, nationwide trend of declining use per customer that is fueled by national and state conservation mandates and programs, and which shows no sign of abating anytime soon. As Mr. Roach points out in his testimony, the trend for residential declining usage will continue based solely on appliance life and the replacement of fixtures such as shower heads, faucets and toilets. Over the period of 2010-2019, including a record warm/drought in 2012, the Company under collected its total authorized revenue by approximately $52.5 million. This shortfall is material, averaging approximately 2% per year, fluctuating yearly between -6.65% to as high as 6.33%. Indeed, in many cases, the shortfall of revenue is so severe that it creates a more extreme financial impact than a 60-

year drought did in 2012. And the trend of revenue shortfall is not expected to change. Even if rate base and expenses in the rate year were the same as they were in the historical test year, revenue will not be the same but will instead almost always decline from historical test year levels.



Second, and equally significant, rate base will not stay the same as in the historical test year even if adjusted in a narrow true up period. Company witness Jeff Kaiser explains that Missouri-American's planned, capital investment is a significant driver of this rate case. Indeed, Missouri-American plans to invest $949.7 million in plant to serve its customers from the true up period in our last rate case, or December 2017, through the end of the future test year in this case (May 31, 2022).

Finally, by successfully controlling costs, Missouri-American mitigated O&M cost increases in the past. Total O&M expenses in the historical test year ended December 31, 2019 (net of acquisitions) have remained essentially flat since 2010. Missouri-American's

cost control efforts compare favorable to the GDP index, and our total for the future test year O&M levels are approximately $15M lower than they would be had they paralleled such an index. Missouri-American's investment requirements are anticipated to continue rising for an extended period, and O&M will increase modestly or approximately three percent annually from 2019 levels, while use per customer continues to decline by approximately two percent per year; thereby undermining the matching principle. While the Company's ongoing ability to mitigate increases in O&M costs keeps down the rate relief requested in this case, it does not offset the revenue requirement necessary to account for our increasing level of capital investment and declining sales. A future test year, on the other hand, is particularly appropriate for Missouri-American given the Company's circumstances because it will restore the proper matching relationship of revenues, expenses and rate base that is necessary to establish just and reasonable rates.

Q. Please describe the process by which the Company has constructed the future test year.

A. The process of developing a future test year is very similar to the process by which all test years are developed. Missouri-American's future test year in this case is a product of a careful projection of measurable data from:

- a normalized and fully historical base year (12 months ended December 31, 2019);
- through a verifiable link period (January 1, 2020 to May 31, 2021); and then,
- across the period covering the first year that new rates are expected to be in place (12 months ending May 31, 2022).

We start by showing a "base year" (an "historical test year") that reflects actual revenues, expenses, and rate base for the twelve months ended December 31, 2019. In order to

advance to the forecasted rate year, we considered changes to those cost elements through a verifiable link period (January 1, 2020 to May 31, 2021) and then continue that forecasting process through the future test year. For revenue, we have used a forecast determined by Company witness Roach, who explains how the present rate revenues through May 31, 2022 have been derived. Our forecast of expenses is explained by Company witnesses Bowen, Wright and LaGrand. Expenses are generally adjusted using known and measurable changes, adjustments based on Company experience, or adjustments based on an inflation factor. The Company's forecast of rate base is being provided by Company witness LaGrand.

Q. How is the rate base developed for the future test year?

A. Our future test year employs a 13-month average of planned changes to rate base. The forecast is composed of both specific projects that are scheduled to be in service during the future test year and projected levels of other activity such as main and service replacements, meter replacements and similar such project groupings.

The future test year develops rates to be effective in the year following the issuance of the rate order. To not reflect plant that is in service during the relevant test year would result in rates that do not reflect plant additions that will be used and useful and serving the customers during the relevant rate year. Further, we are using a 13 month average of rate base additions for our future test year rate base. The use of this convention means that, if plant was added in equal increments in every month, only approximately one-half of the ending plant balance would be in rate base. This convention tends to "smooth out" the plant additions. Company Witness Kaiser describes the Company's capital investments from January 2020 through May 2021 and from June 2021 through May 2022 which is representative of our future test year.

Q. Is use of a future test year consistent with the matching principle?

A. Yes. The use of a future test year properly addresses the matching principle. In an environment where capital investment and expenses are rising and usage per customer is declining, new rates based on an historical test year, even if selective items are adjusted in a True Up, will neither be fully reflective of the rate year relationships nor provide the Company with a realistic opportunity to earn its authorized rate of return even in the year they are implemented. At the same time, any cost and revenue changes that mitigate or reduce the cost of service should also be reflected. Because the future test year best balances all rate elements, it best reflects the matching principle and, as I will explain below, it is a well-understood and successful ratemaking tool.

Q. Why are future test years a successful ratemaking tool?

A. Future test years are a successful ratemaking tool for several reasons. First, as previously discussed, they allow for a relevant matching between the rates charged and the costs incurred, despite a declining consumption environment. Second, future test years allow for prospective regulation rather than reactive regulation. In this proceeding, for example, the Commission has the opportunity to review the Company's forecasted capital plans, for the capital projects between January 1, 2020 through May 31, 2022, detailed in Mr. Kaiser's Direct Testimony. In a historical test year, these changes have already happened and a Commission is left with the choice to allow or disallow the investments. In the forecast, these changes are planned, and the Commission has the opportunity to influence capital, to shape quality service, and to ensure smooth transitions during periods of change. Finally, future test years can bolster the Commission's ability to ensure the envisioned results, even when deploying necessary operational improvements or non-ISRS capital projects such as water quality improvements or asset hardening expenditures. Over

the long term, depending on the overall rate case outcomes, it's possible this can lead to fewer rate cases and to overall better, more reliable, more affordable service.

Q. Is the use of a future test year a novel or unusual approach to ratemaking?

A. No, not at all. The use of a future test year can hardly be considered a novel concept in utility regulation. Since its first use 40 years ago, the future test year has been adopted by an increasing number of regulatory jurisdictions that have recognized the merits of this ratemaking tool. At American Water, 10 of the 14 jurisdictions in which our regulated companies operate authorize the use of a future test year. The future test year is considered a "best practice" for water companies by public utility regulators. In 2005, the National Association of Regulatory Utility Commissioners ("NARUC") adopted a resolution stating, in part, the following:

> WHEREAS, To meet the challenges of the water and wastewater industry which may face a combined capital investment requirement nearing one trillion dollars over a 20-year period, the following policies and mechanisms were identified to help ensure sustainable practices in promoting needed capital investment and cost-effective rates: a) the use of prospectively relevant test years; b) the distribution system improvement charge; c) construction work in progress; d) pass through adjustments; e) staff-assisted rate cases; f) consolidation to achieve economies of scale; g) acquisition adjustment policies to promote consolidation and elimination of non-viable systems; h) a streamlined rate case process; i) mediation and settlement procedures; j) defined timeframes for rate cases; k) integrated water resource management; l) a fair return on capital investment; and m) improved communications with ratepayers and stakeholders…

In July 2013, NARUC's Board of Directors reiterated the use of the 2005 Resolution as a best practice for water companies. NARUC found:

> RESOLVED, That the Board of Directors of the National Association of Regulatory Utility Commissioners, convened at its 2013 Summer Meeting in Denver, Colorado, identifies the implementation and effective use of sound regulatory practice and the innovative regulatory policies identified in the Resolution Supporting Consideration of Regulatory Policies Deemed as "Best Practices" (2005) as a critical component of a water and/or wastewater utility's reasonable ability to earn its authorized return; and be it further

> RESOLVED, That NARUC recommends that economic regulators carefully consider and implement appropriate ratemaking measures as needed so that water and wastewater utilities have a reasonable opportunity to earn their authorized returns within their jurisdictions; and be it further
>
> RESOLVED, That the Committee on Water stands ready to assist economic regulators with the execution of a sound regulatory environment for regulated water utilities, and will continue to monitor progress on this issue at future national committee meetings until satisfactorily improved.

At its November 2013 annual meeting, NARUC again adopted yet another resolution affirming its support of prospective test years for water and sewer utilities.

Q. Are you aware of any cases that suggest that the Commission has the authority to employ a future test period for ratemaking?

A. I am advised that in 2016, the Missouri Court of Appeals for the Western District addressed the Commission's authority to use a future test year in a Kansas City Power & Light Company ("KCPL") rate case appeal. *Kansas City Power & Light Company's Request v. Missouri Public Service Commission*, 509 S.W.3d 757, 771–72 (Mo.App. W.D. 2016), reh'g and/or transfer denied (Nov. 1, 2016), transfer denied (Feb. 28, 2017). KCPL had proposed to include in its revenue requirement projected increases in regional transmission organization costs and property taxes. In the Report and Order, the Commission chose to not include projected costs in KCPL's revenue requirement because: 1) the projected future costs were not presented until surrebuttal testimony, violating the Commission's rule that such evidence should be a part of the company's direct testimony; 2) it found the estimates of future costs to be unreliable; and 3) the Commission had doubts as to whether it had authority to grant the requested relief. As to the matter of whether the Commission has the authority to adopt a future test year, the Court of Appeals appeared to answer that question in the affirmative:

> In determining rates, the PSC may consider all facts that in its judgment have a bearing on the proper determination of rates. *See* Section 393.270.4; *State ex rel. Pub. Counsel*, 397 S.W.3d at 447-48. Relevant facts, of course, include forecasts of future costs. *See Fraas*, 627 S.W.2d at 886 ("the Commission must make an intelligent forecast with respect to the future period for which it is setting the rate; rate making is by necessity a predictive science").

Kansas City Power & Light Company at 771-72. The remaining questions – whether the facts make the use of a future test year a "proper determination of rates" – appears clear in this case. Here, rate base and expenses will be increasing while use per customer continues to decline by approximately two percent per year. Therefore, the relationship between revenues, expenses and rate base that existed in the historical test year, even if updated in a narrow true up period, will not carry forward into the future test year. Under the circumstances, the use of a fully forecasted test period will restore the matching principle.

Q. Is setting rates that will utilize data that will almost certainly not be relevant during the period rates will be in effect in the best interest of customers or the Company?

A. No, it is not. It is in the best interest of all stakeholders to set rates that properly balance revenues, expenses and investment. Regulatory commissions have long recognized that just and reasonable rates are those that properly balance the interests of the customers, investors and the general public. The future test year, especially under the circumstances described in this rate filing, best achieves that balance.

Q. Does this conclude your Direct Testimony?

A. Yes, it does.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Authorized Revenues (1)	$206,532,238	$213,962,106	$232,142,413	$237,054,075	$237,054,075	$237,054,075	$247,349,919	$258,553,015	$274,074,840	$281,650,968
Actual Revenues	192,614,238	207,389,279	243,652,841	229,023,141	227,138,052	218,000,520	233,128,505	259,688,899	286,326,807	276,050,243
Variance - Surcharge (Credit)	$13,918,000	$6,572,827	($11,510,428)	$8,030,934	$9,916,023	$19,053,555	$14,221,414	($1,135,884)	($12,251,967)	$5,600,725

Note (1): Classes of customers include Residential, Commercial, OPA and Sale for Resale

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Authorized Production Costs (1)	$18,739,529	$18,952,075	$20,004,431	$20,288,740	$20,288,740	$20,288,740	$20,018,222	$19,723,865	$20,018,222	$19,800,483
Actual Production Costs	18,409,894	19,140,166	20,275,212	19,050,403	19,792,061	20,132,948	20,542,707	20,418,118	21,629,604	18,218,210
Variance - Surcharge (Credit)	($329,635)	$188,091	$270,781	($1,238,337)	($496,679)	($155,792)	$524,485	$694,253	$1,611,382	($1,582,273)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Revenues net of Expenses Variance - Surcharge (Credit)	$13,588,365	$6,760,918	($11,239,647)	$6,792,597	$9,419,344	$18,897,763	$14,745,899	($441,632)	($10,640,584)	$4,018,452

FORM NO. 13 P.S.C MO NO. 13 Original Sheet No. RT 30.1

Missouri-American Water Company For All Missouri Service Areas
Name of Issuing Corporation Community, Town or City

Revenue Stabilization Mechanism (RSM)

AVAILABILITY – All residential ("domestic"), commercial, other public authority and sale for resale metered water customers.

SECTION A – DEFINITIONS

Actual Revenue (AR) shall mean the actual dollar amount of revenues billed to customers for the identified Service Classifications, excluding revenues arising from adjustments under this tariff and any other tariff, which were billed for the applicable Fiscal Year.

Actual Production Costs (APC) shall mean the actual dollar amount of power, chemicals, purchased water and waste disposal incurred by the Company in the Fiscal Year.

Effective Period shall mean the period for which the adjustments in Section B are to be billed to customers, and shall be the nine-month period April through December after the Filing Month.

Effective Period Usage (G) shall mean the number of 100 gallon units delivered to customers by the Company, including the number of 100 gallon units for the applicable Effective Period.

Filing Month shall mean the month in which an adjustment is determined by the Company and submitted to the Commission, on or before January 31.

Fiscal Year shall mean the Fiscal Year of the Company that ended as of the most recent December 31.

Interest (i) shall mean the Company short-term interest borrowing rate.

Previous Amortization Period shall mean the nine-month reconciliation amortization period that ended as of the most recent Fiscal Year.

Rate Case Revenue (RCR) shall mean the dollar amount of revenues reflected in the revenue requirements approved by the Commission for the applicable Service Classifications in the Company's most recent general rate case. In a month or year in which new rates come into effect, the RCR shall be prorated based upon the number of days in the month or year under the old rates and the number of days in the month or year under the new rates. If the dollar amount of revenues is expected to change as a result of the Commission's approval of one or more water system acquisitions by the Company, then the RCR will be adjusted to reflected the additional revenue as determined in the acquisition case. In a month or year in which the Commission approves a water acquisition by the Company, the RCR shall be prorated based upon the number of days in the month or year that do not reflect the revenues billed to customers in the acquired system(s) and the number of days in the month or year that do reflect the revenues billed to customers in the acquired system(s).

* *Indicates new rate or text*
\+ *Indicates change*

Date of Issue: June 30, 2020 Effective Date: July 30, 2020

Issued By: Deborah D. Dewey, President
727 Craig Road, St. Louis, MO 63141

FORM NO. 13 P.S.C MO NO. 13 Original Sheet No. RT 30.2

Missouri-American Water Company For All Missouri Service Areas
Name of Issuing Corporation Community, Town or City

Revenue Stabilization Mechanism (RSM) (continued)

Rate Case Production Costs (RPC) shall mean the dollar amount of power, chemicals, purchased water and waste disposal expenses reflected in revenue requirements approved by the Commission in the Company's most recent general rate case. In a month or year in which new rates come into effect, the RPC shall be prorated based upon the number of days in the month or year under the old rates and the number of days in the month or year under the new rates. If the dollar amount of production costs is expected to change as a result of the Commission's approval of one or more water system acquisitions by the Company, then the RPC will be adjusted to reflected the additional production costs as determined in the acquisition case. In a month or year in which the Commission approves a water acquisition by the Company, the RPC shall be prorated based upon the number of days in the month or year that do not reflect the production costs in the acquired system(s) and the number of days in the month or year that do reflect the production costs in the acquired system(s).

Upcoming Amortization Period shall mean the nine-month reconciliation amortization period commencing on April 1 following the Fiscal Year.

SECTION B – DETERMINATION OF ADJUSTMENT

$$\frac{((\mathrm{RCR}-\mathrm{RPC})-(\mathrm{AR}-\mathrm{APC}))\mathrm{i}+\mathrm{RA}}{\mathrm{G}}$$

Where:
RCR represents the Rate Case Revenue for the Fiscal Year.
RPC represents the Rate Case Production Costs for the Fiscal Year.
AR represents the Actual Revenue for the Fiscal Year.
APC represents the Actual Production Costs for the Fiscal Year.
i represents the interest rate
G represents the Factor G for the Effective Period.
RA represents the dollar amount due the Company (+RA) or the customers (-RA) arising from adjustments under this tariff that were under-billed or over-billed in the prior Fiscal Year.

The adjustment components above shall be summed together for billing purposes. If either component of the adjustments computes to $0.0001 per 100 gallons or more, any fraction of $0.0001 in the computed per 100 Gallons adjustment amount shall be dropped if less than $0.00005 or, if $0.00005 or more, shall be rounded up to the next full $0.0001.

SECTION C – REPORTS AND RECONCILIATIONS

The Company shall file with the Commission on or before January 30 of each year, the RSM calculation and support for any annual adjustments to be effective under this tariff. The Commission Staff will have 60 days to review. The reconciliation amount will be surcharged from April1 through December 31 of each calendar year. Any credit will be issued as soon as administratively possible.

* *Indicates new rate or text*
\+ *Indicates change*

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