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*Issue:* Rate of Return  
*Witness:* Matthew J. Barnes  
*Sponsoring Party:* MoPSC Staff  
*Type of Exhibit:* Rebuttal Testimony  
*Case No.:* WR-2008-0311  
*Date Testimony Prepared:* September 30, 2008

**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY SERVICES DIVISION**

**REBUTTAL TESTIMONY**

**OF**

**MATTHEW J. BARNES**

**MISSOURI-AMERICAN WATER COMPANY**

**CASE NO. WR-2008-0311**

Jefferson City, Missouri  
September 2008

**\*\*Denotes Highly Confidential Information\*\***

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**TABLE OF CONTENTS**  
**OF THE REBUTTAL TESTIMONY OF**  
**MATTHEW J. BARNES**  
**MISSOURI-AMERICAN WATER COMPANY**  
**CASE NO. WR-2008-0311**

EXECUTIVE SUMMARY .....	1
CORRECTIONS .....	2
MR. RUNGREN’S RECOMMENDED CAPITAL STRUCTURE FOR MAWC .....	2
MR JANOUS’ RECOMMENDED CAPITAL STRUCTURE FOR MAWC .....	5
MS. AHERN’S RECOMMENDED COST OF COMMON EQUITY FOR MAWC.....	6
SUMMARY AND CONCLUSIONS .....	8

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1           A.     I will present Staff's corrected rate-of-return recommendation for MAWC. I  
2 will address Mr. Rungren and Mr. Janous' recommended capital structure for MAWC. I will  
3 also address a few areas of Ms. Ahern's recommended cost of common equity for MAWC.

4           **CORRECTIONS**

5           Q.     Do you have any corrections to make to Staff's recommended rate-of-return  
6 for MAWC?

7           A.     Yes. The first response to Data Request 0161 from MAWC indicated that the  
8 amount of Construction Work In Progress (CWIP) was not available on a consolidated basis  
9 for American Water Company (American Water). Staff received an updated response to  
10 Data Request 0161 on September 5, 2008 that indicated there was a miscommunication  
11 between MAWC and American Water about confidential information that could be released  
12 to Staff. The data request response indicated an increase in CWIP on a consolidated basis,  
13 which increased Staff's rate of return (ROR). Staff now recommends a ROR for MAWC in  
14 the range of 7.60 percent to 8.04 percent, with a mid-point of 7.82 percent. Please see  
15 Attachment 1 to this testimony.

16           **MR. RUNGREN'S RECOMMENDED CAPITAL STRUCTURE FOR MAWC**

17           Q.     Please summarize Mr. Rungren's recommended capital structure for MAWC.

18           A.     Mr. Rungren recommended the use of MAWC's allocated capital structure.  
19 Mr. Rungren recommends MAWC's allocated capital structure as of September 30, 2008.  
20 This capital structure consists of 47.65 percent common equity, 0.36 percent preferred stock  
21 and 51.99 percent long-term debt versus Staff's consolidated capital structure of

1 44.28 percent common equity, .34 percent preferred stock, 55.01 percent long-term debt, and  
2 .38 percent short-term debt.

3 Q. Why is it inappropriate to use MAWC's capital structure for ratemaking  
4 purposes in this case?

5 A. First, a pro-forma capital structure should not be used because it is not known  
6 and measurable. Second, MAWC no longer issues all of its own debt. This change occurred  
7 when American Water created its financing subsidiary American Water Capital  
8 Corporation (AWCC). Although there are internal loan documents between MAWC and  
9 AWCC, AWCC is the entity that is actually issuing the debt on a consolidated basis for all of  
10 the subsidiaries of American Water. Additionally, AWCC is acting as the corporate treasury  
11 for American Water, in that it also aggregates all of the cash receipts and  
12 disbursement functions for its subsidiaries.

13 Q. Please describe MAWC's financing arrangement with AWCC.

14 A. As stated in Paragraph 13 of Missouri-American's Application filed in Case  
15 No. WF-2002-1096:

16 Applicant [MAWC] proposes to implement some or all of the  
17 long-term debt portion of its financing program primarily  
18 through an affiliate, American Water Capital Corp. ("AWCC").  
19 AWCC is a wholly-owned subsidiary of American Water  
20 Works Company, Inc., ("AWW") established for the purpose  
21 of providing financial services to AWW and its water and  
22 wastewater utility subsidiaries (including Applicant)  
23 by pooling the financing requirements of such companies  
24 (the "Participants"), thereby creating larger and more  
25 cost efficient debt issues at more attractive interest rates and  
26 lower transaction costs than would otherwise be available.

1 The Application goes on further to state in Paragraph 14:

2 In the past, Applicant, and its constituent predecessors in  
3 interest, provided for debt financing needs primarily through  
4 short-term bank borrowings and the sale by private placement  
5 of long-term bonds issued pursuant to mortgages on plant and  
6 property in this State including the Indenture of Mortgage and,  
7 when available, tax exempt bond issues. Changes in financial  
8 markets and federal securities regulation have made the  
9 public securities market an attractive alternative to the  
10 traditional, secured privately placed bonds and bank  
11 borrowings upon which Applicant has traditionally relied.  
12 However, borrowers can derive the benefits of the public  
13 market only if the amounts they borrow are large enough, and  
14 their credit rating high enough, to meet that market's  
15 significant entry level requirements. Standing alone, Applicant  
16 does not have the borrowing requirements large enough to  
17 finance in the public markets. However, by financing through  
18 AWCC, Applicant and its sister companies in other states have  
19 sufficient borrowing power to finance in the public market and  
20 thereby obtain the advantageous terms available therein.

21 Paragraph 15. goes on further to state:

22 Generally, each year the Participants provide AWCC with an  
23 estimate of the borrowing requirements which they propose to  
24 finance through AWCC for the coming year and for one (1)  
25 to three (3) years in advance. On the basis of this information,  
26 AWCC arranges borrowing commitments and programs to  
27 provide the funds necessary to meet these requirements.  
28 All long-term debt incurred by AWCC and the corresponding  
29 long-term indebtedness of each Participant will be  
30 match-funded. That is to say, AWCC borrows long term funds  
31 only to meet specific borrowing needs of one or  
32 more participants.

33 Q. How does Standard & Poor's (S&P) evaluate the creditworthiness of  
34 American Water and its subsidiaries?

35 A. S&P does not provide credit ratings for American Water's individual  
36 subsidiaries as it does for some other Missouri utilities, such as AmerenUE and Kansas City  
37 Power and Light. The credit analysis performed by S&P is based on the consolidated

1 credit risk profile of American Water, which is primarily based on its regulated subsidiaries,  
2 but does include non-regulated operations. Consequently, the cost of capital provided to  
3 MAWC is driven by the consolidated operations of American Water.

4 Q. Does the consolidation of financing needs through AWCC make MAWC's  
5 allocated capital structure inappropriate for purposes of arriving at a recommended ROR?

6 A. Yes. AWCC is more or less acting like the treasury for American Water.  
7 The inflows and outflows of funds at AWCC become commingled with those funds that are  
8 being used for financing purposes at American Water and its subsidiaries. By carrying most  
9 of this debt at the parent company level rather than at the subsidiaries, American Water is  
10 able to produce subsidiary capital structures that are more heavily weighted in equity, which  
11 would not be the case otherwise. This equity, which is more expensive than debt is actually  
12 sourced by the debt at AWCC. This creates what is referred to as double leverage, which is  
13 the subsidiary and parent earning equity returns on debt. Because American Water's  
14 capital structure directly affects the cost of capital that is available to its subsidiaries, it is  
15 unlikely that American Water would manage this capital structure in an imprudent manner,  
16 whether it is with too much leverage or not enough. Consequently, the use of the  
17 consolidated capital structure for ratemaking purposes is most likely to produce a ROR that is  
18 consistent with the cost of capital available to MAWC.

19 **MR JANOUS' RECOMMENDED CAPITAL STRUCTURE FOR MAWC**

20 Q. What capital structure did Mr. Janous recommend in this case?

21 A. It appears on Schedule BAJ-1 that Mr. Janous adopted the capital structure  
22 proposed by MAWC.

1 Q. Did Mr. Janous justify the use of MAWC's proposed capital structure?

2 A. No, he did not.

3 Q. Did Mr. Janous explain how MAWC accesses capital?

4 A. Yes. On page 2, line 16 through 23, Mr. Janous states the following:

5 Missouri-American does not access external capital markets  
6 on its own rather it gets all of its external capital through its  
7 parent company or affiliate companies. All external equity  
8 comes from its parent company American Water Works, and  
9 all corporate debt capital is issued by American Water Capital  
10 Corp. As such, Missouri-American's entire access to external  
11 corporate debt and equity capital is determined by its parent  
12 company and affiliates' credit standing and access to capital.

13 Q. Is this one of the reasons that the Commission should adopt a consolidated  
14 capital structure even though Mr. Janous did not recommend it?

15 A. Yes. This is the main reason along with the other reasons that were  
16 mentioned previously.

17 **MS. AHERN'S RECOMMENDED COST OF COMMON EQUITY FOR MAWC**

18 Q. Please summarize Ms. Ahern's recommended cost of common equity for  
19 MAWC.

20 A. Ms. Ahern utilized the Discounted Cash Flow (DCF) model, the Capital Asset  
21 Pricing Model (CAPM), the Risk Premium Model (RPM), and the Comparable Earnings  
22 Model (CEM) to estimate the cost of common equity for MAWC. Ms. Ahern applied the  
23 DCF, CAPM and RPM to two proxy groups. Ms. Ahern applied the CEM to two proxy  
24 groups of unregulated companies. Ms. Ahern selected each unregulated proxy group with  
25 the intent of making these groups comparable to her utility proxy groups. Ms. Ahern  
26 summarizes her results on pages 3 through 5 of her Direct Testimony. The results range



1 from a low of 9.86 percent utilizing the DCF model to a high of 14.13 percent using  
2 the CEM. After reviewing these results and making a business risk adjustment, Ms. Ahern  
3 arrived at a range of recommended cost of common equity of 11.075 percent to  
4 11.425 percent with a mid-point of 11.25 percent.

5 Q. On page 11, line 23 through page 14, line 6, of her Direct Testimony,  
6 Ms. Ahern explains why she believes a small size risk adjustment needs to be made to her  
7 initial proxy group cost of common equity. What has been Staff's position in the past  
8 regarding the need for an adjustment to the cost of common equity to consider a utility  
9 company's smaller size relative to the proxy group?

10 A. Staff has consistently recommended to the Commission that it reject any  
11 adjustments to the cost of common equity because of a utility company's smaller size. Staff  
12 has maintained that the study's cited by company ROR witnesses were not based on an  
13 analysis of the regulated utility industry, but on all of the stocks in the New York Stock  
14 Exchange, the American Stock Exchange and the Nasdaq National Market, which are not  
15 comparable.

16 Q. Do you have any concerns with Ms. Ahern's risk premium estimate using  
17 historical data?

18 A. Yes. I do not agree with Ms. Ahern's position that arithmetic means should  
19 be used when estimating the risk premium going forward. For the most part, it is assumed  
20 that investors in utility stocks are buying for the long-term. Investors are not buying and  
21 selling shares every year. Consequently, the investor should not be assumed to be realizing  
22 any of the gains and losses that occur year-to-year.

1 Q. Please provide a simple example to illustrate why you don't believe investors  
2 use arithmetic means when determining the amount of risk premium they will require on a  
3 given stock or a portfolio of stocks.

4 A. Suppose that an investor makes a \$1 stock investment over a three-year  
5 period. If an investor pays \$1 for a stock in year 1 and in year 2 the stock increases to \$1.50,  
6 then the investor would have a 50 percent growth rate. In year three, the price of the stock  
7 decreases by 50 percent to \$.75. If an investor performed a simple arithmetic average of  
8 these two returns, then he would think that he received 0 percent  $[(50 \text{ percent} +$   
9  $-50 \text{ percent})/2]$  growth in his investment over the three-year period. However, in reality the  
10 investor actually had a 25 percent decline from \$1.00 to \$.75 in their investment over this  
11 three-year period. This is why using the arithmetic mean to measure risk premiums  
12 is questionable.

13 Q. Do you have concerns with Ms. Ahern's CAPM analysis?

14 A. Yes. My concerns about her CAPM analysis are much the same as my  
15 concerns about her RPM analysis because of her use of arithmetic averages. Therefore, I will  
16 not go into the detail that I did in my discussion about her risk premium analysis.

17 **SUMMARY AND CONCLUSIONS**

18 Q. Please summarize the conclusions of your rebuttal testimony.

19 A. My conclusions regarding the cost of common equity are listed below.

20 1. The use of MAWC's capital structure as proposed by Missouri  
21 Industrial Energy Consumers (MIEC) and MAWC is inappropriate. It  
22 does not reflect American Water's actual support of the capital of its

1 subsidiary, MAWC. The calculation of the cost of capital for MAWC  
2 should be based on American Water's actual consolidated capital  
3 structure as of March 31, 2008;

4 2. My cost of common equity recommendation of 9.60 percent to  
5 10.60 percent with a mid-point of 10.10 percent would produce a fair  
6 and reasonable ROR of 7.60 percent to 8.04 percent with a mid-point  
7 of 7.82 percent for the Missouri jurisdictional water utility rate base  
8 for MAWC.

9 Q. Does this conclude your rebuttal testimony?

10 A. Yes, it does.

**BEFORE THE PUBLIC SERVICE COMMISSION**  
**OF THE STATE OF MISSOURI**

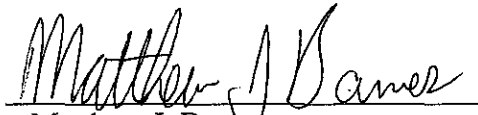
In the Matter of Missouri-American Water )  
Company's request for authority to )  
implement a general rate increase for water )  
and sewer service provided in Missouri )  
Service Areas

Case No. WR-2008-0311

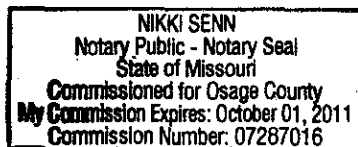
AFFIDAVIT OF MATTHEW J. BARNES

STATE OF MISSOURI     )  
                                  )     ss.  
COUNTY OF COLE     )

Matthew J. Barnes, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, consisting of 9 pages to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

  
Matthew J. Barnes

Subscribed and sworn to before me this 29<sup>th</sup> day of September, 2008.



  
Notary Public

**MISSOURI-AMERICAN WATER COMPANY  
CASE NO. WR-2008-0311**

**Capital Structure as of March 31, 2008  
for American Water Company**

Capital Component	Amount in Dollars	Percentage of Capital
Common Stock Equity	\$3,809,423,000 <sup>1</sup>	44.28%
Preferred Stock	28,864,000 <sup>2</sup>	0.34%
Long-Term Debt	4,732,503,000 <sup>3</sup>	55.01%
Short-Term Debt	32,419,000 <sup>4</sup>	0.38%
<b>Total Capitalization</b>	<b><u>\$8,603,209,000</u></b>	<b><u>100.00%</u></b>

Source: 1. MAWC's response to Staff Data Request No. 0149.  
2. MAWC's response to Staff Data Request No. 0149.  
3. MAWC's response to Staff Data Request No. 0149.  
4. MAWC's response to Staff Data Request Nos. 0149 and 0161. The amount of Short-term debt outstanding on a consolidated basis was \$368,137,000. The amount of CWIP outstanding for American Water on a consolidated basis was \*\* \_\_\_\_\_ \*\*.

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**SCHEDULE 8**

**MISSOURI-AMERICAN WATER COMPANY  
CASE NO. WR-2008-0311**

**Weighted Cost of Capital as of March 31, 2008  
for Missouri-American Water Company**

Capital Component	Percentage of Capital	Embedded Cost	Weighted Cost of Capital Using Common Equity Return of:		
			<b>9.60%</b>	<b>10.10%</b>	<b>10.60%</b>
Common Stock Equity	44.28%	-----	4.25%	4.47%	4.69%
Preferred Stock	0.34%	9.18%	0.03%	0.03%	0.03%
Long-Term Debt	55.01%	6.00%	3.30%	3.30%	3.30%
Short-Term Debt	0.38%	5.03%	0.02%	0.02%	0.02%
	<u><b>100.00%</b></u>		<u><b>7.60%</b></u>	<u><b>7.82%</b></u>	<u><b>8.04%</b></u>

Notes:

See Schedule 8 for the Capital Structure Ratios.

See Schedule 9 for the Embedded Cost of Long-Term Debt.

See Schedule 10 for the Embedded Cost of Preferred Stock.

Embedded Cost of Short-Term Debt was provided by MOAWC in Data Request No. 0151.