Exhibit No.:	
Issues:	Rate Base, Main Breaks, Unaccounted for Water, Discretionary Capital Investments
Witness:	Jeffrey T. Kaiser
Exhibit Type:	Surrebuttal
Sponsoring Party:	Missouri-American Water Company
Case No.:	WR-2020-0344
Date:	February 9, 2021

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. WR-2020-0344

SURREBUTTAL TESTIMONY

OF

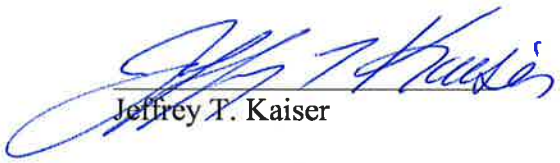
JEFFREY T. KAISER

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

AFFIDAVIT

I, Jeffrey T. Kaiser, under penalty of perjury, and pursuant to Section 509.030, RSMo, state that I am Director of Engineering and Vice President of Operations for Missouri-American Water 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.



Jeffrey T. Kaiser

February 9, 2021

SURREBUTTAL TESTIMONY
JEFFREY T. KAISER
MISSOURI-AMERICAN WATER COMPANY
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SURREBUTTAL TESTIMONY

JEFFREY T. KAISER

I. INTRODUCTION

Q. Please state your name and business address.

A. Jeffrey T. Kaiser. My business address is 727 Craig Road, Creve Coeur MO 63141.

Q. Are you the same Jeffrey T. Kaiser that previously submitted direct testimony and rebuttal testimony in this proceeding on behalf of Missouri-American Water Company ("MAWC" or "Company")?

A. Yes.

Q. What is the purpose of your surrebuttal testimony in this proceeding?

A. The purpose of my surrebuttal testimony is to respond to the direct testimony of Office of the Public Counsel ("OPC") witness Robert E. Schallenberg as to the Company's rate base, Missouri Public Service Commission Staff ("Staff") witness Kimberly K. Bolin as to the Company's main breaks and water loss, and Missouri Industrial Energy Consumers ("MIEC") witness Greg R. Meyer as to the Company's unaccounted for water.

II. MAWC RATE BASE

Q. On page 9, line 25 of his rebuttal testimony, OPC witness Schallenberg states that "MAWC did not address the reasonableness or prudence of AWWSC's costs that it included in MAWC's rate base." Can you provide additional information as to the American Water Works Service Company ("AWWSC" or "Service Company") costs that are included in rate base?

A. Yes, The AWWSC costs included in rate base are for company wide support applications also known as Enterprise Solutions (ES) related to hardware, software, and related appurtenances that provide the core Technology and Innovation (T&I) systems infrastructure for use by the Service Company and all American Water regulated subsidiaries, including MAWC. ES technology investments include enhancements to our geographic information system (GIS), upgrades to our customer service infrastructure, enhancements to our customer portal, as well as MapCall, Customer1View (C1V), Meter Ops, Work1View (W1V), and Customer Service Representative (CSR) One View applications. ES investments also include upgrades and enhancements to our foundational technologies, including upgrades to our SAP implementation to the SAP HANA business platform, upgrades to our PowerPlan asset accounting and tax software, replacement of SCADA firewalls, upgrades to network hardware, implementation of remote physical security monitoring, and enhancements to our compliance and identity and access management software tools. ES investments also support the development of a services framework that integrates the Company's foundational technologies, applications and third-party hosted services. In addition, the Company's ongoing investment in technology enables a better end-to-end view of its water and wastewater business. For example, Service Company's Technology and Innovation (T&I) team works side-by-side with end-users to develop technological solutions engineered with a focus to enhance our employees' effectiveness and to allow our customers to do business with us more easily. These products and applications are designed with ease of use in mind. They take advantage of augmented intelligence technologies that enhance human decision making and continuously learn from their

interactions with humans and the environment, meaning information evolves with usage.

Q. Is MAWC using technology to improve employee effectiveness?

A. Yes.

Q. Are there any examples you can provide?

A. Yes. An example would be our GIS which includes accurate electronic maps of our systems. These maps ensure that the Company's institutional knowledge is captured for use by current and future employees. To that end, MWAC has loaded its facilities into a GIS so that maps of its water and wastewater system assets are accessible on its internal network. The information available on GIS includes the location and a short description of the facilities, giving an electronic spatial view of the entire system. GIS also helps locate customers that might be affected by related service issues and allows us to more effectively communicate with our customers. This system also integrates with hydraulic modeling software to allow more accurate and cost-effective development of hydraulic models with less manual data entry. We continue to enhance our GIS platform through integration with our SAP Enterprise Asset Management (EAM) system, our computer-aided design (CAD) system, and our PowerPlan fixed asset records. This integration allows communication across the various platforms and makes data retrieval more efficient.

Another example would be by the MapCall system. Starting in 2017, the Company implemented MapCall, an application that provides a more intuitive interface among SAP, GIS, and its employees in the field. MapCall provides the flexibility to create

work orders, configure workflows and report progress while in the field. For example, a supervisor can create a work order to flush a dozen hydrants in a particular area. Using MapCall, the field worker can report progress as flushing is performed, and both the supervisor and others in the field can visually see the progress made toward completing the identified work in real time through the MapCall interface. The same can be done to schedule and monitor other routine work, as well as emergency work, such as main break repairs. As MapCall matures, field workers will be able to access pressure and flow sensor data while in the field to see the impact of their activities, allowing them to address potential issues that may arise in a more timely manner and minimize the impact on service to our customers.

Lastly, MapCall will also allow those in the field to more efficiently communicate water quality and other events through preloaded notifications via email to both internal and external stakeholders, including regulators, allowing workers to quickly shift back to focusing on the task at hand and providing quality service to customers.

Q. Are there other technology solutions MAWC is implementing to improve employee effectiveness?

A. Yes. In addition to GIS platform enhancements and MapCall, American Water has developed a number of applications that will further enhance employee effectiveness. These include Customer1View (C1V), Meter Ops and Work1View (W1V), each of which provides more comprehensive and easily accessible information to employees.

C1V has been implemented by the Company to better serve our customers in a way that also improves our efficiency. Customer1View provides improved access to

customer information (e.g., premise and service order history, meter details, billing and payment information) to field service representatives (FSRs) who regularly interact with our customers. This means that FSRs can view the same information as customer services representatives (CSRs) located at the customer service center (CSC). This allows our FSRs to review customer information that can help them address the customer's issue and provide customer information while speaking with them, rather than having to contact the CSC for information or requiring customers themselves to follow up with the CSC. FSRs can also update customer information and record notes on customer interactions on the spot, providing other employees that serve our customers timely access to the most up to date information.

Meter Ops is another application that will support our continued efficiency. Meter Ops monitors over 20 key attributes for each meter, including manufacturer, size, installation date, location (both on a map and whether it's located inside or outside), customer information, and historical data, such as past alarms, work orders, customer contacts and visits, and reading and billing information. This provides local operations supervisors and managers a real-time view of meter performance and the ability to more easily monitor and manage length of service meter replacements and identify and address potentially problem meters more timely. In addition, all this information is available to, and can be updated by, our employees while they're in the field so they also have a full, real-time, view of information they can use to better serve our customers.

The Company is also utilizing Work1View (W1V). This is a tool built by the field, for the field. It will provide a single view for managing work in the field, customer

information and meter information. W1V includes a real-time operations map to see work orders with optimized routing, as well as other types of work and alerts happening nearby. In addition, using W1V, FSRs can manage their own work based on the day's demands by adding or deferring undated work, and putting orders on hold for emergency work needed at another location. Supervisors can also reroute work as appropriate. W1V will be integrated with C1V for easy access to customer information during field visits. It will also be integrated with Meter Ops and MapCall to provide FSRs one point of access for all information needs. Taken together, these types of improvements will continue to drive a better customer experience and level of satisfaction.

Q. How else is MAWC using technology to improve customer service?

A. We are improving our web-based customer portal to allow self-service for billing, consumption information and conservation advice. We are making the portal more user friendly, accessible, and compliant with the Americans with Disabilities Act by, for example, using more graphical information. We are upgrading our customer service infrastructure to improve interactions with customers and make customer information more easily accessible in the field. These upgrades include replacing our CSC call management software and meter data management solution. Our new CSC telephone software system will improve call routing, automate many call handling tasks and use voice prompts to gather information, all of which will serve to minimize the time customers have to spend on the telephone.

Our new meter data management solution will provide field, CSC, and back office operations employees access to improved premise, asset attribute (type, age, life, etc.),

and data analysis to enable more efficient meter management, including more timely and efficient meter replacement activities like resource planning and scheduling. CSR One View provides CSRs access to relevant customer information more efficiently by bringing together information from multiple sources in to a single, easy to use view.

This will lead to more effective customer communications, service and outreach, as well as more effective utilization of customer service center resources. CSR One View is being integrated with the customer portal to enable communications with customers via online chat. This integration should be completed in 2021.

Q. Are there other technology solutions the Company is implementing to improve health and safety?

A. Yes. The Company is implementing an enterprise-wide safety, incident and near miss management solution that integrates incident/near miss capture, reporting, claims, and analysis. Another solution is being developed to improve predictive security, intrusion detection, and compliance automation to provide more effective and safe T&D, plant, and field operations by proactively informing company personnel of compliance or threat issues. Finally, we have replaced our legacy, unsupported employee time management system with MyTime. MyTime enhances employee time collection and reporting and contributes to improved pay accuracy. It also provides employees with a better way to record time worked and time off, including the ability to record and view time on a mobile device.

III. MAIN BREAKS AND WATER LOSS

Q. On page 16 line 3 of her rebuttal testimony, Staff witness Bolin includes a table

indicating the total number of main breaks MAWC's St. Louis County district has experienced between 2015 and 2019. Is this table a complete picture of the Company's main breaks during that period?

A. No, it is not. This table appears to replicate data provided in response to Staff DR 0131 and indicates the number of main breaks that, due to their method of repair, have been included in the operational expense of the Company. It does not include those breaks, which based on their necessity to replace sections of pipe, have been capitalized over this same period.

Q. Can you provide the total number of main breaks in St. Louis County over this same time period.

A. Yes. The table below indicates the total number of main breaks, both those expensed and those capitalized, from 2015 through 2019.

Year	Number of Main Breaks
2015	2,235
2016	2,446
2017	2,894
2018	2,120
2019	1,987

Q. Based upon this information, would you expect a reduced number of main breaks in the future?

A. No, I would not. As you look at these numbers, you will see some significant variations from year to year. This is due to environmental and other factors that contribute to main breaks. For example, during extreme cold weather events, the ground freezes deeper, and the frozen ground can exert unusual pressures on the outside of the pipe while at the same time the cold temperatures of the ground and cold river water within the pipe make the metal contract and make it more brittle. These factors tend to expose existing weaknesses in the pipe and cause more failures to occur. The polar vortex experienced in late 2017 and early 2018, for example, had this impact. Similarly, extreme heat and dry weather can also result in more breaks. This is due to the ground shrinking as it dries (as you can observe as cracks in the ground of your back yard in the dry summer months) as well as increased pumping and water pressure due to higher demand. These factors also tend to expose weaknesses in the pipe and result in more breaks. These type of weather events tend to skew numbers upward in a given period and downward in the following period as many breaks occur sooner than they would during more normal weather conditions. As we are not able to either predict or control the weather and therefore these factors, any attempt to predict future main breaks would be equally difficult. Finally, no matter what weather phenomenon we may experience, the pipe in the ground continues to deteriorate as it ages. We do know that the pipe in the distribution system will be one year older next year and therefore it will be in a condition more susceptible to breaks than it was this year. If MAWC replaces its infrastructure reaching a goal of one percent annual replacement rate (a pace ahead of the industry average of 0.8%), the pipe will be expected to last 100 years. The remaining 99% of our distribution system pipe which is not replaced each year will continue to increase in age and deteriorate in condition each year. When MAWC has

finally replaced all of the distribution pipe over the next 100 years, we will still have pipe that is nearly one hundred years old in the system and the breaks will continue to occur.

IV. UNACCOUNTED FOR WATER

Q. On page 11 of his rebuttal testimony, MIEC witness Meyer includes a table indicating the total number of main breaks MAWC's St. Louis County district has experienced in the period of 2010 through 2019. Is this table accurate?

A. No. As stated previously regarding a similar table presented by Staff witness Bolin, this table appears to replicate data provided in Staff DR 0131 and indicates the number of main breaks that, due to their repair as opposed to their replacement, have been included in the operational expense of the Company. It does not include those breaks, which based on the necessity to replace sections of pipe, have been capitalized over this same period.

Q. On page 11, line 2 of his rebuttal testimony, Mr. Meyer states that "A five-year average of St. Louis County main breaks from 2015-2019 is 535." Is this correct?

A. No. The actual average of main breaks in St. Louis County during this period is 2,340.

Q. On Page 11, line 13 of his rebuttal testimony, Mr. Meyer proposed that MAWC provide the Commission and "any other interested party an annual report that details main breaks and lost and unaccounted for water by major service area." Would MAWC agree to providing such a report?

A. MAWC will agree to provide the Staff and OPC with any operational information they may deem necessary for oversight of the water utility.

V. DISCRETIONARY CAPITAL INVESTMENTS

Q. Are you aware that Staff witness Seoung Joun Won has proposed to impute American Water Works Company's consolidated capital structure, rather than MAWC's actual capital structure as proposed in this case?

A. Yes, I am generally familiar with the position that Staff witness Won has taken as well as the Company's response. Please also refer to the Surrebuttal Testimony of MAWC witness Bulkley for a further discussion of the Company's position.

Q. If the Commission were to adopt Dr. Won's proposed capital structure, would you agree that planned discretionary capital investments by MAWC could be delayed?

A. Yes, Company witness Dewey has testified in this case that discretionary capital available from American Water is finite, and the operating companies are essentially in competition with one another for this capital. (Dewey RT, p. 5-6).

Q. What types of investments do you consider to be discretionary capital investment?

A. Discretionary capital investment is defined by MAWC as spending which is considered proactive investment of assets that could be delayed to a later period

Q. If discretionary capital was delayed or withheld from MAWC, how would that impact future investment in MAWC and ultimately its customers?

A. In the Company's 2021-2022 capital plan, there is approximately $70 million of capital investment that could be deferred beyond 2022, including the proactive replacement of aging or prone-to-fail assets. Proactive investment in capital replacement is likely to result in a lower cost to serve customers than replacing assets at the point of failure, or continual repair of aging infrastructure. If discretionary capital was directed to other American Water operating utilities with more favorable regulatory treatment, MAWC

and its customers would lose out on the benefits of more proactive investments in capital replacement.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.