

Exhibit No.: 328
Issue: Main Replacement Scheduling
and Coordination with City
Departments
Witness: Britt E. Smith, PE
Sponsoring Party: City of Jefferson City, Missouri
Case No.: Case No. WR-2017-0285

CITY OF JEFFERSON CITY, MISSOURI

Case No. WR-2017-0285

SURREBUTTAL TESTIMONY

OF

BRITT E. SMITH, PE

Jefferson City, Missouri
February 2018

City of Jefferson City Exhibit No. 328
Date 3-5-18 Reporter Becca T.
File No. WR-2017-0285

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water Company's)
Request for Authority to Implement a General Rate) Case No. WR-2017-0285, et al.
Increase for Water and Sewer Service Provided in)
Missouri Service Areas)

AFFIDAVIT OF BRITT E. SMITH, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

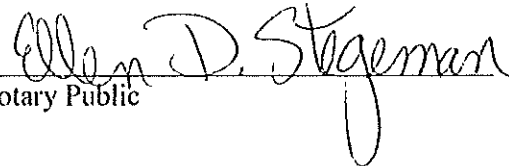
I, Britt E. Smith, PE, of lawful age, and being duly sworn, do hereby depose and state:

1. My name is Britt E. Smith. I am presently Operations Divisions Director within the Department of Public Works for the City of Jefferson, intervener in the referenced matter.
2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my personal knowledge, information and belief.



Britt E. Smith

Subscribed and sworn to before me, a Notary Public, this 5th day of February, 2018.



Notary Public

My Commission expires:
11/17/2021

ELLEN D. STEGEMAN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: November 17, 2021
Commission Number: 13789182

SURREBUTTAL TESTIMONY
BRITT E. SMITH

1 Q. WHAT IS YOUR NAME, TITLE AND BUSINESS ADDRESS?

2 A. My name is Britt E. Smith, PE, and I am the Operation Divisions Director within the
3 Department of Public Works for the City of Jefferson. My business address is City Hall,
4 320 East McCarty, Jefferson City, Missouri.

5 Q. ARE YOU THE SAME BRITT E. SMITH WHO FILED DIRECT TESTIMONY ON
6 BEHALF OF THE CITY OF JEFFERSON IN THIS PROCEEDING?

7 A. Yes, I am.

8 Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

9 A. I will be responding to portions of the rebuttal testimony of Bruce W. Aiton, the Director
10 of Engineering for Missouri American Water Company.

11 Q. AT PAGE 8 OF HIS REBUTTAL TESTIMONY MR. AITON TESTIFIES THAT THE
12 JEFFERSON CITY WATER DISTRIBUTION SYSTEM CONTAINS ABOUT 13.6
13 MILES OF SMALL DIAMETER MAINS ($\leq 4''$), OR APPROXIMATELY 8.5% OF THE
14 SYSTEM, BUT THE SMALL MAINS CONNECTED TO FIRE HYDRANTS MAKE UP
15 ONLY 1.2% OF THE ENTIRE SYSTEM. DO YOU KNOW HOW MANY FIRE
16 HYDRANTS ARE CONNECTED TO THE SMALL MAINS?

17 A. No, and from the data supplied by Mr. Aiton I do not know what *percentage* of the fire
18 hydrants in Jefferson City are connected to small mains which in my opinion is important
19 to know not only from the perspective of fire safety, something which Chief Matt Schofield
20 will further address in his surrebuttal testimony, but also from a public works perspective.

1 Q. FROM MR. AITON'S TESTIMONY CAN YOU CALCULATE THE NUMBER OF
2 MILES OF SMALL MAINS IN THE JEFFERSON CITY SYSTEM THAT ARE
3 CONNECTED TO FIRE HYDRANTS?

4 A. As I understand his testimony, of the 13.6 miles of small diameter mains within the system
5 there are approximately 1.9 miles connected to fire hydrants.

6 Q. CHIEF SCHOFIELD IN HIS SURREBUTTAL HAS RECOMMENDED THAT THE
7 COMPANY SHOULD COMMIT THE NEEDED RESOURCES TO REPLACE/UPSIZING
8 THIS RELATIVELY SMALL PORTION OF THEIR SYSTEM IN THE NEAR TERM.
9 IN YOUR OPINION IN WHAT WAY COULD THIS OBJECTIVE BE
10 ACCOMPLISHED BY THE COMPANY?

11 A. If the Company works toward a pipe line replacement system based on 100 year life, which
12 I strongly suspect is its program, therefore the average annual replacement in Jefferson
13 City should be approximately 1.6 miles per year. Given a five year replacement plan, that
14 would be 8 miles per cycle. Therefore the replacement of those small diameter lines which
15 support fire flows would represent less than 25% of the Company's next 5 year capital
16 replacement program. I will add that my Department and I look forward to working with
17 the Company to upgrade these lines and would appreciate the locations of these lines as
18 soon as possible so we can schedule/reschedule any street upgrade work accordingly.

19 Q. ON PAGE 10 OF HIS REBUTTAL TESTIMONY, MR. AITON ADDRESSES THE
20 CAPITOL AVENUE RESURFACING PROJECT DISCUSSED IN YOUR REBUTTAL
21 AND TESTIFIES THAT THE COMPANY DECIDED NOT TO REPLACE THE MAIN
22 UNDER CAPITOL AVENUE BECAUSE IT IS OLDER PIT CAST, HAS PERFORMED

1 WELL AND HAS NOT HAD A RECORDED LEAK. IN YOUR OPINION, WAS THE
2 COMPANY JUSTIFIED IN LEAVING THIS MAIN IN PLACE?

3 A. In my opinion, no. The Company's decision overlooks the age of the pipe. Because Mr.
4 Aiton referred to the pipe on Capitol Avenue as being "older pit cast pipe," and similar
5 terminology was used on page 4 of his rebuttal in reference to the St. Louis system, this
6 leads me to assume the Capitol Avenue main was installed prior to 1930 and is at least 87
7 years old. Therefore, according to the chart at page 11 of his testimony, it would appear
8 that the pipe is in the oldest 5.7% of the system. It is very near the end of its useful life.
9 The absence of a recorded leak is valuable information when determining to replace a line
10 or not *but that decision cannot be made in a vacuum*. In this case, the same rate payers as
11 those supporting the system were also planning a major roadway improvement with a
12 pavement life of approximately 15 to 20 years (asphalt) and a parking lane/sidewalk life
13 estimated to be 40 to 50 years (concrete). In my opinion these factors change the evaluation
14 and conclusion dramatically, making that main replacement not only reasonable but highly
15 prudent.

16 Furthermore, in the case of Capitol Avenue, a multi-agency effort is underway to revitalize
17 the area including restoration and redevelopment of adjacent structures. And many, if not
18 most, of those structures, have service lines made of galvanized metal and were most likely
19 installed at the same time as the main (estimated to be 80+ years ago). Also, many, if not
20 most, of the structures currently have a meter located in the basement of the building and
21 may or may not have an operational curb stop in the exterior of the building. In my opinion,
22 it would be prudent to expend the funds needed to at least renew those service lines to

1 beyond the limits of the new construction and relocate the meters to the exterior of the
2 property in support of the planned redevelopment for the properties.

3 Q. ON PAGE 10 OF HIS REBUTTAL MR. AITON TESTIFIES THAT THE COMPANY IS
4 IN THE PROCESS OF PREPARING A CURRENT, CALIBRATED HYDRAULIC
5 MODEL OF THE JEFFERSON CITY WATER SYSTEM, BUT IT IS NOT YET
6 COMPLETED. WHAT SHOULD THE MODEL INCLUDE?

7 A. If the Company has not decided to do so yet, I suggest the model should include a hydraulic
8 model of the system in North Jefferson City --- the system serving the Jefferson City
9 Airport which has experienced water pressure problems. My Department and I anticipate
10 assisting the Company in fully resolving the pressure related issues affecting the citizens
11 and businesses located in North Jefferson City. Given the Company's proposal to replace
12 the pressure reducing valve for the supply point, I will assume it is the Company's belief
13 that the existing distribution system will be capable of operating at a higher pressure than
14 currently maintained in the system.

15 Q. ON PAGE 11 OF HIS REBUTTAL MR. AITON TESTIFIES THAT THE COMPANY
16 WILL BE RENEWING EARLY THIS YEAR ITS RESOURCE SUPERVISED PLAN
17 WHICH IS PART OF ITS OWNER SUPERVISED PROGRAM ("OSP"), A FIVE YEAR
18 MAIN REPLACEMENT PROGRAM APPROVED BY THE MISSOURI
19 DEPARTMENT OF NATURAL RESOURCES. IS YOUR DEPARTMENT READY TO
20 ASSIST THE COMPANY WITH THE OSP?

21 A. Yes. My Department and I look forward to working with the Company in its forthcoming
22 five year plan and would be interested to see the current five year plan and what has been
23 accomplished and is still planned.

1 I do find it troubling that approximately 20% of the system is 60 years old or older as
2 shown on Mr. Aiton's "Water Main Age" chart on the same page. This combined with his
3 report that 25% of the system's water mains have an unknown age may mean that the
4 percentage of mains in the system 60 years old or older could be as high as 45%. However,
5 with a robust replacement plan, these percentages can be reduced over time.

6 Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

7 A. Yes.