Exhibit No.:

Issue: Rate of Return Witness: David Murray
Sponsoring Party: MoPSC Staff
Type of Exhibit: Surrebuttal Testimony

Case No.: WR-2007-0216
Date Testimony Prepared: July 31, 2007

# MISSOURI PUBLIC SERVICE COMMISSION **UTILITY SERVICES DIVISION**

## SURREBUTTAL TESTIMONY

**OF** 

## **DAVID MURRAY**

## MISSOURI-AMERICAN WATER COMPANY **CASE NO. WR-2007-0216**

Jefferson City, Missouri July 2007



## BEFORE THE PUBLIC SERVICE COMMISSION

## OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water ) Company's request for Authority to ) Case No. WR-2007-0216 Implement a General Rate Increase for ) Water Service provided in Missouri ) Service Areas )						
AFFIDAVIT OF DAVID MURRAY						
STATE OF MISSOURI ) ) ss. COUNTY OF COLE )						
David Murray, being of lawful age, on his oath states: that he has participated in the preparation of the following Surrebuttal Testimony in question and answer form, consisting of $27$ pages to be presented in the above case; that the answers in the following Surrebuttal 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.						
David Murray						
Subscribed and sworn to before me this 3154 day of July, 2007.						
D. SUZIE MANKIN Notary Public - Notary Seal State of Missouri County of Cole My Commission Exp. 07/01/2008  Notary Public Notary Public						

1	TABLE OF CONTENTS	
2	SURREBUTTAL TESTIMONY	
3	OF	
4	DAVID MURRAY	
5	MISSOURI-AMERICAN WATER COMPANY	
6	CASE NO. WR-2007-0216	
7	EXECUTIVE SUMMARY	2
8	RESPONSE TO MS. AHERN'S AND MR. JENKIN'S REBUTTAL TESTIMONY	4
9	SUMMARY AND CONCLUSIONS	26

1	SURREBUTT	AL TESTIMONY
2	2	OF
3	3 DAVID	MURRAY
4	4 MISSOURI-AMERIC	AN WATER COMPANY
5	5 CASE NO.	WR-2007-0216
6	6 Q. Please state your name.	
7	7 A. My name is David Murray.	
8	Q. Are you the same David M	Murray who filed Direct testimony, Rebuttal
9	9 testimony and True-up Direct testimony in th	is proceeding for the Staff of the Missouri Public
10	10 Service Commission (Staff)?	
11	11 A. Yes, I am.	
12	Q. In your Direct testimony, did	you provide your expert opinion on what you
13	considered to be a fair and reasonable rate of	return on the Missouri jurisdictional water utility
14	rate base for Missouri-American Water Comp	any (MAWC)?
15	15 A. Yes, I did.	
16	Q. What is the purpose of your Su	rrebuttal testimony?
17	A. The purpose of my Surrebu	attal testimony is to respond to the rebuttal
18	18 testimonies of MAWC witnesses Pauline	M. Ahern and James M. Jenkins. Ms. Ahern
19	sponsored rate-of-return (ROR) Direct and R	ebuttal testimony in this case dealing with both
20	cost of common equity and capital structu	re issues. Mr. Jenkins sponsored Direct and
21	Rebuttal testimony on capital structure issue	s, which specifically addresses the arrangement
22	that MAWC has with American Water Capita	l Corporation (AWCC).

## **EXECUTIVE SUMMARY**

Q. Please provide an executive summary of your surrebuttal testimony.

A. I will address Ms. Ahern's claims that MAWC has an independent, stand-alone capital structure. MAWC's debt is not separately rated to assist investors with their evaluation of the credit quality of its debt. This is probably because American Water realizes that there is limited value to having MAWC's debt rated separately because investors evaluate the parent company, American Water, when deciding whether to provide debt financing through AWCC. Although it is debatable whether AmerenUE or Kansas City Power and Light are independent, stand-alone entities, at least credit rating agencies assign these entities separate credit ratings, even if they are the same as the parent company in some instances.

MAWC can have equity capital infused into it by the parent company even though the source of the capital infused into it was debt issued by the parent company. This is commonly referred to as double leverage. The existence of double leverage is one of the criteria that is often considered when determining if the subsidiary or parent company capital structure is appropriate for ratemaking purposes. In this case, the existence of double leverage supports the use of the parent company's consolidated capital structure. The parent's consolidated capital structure is less likely to be manipulated for ratemaking purposes because it is also the capital structure that has the most bearing on the financial stability of American Water and its subsidiaries' operations.

Although the debt that MAWC receives from AWCC is not directly guaranteed by American Water (Staff cannot understand why such a situation would ever occur because it is illogical), Staff maintains that, because the AWCC debt issued to third parties is supported by American Water in a "Support Agreement," from a financial analysis perspective, this would

appear to be better than a guarantee because the third parties that buy AWCC's debt do not have to pursue payment through American Water's individual water utility subsidiaries.

Because American Water is predominately a regulated water utility, its risk profile is similar to MAWC (a situation that is acknowledged by Ms. Ahern in her Rebuttal testimony), and therefore, both its capital structure and cost of capital are appropriate for the recommended ROR in this case.

Part of Ms. Ahern's criticisms of my cost of common equity recommendation are no longer relevant because of my revised recommended capital structure, which includes the equity infusion made by RWE. If anything, Ms. Ahern's testimony concerning adjustments she believes need to be made to my cost of common equity recommendation because of my initial leveraged capital structure recommendation would be reversed because my current capital structure recommendation contains a larger percentage of total equity.

I will address Ms. Ahern's criticisms of my discounted cash flow (DCF) analysis and why I believe using other models with appropriate inputs corroborate Staff's single digit return on common equity (ROE) recommendation. In fact, based on evidence Staff uncovered during its review of the upcoming proposed spin-off of American Water, \*\*

Therefore, it is not the model used or whether it is applied to a set of comparable companies that drives the reasonableness of results achieved, it is the inputs used in these models. If one

NP

judges the merits of the inputs in the models, the models should produce a fair and reasonable authorized rate of return in a utility rate case proceeding.

## RESPONSE TO MS. AHERN'S AND MR. JENKIN'S REBUTTAL TESTIMONY

Q. On page 7, lines 15 through 17 of her Rebuttal testimony, Ms. Ahern claims that you implied that AWCC would be the exclusive source of future MAWC debt financing. Did you imply this in your testimony?

A. No. I simply restated the response that MAWC provided to me in response to Staff Data Request No. 0102. I did not change the wording of MAWC's response. Therefore, one can interpret MAWC's response however he or she wants, but MAWC specifically stated that "American Water Capital Corporation is the primary source of long-term debt and short-term debt for Missouri-American Water Company." If I were attempting to mislead the reader into thinking that AWCC was the "exclusive source" of financing for MAWC, I wouldn't have stated in the same sentence that MAWC still accesses the capital markets by issuing tax-advantaged bonds through the State Environmental Improvement and Energy Resource Authority (EIERA).

- Q. On page 8, lines 9 through 20 of her Rebuttal testimony, Ms. Ahern stated that Standard & Poor's (S&P) indicated in its August 1, 2003, Research Report that American Water Works "does not guarantee debt issued by AWCC." Does this contradict a statement made in American Water's 2002 Annual Report?
- A. Yes. As stated under Note 15 of its Notes to Financial Statements, American Water stated that "American Water Works has fully and unconditionally guaranteed the securities of AWCC."

- Q. Ms. Ahern states that bond rating agencies, such as S&P, are "investor influencing and their opinions regarding the non-existence of a guarantee of AWCC's debt by American Water is likely to affect investor's perceptions of the true nature of the Support Agreement between American Water and AWCC." Is it important for investors to review, analyze and question information that is available to them when they are making investment decisions?
- A. Yes. If I were an investor, I would want to understand why there is a contradiction between what American Water communicated to its investors in its annual report compared to S&P's opinion. If Ms. Ahern believes that the S&P report is accurate, then this would imply that American Water's statement in its annual report is a misrepresentation.
- Q. On page 9, lines 5 through 15 of her Rebuttal testimony, Ms. Ahern cites three factors from the book *The Cost of Capital A Practitioner's Guide* authored by David Parcell to attempt to support her position that it is inappropriate to use American Water's consolidated capital structure. How do you respond?
- A. First, it is important to list all four of the factors provided in the book.

  Ms. Ahern only cites the first three of these four factors. The four factors are:
  - 1. Whether subsidiary utility obtains all of its capital from its parent, or issues its own debt and preferred stock.
  - 2. Whether parent guarantees any of the securities issued by the subsidiary.
  - 3. Whether subsidiary's capital structure is independent of its parent (i.e., existence of double leverage, absence of proper relationship between risk and leverage of utility and non-utility subsidiaries).
  - 4. Whether parent (or consolidated enterprise) is diversified into non-utility operations.

The first item mentioned above clearly indicates that, if a subsidiary obtains all of its capital from its parent, which includes debt and equity, then it would be appropriate to utilize a consolidated capital structure. However, if the subsidiary issues its own debt and preferred stock, then it is not clear that this requires the subsidiary to issue *all* of its own debt and preferred stock, or just some of it. I maintain that the subsidiary should issue all of its own debt and preferred stock in order for the subsidiary capital structure to be considered appropriate and verifiable. Otherwise, there are debt issuances contained in the subsidiary capital structure that are allocations from the parent company. It is undisputed from American Water's 2002 Annual Report that American Water has indicated that AWCC will be the "*primary*" funding vehicle for its subsidiaries going forward. MAWC reiterated this intent in its response to Staff Data Request No. 0102.

The second item in the list above reasonably implies that if a parent company guarantees any of the debt of its subsidiaries, then it would be more appropriate to utilize a consolidated parent company capital structure. Ms. Ahern maintains that because S&P states that American Water does not "guarantee" the debt issued by AWCC, and allocated down to its subsidiaries, that this lends support to utilizing a subsidiary capital structure. However, in no uncertain terms, American Water itself, in its 2002 Annual Report indicates that it has "fully and unconditionally guaranteed the securities of AWCC." Obviously, American Water characterizes its "support agreement" as a guaranty, whether it is a legal guaranty or not. I agree with American Water's classification that this is a guaranty, meaning that they will assure payments on AWCC debt.

The third item above states that the subsidiary capital structure has to be considered independent in order for it to be appropriate, otherwise the consolidated parent capital structure should be used. Because American Water employs double leverage and because debt from AWCC is allocated down to the subsidiaries of American Water, it is clear that MAWC's capital structure is not independent. Another indicator that MAWC's capital structure is not independent is the fact that MAWC's debt isn't rated by S&P. S&P provides credit ratings for American Water and AWCC, but not for any of American Water's regulated water utility subsidiaries. The required return on the debt that MAWC receives from AWCC is based on the creditworthiness of American Water, not directly on MAWC's creditworthiness.

The fourth item from the list above indicates that if the parent isn't diversified into non-utility operations, then it would be appropriate to utilize the consolidated parent capital structure because that approach would be consistent with how the parent company normally finances its operations. Although American Water's current audited financial statements do not provide the segmentation of American Water revenues for regulated and non-regulated operations, they do provide a segmentation of utility and non-utility property, plant and equipment. Based on this information, non-utility property, plant and equipment only account for 1.18 percent of total property, plant and equipment as of 2005. Additionally, it is worthy to note that S&P has not assigned much weight to American Water's non-regulated operations when assigning American Water a business risk profile of 2, which is the next to lowest (least risky) business risk profile that S&P can assign. The fact that American Water is predominately a regulated water distribution company provides support for the use of the consolidated parent capital structure based on this criterion.

- Q. Does Ms. Ahern provide any testimony that supports the position that the use of American Water's capital structure would be appropriate because it has the same risk profile as MAWC?
- A. Yes. On page 12, line 29 through page 13, line 3, of her Rebuttal testimony, Ms. Ahern states the following:

Although MAWC's bonds are not rated by S&P, both American Water's and AWCC's S&P credit ratings are A- and both are assigned a business profile of "2" or "excellent" based on S&P's consideration of "the stand-alone credit profile of American Water Works" (see Schedule PMA-18). Thus, S&P would likely assign a bond/credit rating of A- and business profile of "2" to MAWC as well.

- Q. Why do you believe Ms. Ahern's statement supports the use of American Water's capital structure?
- A. Because she believes that MAWC would have the same credit rating and business risk profile as American Water because it is a subsidiary of this entity, which implies similar business risk. S&P does not evaluate MAWC's capital structure when assigning American Water an "A-" credit rating, it evaluates American Water's consolidated capital structure.
- Q. Has this Commission relied on the fact that the consolidated capital structure is the capital structure analyzed by credit analysts to adopt the consolidated capital structure in past decisions?
- A. Yes. In the Report and Order in the Missouri Gas Energy rate case in 2004, Case No. GR-2004-0209, the Commission stated the following: "When a business analyst such as Moody's or Standard & Poor's examines Southern Union to assess its credit worthiness, it looks to that unadjusted consolidated capital structure to make its

determination." *In the Matter of Missouri Gas Energy*, 12 Mo.P.S.C.3d 581, 589 (September 21, 2004).

- Q. On page 13, lines 3 through 18 of her rebuttal testimony, Ms. Ahern discusses her determination that MAWC's total equity ratio of 48.25 percent is consistent with the benchmarks established by S&P. Does Ms. Ahern include preferred stock in her total equity ratio calculation?
  - A. Yes.
- Q. What is American Water's total equity ratio if you were to include preferred equity with common equity as a percentage of total capital?
- A. 47.36 percent, which is also within the benchmark range of 42 percent to 48 percent cited by Ms. Ahern. Consequently, Ms. Ahern's use of the benchmark ratios to discredit my use of American Water's consolidated capital structure is misguided.
- Q. Did you file True-up Direct testimony that supported the use of an even higher equity ratio for ratemaking purposes in this case?
- A. Yes. I filed True-up Direct testimony on July 19, 2007, in which I recommended a capital structure that included 45.80 percent common equity and 18.15 percent preferred equity. Based on Ms. Ahern's logic, I may be recommending too high of an equity ratio because the total equity ratio is 63.95 percent, which would imply less financial risk and perhaps warrant a higher credit rating if this capital structure is maintained. If this capital structure is maintained, then a lower cost of common equity may be justified.
- Q. Beginning on page 13, line 19, through page 15, line 12, of her Rebuttal testimony, Ms. Ahern cites what she believes is Commission precedent for using something

other than the consolidated capital structure. Does Ms. Ahern provide complete information on recent decisions by this Commission which addresses capital structure authorizations?

- A. No. It should be noted that the decisions Ms. Ahern cites were not decisions that were made by the current Commission.
- Q. In which recent rate cases has the current Commission adopted a consolidated capital structure approach?
- A. In the following cases: MGE rate cases, Case No. GR-2004-0209 and Case No. GR-2006-0422; the Empire rate cases, Case Nos. ER-2004-0570 and ER-2006-0315; the KCPL rate case, Case No. ER-2006-0314; and the Aquila rate case, Case No. ER-2007-0004. In fact, the Commission adopted the parent's consolidated capital structure of Algonquin Water Resources of Missouri, LLC, in Case No. WR-2006-0425 even though the parent company, Algonquin Power Income Fund, is a Canadian company.
- Q. Are there any recent cases in which you are aware in which the Commission adopted a subsidiary capital structure?
- A. Yes. The Commission adopted the subsidiary capital structure in the Union Electric rate case, Case No. ER-2007-0002. To my knowledge, the only party that recommended some version of the consolidated capital structure was the OPC's ROR witness.
- Q. On page 15, lines 4 through 6 of her Rebuttal testimony, Ms. Ahern claims that MAWC's stand-alone capital structure insulates MAWC from American Water's non-regulated operations. Do you agree?
- A. No. If the mere existence of a subsidiary and a corresponding capital structure insulated a utility from the parent company's other operations, then AmerenUE would not have had its S&P credit rating reduced from an "A-" to "BBB-" over the past year and a half

due to concerns about the effects of possible financial difficulties for Ameren's Illinois subsidiaries. In this case, AmerenUE is rated by the credit rating agencies. In the case of MAWC, it isn't even rated by the credit rating agencies. Ms. Ahern states on page 13, lines 2 through 3 of her Rebuttal testimony, that this would lead one to believe that S&P would assign the same credit rating as that assigned to the parent company. Because American Water's credit rating is based on S&P's evaluation of all of American Water's operations, including its non-regulated subsidiaries, Ms. Ahern's assertion that MAWC is insulated from these operations is simply not accurate.

- Q. Ms. Ahern provides testimony on page 18, line 2, through page 21, line 24, that supports the use of at least a 45 percent common equity ratio if the Commission were to adopt a consolidated capital structure approach. Have you changed your position on the amount of common equity that should be in the ratemaking capital structure for MAWC?
- A. Yes. I filed True-Up Direct testimony which now reflects an equity infusion that RWE made into American Water to prepare for the spin-off. This capital structure now reflects a \*\* \_\_\_\_ \*\* percent common equity ratio.
- Q. Because American Water's common equity ratio after the equity infusion is now similar to MAWC's common equity ratio, capital structure is no longer as material in terms of differences in revenue requirement between Staff and the Company as it was in direct testimony. Do you believe it is still important for the Commission to adopt the consolidated capital structure?
- A. Yes, because this is the capital structure that will have an impact on the cost of capital to MAWC going forward. Unless there was irrefutable proof that MAWC was insulated/ring-fenced from the rest of American Water's operations, MAWC's capital

NP

structure does not truly "stand alone". Although American Water's common equity ratio is currently around 45 percent, there is no assurance that American Water's common equity ratio will continue to be at this level. Based on data request responses from MAWC, it does not appear that American Water has a continuing commitment to maintain a 45 percent common equity ratio. MAWC's response to Staff Data Request No. 0288, in which Staff requested the anticipated common equity ratio after the spin-off, was as follows:

**			
_			
	**		

Because American Water's capital structure will affect the cost of capital that MAWC may have available to it in the future, it is important for the Commission to recognize this, even if the capital structure in this case is not as material in terms of revenue requirement. Additionally, adopting the parent company consolidated capital structure would be consistent with the Commission's recent decisions.

- Q. MAWC has provided information from other commissions to support their position that American Water will have a 45 percent common equity ratio at the time of the spin-off. At the risk of stating the obvious, what capital structure appears to be of most concern to other commissions that have jurisdiction over the American Water spin-off?
- A. American Water's consolidated capital structure. This is most likely because these jurisdictions recognize that American Water's financial integrity will have an impact on the ability of their state utility subsidiaries to attract capital at a reasonable cost.
- Q. Beginning on page 21, line 21, through page 22, line 14, of her Rebuttal testimony, Ms. Ahern discusses why she believes you erred by including negative growth rates in your growth rate analysis. How do you respond?

NP

A. Ms. Ahern indicates that it is illogical that investors would rely upon such a growth rate, as investors do not invest in securities expecting to lose money. While I agree that investors will not invest in securities expecting to lose money (at least in the long-run), I do not agree that investors, and hence rate-of-return witnesses, should not consider such growth rates. To do otherwise would be irresponsible. Only a foolish investor would ignore the possibility that negative growth rates will lower expected returns. An investor will take into consideration these negative growth rates when estimating what he thinks a reasonable growth rate would be for the investment. If a rate-of-return witness disregards negative growth rates, then that witness will be achieving the benefit of a higher dividend yield without considering that the reason for that higher dividend yield is because of lower growth rate expectations. The exclusion of negative growth rates would result in a recommendation that not only has a higher growth rate, but a higher dividend yield because previous growth rates did not meet expectations so investors drove the price of the stock down.

Notwithstanding the above, it should be noted that I gave more weight to projected growth rates when I estimated my growth rate range of 5.60 percent to 6.60 percent, which is within the range of projected growth rates of two of my four comparable companies.

- Q. Is it possible that investors will expect negative growth for a company in the future?
- A. Yes. While this negative growth may not occur indefinitely, it is quite possible that investors would expect negative growth for at least the near future. If this were the case, then this would affect an investor's expectations over a longer period. If these near term negative growth rates cause some investors to not invest in a stock, then, as indicated before, the price of the stock would be driven down. If the dividend per share is kept the same, this

13

10

16

19

20

would cause the dividend yield to increase. If negative growth rates are not considered by the rate-of-return witness, then the witness's discounted cash flow (DCF) results will be upwardly-biased because the dividend yield will be higher because investors have driven the price of the stock down. Additionally, the growth rates will be higher because negative growth rates were disregarded by the rate-of-return witness.

If the dividend yield rises because the growth projections do not turn out as expected, then a prudent rate-of-return witness would lower his estimated growth rate to take this into consideration. It is not proper to recognize the benefit of the higher dividend yield, but not recognize the lower growth that caused the higher dividend yield.

- Q. Do you have reason to believe that investors use historical, including negative historical growth rates, to test the reasonableness of projected growth rates?
- A. Yes. I stated in my Direct testimony (p. 10, lines 6-8) that I believe investors tend to believe projected growth rates are overly optimistic. Since I wrote my Direct testimony, I found the following additional support for this position from a speech made by former Federal Reserve Chairman Alan Greenspan on March 26, 2002, at the Stern School of Business, New York University:

...long-term earnings forecasts of brokerage-based securities analysts, on average, have been persistently overly optimistic. Three-to five-year earnings forecasts for each of the S&P 500 corporations, compiled from projections of securities analysts by I/B/E/S, averaged almost 12 percent per year between 1985 and 2001. Actual earnings growth over that period averaged about 7 percent. 1

Q. On page 22, lines 15 through 22 of her Rebuttal testimony, Ms. Ahern contends that page 3 of her Schedule PMA-19 indicates that I/B/E/S is the source of

<sup>&</sup>lt;sup>1</sup> Remarks by Chairman Alan Greenspan "Corporate Governance" At the Stern School of Business, New York University, New York, New York March 26, 2002.

S&P's growth rates. Can you find anything on this page of Ms. Ahern's Schedule PMA-19 that verifies that her claim is correct?

- A. No. There is nothing specific on page 3 of her Schedule PMA-19 that indicates that I/B/E/S is the source of S&P's growth rates.
- Q. On page 24, lines 2 through 13 of her rebuttal testimony, Ms. Ahern discusses her position that the use of current yields on 30-year U.S. Treasury bonds is flawed because estimating the cost of capital for ratemaking purposes is prospective. How do you respond?
- A. I addressed much of this in Rebuttal, but for sake of convenience, I will repeat some of my testimony. It is logical to use current yields for the same reason it is logical to use current stock prices in the DCF model. As with current stock prices, current yields reflect investors' required rates of return for future uncertainties. If I require a yield of 6 percent on my investment in a bond today, I have done so based on my assessment of not only company-specific factors, such as credit risk, but also the uncertainty of changes in interest rates in the future. In applying the DCF model, it is not appropriate to use some future estimate of the stock price to determine the cost of common equity. Consequently, it is most appropriate to use current yields when estimating the cost of capital.
- Q. On page 24, line 14, through page 25, line 19, of her Rebuttal testimony, Ms. Ahern explains why she believes you erred by using the total return on long-term government bonds rather than just the income return when you derived the historical earned equity risk premium. Is an investor in government bonds only going to receive a return based on the coupon of the bond, which is the income from the interest rate stated on the bond?
- A. Only if the investor holds the bond until maturity and bought the bond at par value. Otherwise investors will receive a total return, which is based on changes in the price

of the bond and reinvestment returns. Therefore, it is appropriate to measure the market risk premium by comparing total returns on stocks versus total returns on risk-free treasuries because this is what investors will expect to receive.

- Q. On page 25, line 27 through page 27, line 2, of her Rebuttal testimony, Ms. Ahern criticizes you for relying exclusively on historical data to estimate an equity risk premium for your Capital Asset Pricing Model (CAPM) analysis. How do you respond?
- A. I agree that relying exclusively on historical data to estimate an equity risk premium would be inappropriate if I had incorporated my CAPM analysis into my final recommendation, but I only used it as a test of reasonableness so I don't believe I need to be as rigorous with my CAPM analysis. Actually, I recognize this in my Rebuttal testimony on page 3, lines 10 through 15.

Notwithstanding the above, I did perform a prospective CAPM analysis in my Direct testimony which tested the reasonableness of my recommendation. This prospective CAPM was based on the very assumptions that American Water uses for expected returns for its pension plan. Using this information, I arrived at an estimated cost of common equity of \*\* \_\_\_\_ \*\* percent for MAWC's regulated water utility operations.

Additionally, on page 26, line 19 through page 29, line 11, of my Direct testimony, I provided information from some of the most notable names in finance to explain why caution should be used in relying too heavily on equity risk premium estimates using historical earned return spread data. Because I relied primarily on my DCF analysis, my cost of common equity recommendation is based on implied equity risk premiums. In fact, many times the DCF model is used to determine the implied equity risk premium for an index such as the S&P 500. Consequently, because my recommendation is based on my DCF analysis,



prospective equity risk premiums are embedded in my cost of common equity recommendation.

Q. Has the estimated equity risk premium been a topic of much debate recently both in the broader finance field and specifically in utility regulatory rate of return discussions?

A. Yes. I believe it has become more of an issue recently in the utility ratemaking arena because of what appears to be a general shift away from relying on the DCF model to estimate the cost of common equity. Some have started to question the reliability of the DCF model because the results achieved have been lower than they are accustomed to seeing. Therefore, they have looked to other models such as the CAPM and risk premium model to estimate the cost of common equity. The only reason the estimated cost of common equity is higher with these models is because of the inputs used. It is just as inappropriate to use too high of an estimated equity risk premium when performing a CAPM or risk premium analysis as it is too use too high of a growth rate when performing a DCF analysis. Both result in unreasonable cost of common equity results. However, if one uses more reasonable estimates of equity risk premiums when performing a CAPM and/or risk premium analysis, the results will actually confirm the reasonableness of the DCF results that many consider to be too low.

Q. Are you aware of any information from the analysis that is being performed to prepare for the spin-off of American Water from RWE that supports the reasonableness of your cost of common equity estimation?

A.	· · ·				



1	
2	
3	**
4	Q. On page 8, line 21, through page 9, line 2, of her Rebuttal testimony,
5	Ms. Ahern mentioned that you sat for the Certified Rate of Return Analyst (CRRA)
6	examination at the recent Society of Utility and Regulatory Financial Analysts (SURFA)
7	2007 Forum in April 2007. Did Ms. Ahern attend this Forum?
8	A. Yes. In fact, not only did she attend the 2007 Forum, but she also proctored
9	the CRRA examination I sat for while I attended the Forum.
10	Q. Was the topic of equity risk premium discussed at this Forum?
11	A. Yes. This topic was the focus of the last panel discussion at the Forum. The
12	panelists for this topic were Stephen G. Hill, CRRA, Principal of Hill Associates;
13	Aswath Damodaran, PhD, Professor of Finance & Peter Margolis Teaching Fellow at the
14	Leonard N. Stern School of Business at New York University (NYU); and Felicia C. Marston,
15	PhD, Associate Professor of Commerce at the McIntire School of Commerce at University of
16	Virginia.
17	Q. Are you familiar with any of the panelists that debated the topic of estimating
18	the equity risk premium?
19	A. Yes. Mr. Hill was the Staff rate-of-return (ROR) witness in the recent
20	AmerenUE rate case, Case No. ER-2007-0002. Mr. Hill sponsors ROR testimony in utility
21	rate case proceedings throughout the country. Mr. Hill had also sponsored ROR testimony in
22	Missouri previous to the most recent AmerenUE rate case.



4

5

6

7

8 9

10

18

19

20

21

22

While I don't know Dr. Damodaran personally, I was pleased to have the privilege of meeting him at the recent SURFA conference because I have used information from textbooks he has authored and information from his website on the NYU's Stern School of Business website to support my testimony in proceedings before the Commission.

I have less familiarity with Dr. Marston, but I have seen her name associated with research on financial issues.

- Q. Please discuss some of the main points discussed by these panelists at the recent SURFA conference.
- According to a slide presented by Dr. Damodaran, the implied equity risk A. premium for the S&P 500 as of January 1, 2007 was 4.16 percent. This implied equity risk premium estimate is much lower than Ms. Ahern's estimated equity risk premium of 6.1 percent using projected information and 7.1 percent using historical information. Additionally, Dr. Damodaran also advised that it is more appropriate to use geometric averages for estimating equity risk premiums because it is "how investors think over long periods." I asked Dr. Damodaran if this meant that one should ignore year-to-year volatility in returns (which is captured when using arithmetic averages as Ms. Ahern does in her analysis) when estimating equity risk premiums and Dr. Damodaran replied that "ignore" is probably too strong of a stance when determining if investors would require a higher equity risk premium based on year-to-year volatility. Consequently, even though it is probably more appropriate to use geometric averages for estimating equity risk premiums, some consideration may be given due to year-to-year volatility even though gains and losses would not be realized unless the security is bought and sold every year.

Dr. Marston estimated the equity risk premium for utilities to be 4.15 percent and 5 to 6 percent for the entire market. Based on a twenty-year U.S. Treasury bond yield of 5 percent, Dr. Marston estimated the current cost of common equity for utilities to be anywhere from 9.15 percent to 10.10 percent. If one were to use the average June 2007 twenty-year U.S. Treasury bond yield of 5.3 percent, this estimate would increase from 9.45 to 10.4 percent. These estimates are below those provided by Ms. Ahern.

Mr. Hill discussed many of the different studies that have been performed on estimating the equity risk premium. He discussed three approaches to estimating equity risk premiums: the historical average earned return spread between stocks and bonds; forward-looking equity risk premium estimates; and survey of investor/chief financial officer expectations. Mr. Hill discussed the various research that has been done on each of these methodologies for estimating an equity risk premium. Because Mr. Hill recently sponsored testimony in the AmerenUE rate case, Case No. ER-2007-0004, in which he filed extensive testimony that supported lower equity risk premium estimates, I will not discuss his presentation any further.

- Q. On page 27, lines 3 through 21, of her Rebuttal testimony, Ms. Ahern claims that you should have utilized the empirical CAPM. Do all financial texts suggest that it is appropriate to utilize the empirical CAPM?
- A. No. The textbook by Aswath Damodaran, *INVESTMENT VALUATION:* Tools and Techniques for Determining the Value of Any Asset, 1996, does not recommend any adjustment to beta for the CAPM. This textbook follows the traditional execution of the CAPM throughout the text.

- Q. On page 28, line 1, through page 31, line 22, of her Rebuttal testimony, Ms. Ahern discusses why she believes it is more appropriate to use arithmetic averages compared to geometric averages when estimating the equity risk premium. Did you address this issue in your Rebuttal testimony?
- A. Yes, and because of the length of the discussion in my Rebuttal testimony (p. 22, l. 8 through p. 24, l. 16) I will not provide the same detail that I provided in Rebuttal. Because investors in utility stocks typically hold these investments as long-term investments, investors don't typically realize the gains and losses in utility stock investments that may occur from year-to-year. Investors are most concerned with the likelihood that the terminal value of their investment will be consistent with their expectations. For example, although weather may affect a utility company's year-to-year earnings per share (EPS), one would expect that a utility company is not going to increase or decrease its dividends per share (DPS) based on this year-to-year volatility. The growth, if any, in DPS will be based on the fundamentals; i.e. customer/demand growth, that can support the gradual increase in DPS. This is the same reason that investors will focus on the long-term fundamentals of a company when estimating their required equity risk premium.
- Q. On page 38, line 1, through page 39, line 20, of her Rebuttal testimony, Ms. Ahern discusses how your recommended return on common equity compares to that of authorized ROEs published by Regulatory Research Associates (RRA). What segments of the utility industry are followed by RRA?
- A. RRA publishes information on natural gas distribution and electric utility companies.

- Q. Because Ms. Ahern is the ROR witness for MAWC, would it appear to be feasible for her to ask MAWC to provide her with authorized returns for American Water's other regulated water utility subsidiaries which would provide her with more relevant information?
- A. Yes, and considering that American Water has regulated water utility subsidiaries in up to 19 states, this would appear to provide a reasonable number of authorized returns for other regulated water utility subsidiaries for this Commission to review to help it determine a fair and reasonable authorized return in this case.
- Q. Did you attempt to obtain this information so the Commission would have more information to help it determine a fair and reasonable authorized ROE and overall ROR in this case?
- A. Yes. I submitted Staff Data Request No. 0104 to request this information (response attached as Schedule 1). I decided it may be helpful to go one step further and determine what the various parties recommended in these cases to determine if recommended ROEs were lower than those ultimately authorized by other commissions.
- Q. Did MAWC witness James M. Jenkins question the relevance of authorized return information in his Rebuttal testimony in this case?
- A. Yes, Mr. Jenkins stated the following on page 13, lines 6 through 10, of his Rebuttal testimony:

While I might question the relevance of considering, in this proceeding, the returns of companies for which the risk profile has not been assessed relative that of MAWC's, I would note that a number of the returns reviewed by Mr. Murray are from cases whose final Orders or Stipulations occurred 2 to 3 years ago.

- Q. Considering Mr. Jenkin's comment concerning relevancy, would the same comment also apply to the use of RRA's authorized returns for natural gas and electric utility companies?
- A. Yes. Mr. Jenkin's comment about risk profile is even more relevant to utility companies in different segments of the utility industry.
- Q. If the Commission were to rely on authorized returns for its decision in this case, which decisions do you think are most relevant?
- A. Those that are made on MAWC's sister companies under the same corporate umbrella that are associated with the S&P business risk profile of 2 for American Water.
- Q. Did you perform any research on the cases supplied by MAWC in response to Staff Data Request No. 0104?
- A. Yes. I attempted to obtain information on each of the cases listed in MAWC's response to Staff Data Request No. 0104. I was able to obtain additional information on several of the cases listed in MAWC's response. However, in certain cases, I was not able to obtain complete information due to limitations of the commissions I contacted and also due to limitations of my own time to perform this time-consuming task. Because Regulatory Research Associates (RRA) publishes ROR information for electric and natural gas utility companies, providing the Commission with this information is not as time-consuming. Therefore, if the Commission desires to review authorized return information in these cases, Staff can easily provide this information in electric and natural gas utility rate cases. However, due to limitations of the RRA information, recommendations of parties other than the company are not routinely provided. Therefore, the Staff and the Commission cannot

always compare authorizations to the other parties' recommendations, which, as I discovered in some of my research in this case, are not necessarily tied to one party's recommendation.

Q. Does it seem reasonable that American Water can continuously compile this information to assist the Commission with its decisions in future MAWC rate cases?

- A. Yes. Because American Water's various subsidiaries are continuously involved in rate cases throughout the country, it would seem reasonable to request that they continuously compile this information for future MAWC rate cases in order to assist the Commission with its future decisions.
  - Q. Will Staff still need to verify some of this information in future cases?
- A. Most likely, because as I discovered in the rate case in West Virginia, Docket No. 04-0373-W-42T, in settled cases there may be an ROE and ROR in the revenue requirement reconciliation for purposes of settlement, but each party may not have used the same ROE and/or ROR. In the West Virginia-American Water rate case, the company arrived at a 9.85 percent ROE for the awarded ROE, whereas the Consumer Advocate Division arrived at a 9.00 percent ROE for the awarded ROE. The Commission should consider issues such as this when evaluating the reliability of "awarded" ROE/ROR information, including that which I provide in the rest of my testimony.
  - Q. Based on the information you were able to retrieve, what did you discover?
- A. After adjusting for circumstances, such as the same ROE being authorized for multiple jurisdictions in the same state, Staff evaluated the ranges and averages of the various parties' recommendations to compare it to the authorized ROE's. Staff ROE recommendations for American Water's subsidiaries in other states ranged from 7.49 percent to 10.70 percent with an average of 9.76 percent. Consumer advocate and attorney general

ROE recommendations ranged from 7.50 percent to 10.01 percent with an average of 9.01 percent. The company ROE recommendations ranged from 10.50 to 12.00 percent with an average of 11.16 percent. This compares to the average authorized ROE for all of the cases I could find an authorized ROE, whether it was a settled case or fully litigated, of 10.00 percent (see Schedules 2 and 3 attached to this testimony).

- Q. Can one draw any conclusions from the above?
- A. Just as I have always cautioned the Commission about inferring too much from averages of authorized ROEs and RORs in the past, I would also urge caution about drawing many conclusions from the above. However, it does appear that consumer advocates generally recommended ROEs in the 8 to 9 percent range and staff commissions recommended ROEs in the 9 to 10 percent range. The company recommendations tend to be at least in the high 10 to 11 percent range.
- Q. Please provide the same information on overall rate of return recommendations and authorizations?
- A. Staff ROR recommendations for American Water's subsidiaries in other states ranged from 6.50 percent to 7.83 percent with an average of 7.42 percent. Consumer advocate and attorney general ROR recommendations ranged from 6.77 percent to 7.77 percent with an average of 7.04 percent. Company ROR recommendations ranged from 6.96 percent to 8.92 percent with an average of 8.38 percent. This compares to the average authorized ROR for all of the cases I could find an authorized ROR, whether it was a settled case or fully litigated, of 7.69 percent (see Schedules 2 and 3 attached to this testimony).

Of all of the cases that I researched, there was one other ROR witness that recommended consideration of American Water's capital structure in his ROR

recommendation. This was done by the Tennessee Attorney General's ROR witness in the Tennessee-American Water Company rate case, Docket No. 06-00290. Although there was only one other ROR witness that recommended the consideration of American Water's consolidated capital structure, a few of the other states indicated that they may consider this approach in the future. Virginia's Staff sponsored ROR testimony in the Virginia-American Water Company (VAWC) rate case, Docket No. PUE 2003-00539, that stated that because VAWC was now receiving debt financing through an affiliate (AWCC), they would consider using a consolidated approach in future rate cases.

- Q. Has your discovery that only one other state has proposed the use of a consolidated capital structure caused you to change your position in this case?
- A. No. While I believe it is important to consider the merits of any position that may be different than my position, I still believe that American Water's consolidated capital structure is the most appropriate for estimating MAWC's cost of capital because it is the capital structure that will be scrutinized by investors in the upcoming spin-off. Consequently, it would appear that this is the most relevant capital structure to MAWC's ongoing financial stability.

## **SUMMARY AND CONCLUSIONS**

- Q. Please summarize the conclusions of your Surrebuttal testimony.
- A. My conclusions regarding the capital structure and cost of common equity are listed below:
  - 1. The use of MAWC's capital structure as proposed by Missouri Industrial Energy Consumers and MAWC is inappropriate. It does not reflect American Water's actual support of the capital of its subsidiary, MAWC. The calculation of the cost of capital for MAWC should

be based on American Water's actual consolidated 1 2 capital structure as of May 31, 2007, as shown on 3 Schedule 4 attached to my True-up Direct testimony; 4 and 5 My cost of common equity stated in Schedule 4 attached 2. to my True-up Direct testimony, which is 8.60 percent 6 to 9.60 percent, would produce a fair and reasonable rate 7 8 of return of 7.07 percent to 7.53 percent for the Missouri jurisdictional water utility rate base for MAWC. 9 Does this conclude your Surrebuttal testimony? 10 Q. 11 A. Yes, it does.

### **Missouri Public Service Commission**

### **Respond Data Request**

Data Request No. 0104

Company Name Missouri-American Water Company-(Water)

Case/Tracking No. WR-2007-0216

Date Requested 1/31/2007

Issue Rate of Return - Cost of Capital (Equity/Debt)

Requested From Donald J Petry
Requested By David Murray

Brief Description Authorized ROEs and RORs

**Description** Please provide all authorized returns on common equity (ROE)

and rates of return (ROR) for all of American Water's

jurisdictions since January 1, 2004. Additionally, please provide the recommended ROEs and RORs of all the parties to all rate cases filed by American Water's subsidiaries since January 1, 2004. For each respective case, please provide the jurisdiction

and the case number.

**Response** Please see the objections set forth in the Company's letter to

Kevin Thompson, dated February 9, 2007. Notwithstanding the Company's objection, please see attached documents for the

information the Company can provide.

**Objections** NA

The attached information provided to Missouri Public Service Commission Staff in response to the above data information request is accurate and complete, and contains no material misrepresentations or omissions, based upon present facts of which the undersigned has knowledge, information or belief. The undersigned agrees to immediately inform the Missouri Public Service Commission if, during the pendency of Case No. WR-2007-0216 before the Commission, any matters are discovered which would materially affect the accuracy or completeness of the attached information. If these data are voluminous, please (1) identify the relevant documents and their location (2) make arrangements with requestor to have documents available for inspection in the Missouri-American Water Company-(Water) office, or other location mutually agreeable. Where identification of a document is requested, briefly describe the document (e.g. book, letter, memorandum, report) and state the following information as applicable for the particular document: name, title number, author, date of publication and publisher, addresses, date written, and the name and address of the person(s) having possession of the document. As used in this data request the term "document(s)" includes publication of any format, workpapers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data, recordings, transcriptions and printed, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to Missouri-American Water Company-(Water) and its employees, contractors, agents or others employed by or acting in its behalf.

Security: Public Rationale: NA

With Proprietary and Highly Confidential Data Requests a Protective Order must be on file.

#### LAW OFFICES

## BRYDON, SWEARENGEN & ENGLAND

PROFESSIONAL CORPORATION

DAVID V.G. BRYDON

312 EAST CAPITOL AVENUE

JAMES C. SWEARENGEN

P.O. BOX 456

WILLIAM R. ENGLAND, III

JEFFERSON CITY, MISSOURI 65102-0456

JOHNNY K. RICHARDSON

TELEPHONE (573) 635-7166

GARY W. DUFFY

FACSIMILE (573) 635-0427

PAUL A. BOUDREAU

SONDRA B. MORGAN

BRIAN T. MCCARTNEY
DIANA C. CARTER
JANET E. WHEELER
SCOTT A. HAMBLIN
M. MELISSA MANDA
JAMIE J. COX
L. RUSSELL MITTEN

OF COUNSEL RICHARD T. CIOTTONE

February 9, 2007

## **VIA ELECTRONIC MAIL**

CHARLES E. SMARR DEAN L. COOPER

GREGORY C. MITCHELL

Mr. Kevin Thompson General Counsel Missouri Public Service Commission Governor State Office Building, 6<sup>th</sup> Floor Jefferson City, Missouri 65101 kevin.thompson@psc.mo.gov

Re: Case No. WR-2007-0216

Missouri-American Water Company

Dear Kevin:

We are in receipt of the Commission Staff's Data Requests Nos. 96, 97, 100, 101 and 104. These data requests were received on January 31, 2007.

This letter should be considered an objection on behalf of MAWC to the identified data requests in accordance with Commission Rule 4 CSR 240-2.090(2) for the reasons described in the following paragraphs.

<u>DR 96</u> – DR 96 asks for targeted or projected returns on equity for American Water and all its subsidiaries (consolidated basis) and for MAWC for fiscal years 2007, 2008, 2009 and 2010. MAWC objects to this data request for the following reasons: a) the responsive information is not relevant to the subject proceeding nor reasonably calculated to lead to the discovery of admissible evidence in that: (1) the requested information is projected, speculative in nature, not final and subject to change. Therefore, this information could be misleading and would be of little probative value; and, (2) American Water and its subsidiaries are not regulated by the Missouri Public Service Commission (Commission); b) the request is overly broad and will cause undue burden and expense in that the request will require review of several affiliates/companies and is not related to issues that are relevant to MAWC and the setting of its rates and its regulation by the Missouri Public Service Commission; and, c) the responsive information is not in the possession, custody or control of MAWC.

Notwithstanding this objection, MAWC will provide a response concerning MAWC.

Mr. Kevin Thompson General Counsel Page 2 of 3 February 9, 2007

DR 97 – DR 97 requests all correspondence or research reports provided within the last two year to or from any outside financial analysts concerning American Water's, MAWC's and American Capital Corporation's credit rating. MAWC objects to this data request for the following reasons: a) the request is overly broad and will cause undue burden and expense in that the request is not related to issues that are relevant to MAWC and the setting of its rates and its regulation by the Missouri Public Service Commission in that it requests "all correspondence," to include two entities not regulated by this Commission; b) the request for "all" correspondence would require production of documents not relevant to the subject proceedings nor reasonably calculated to lead to the discovery of admissible evidence; c) the responsive information is not in the possession, custody or control of MAWC; d) the responsive information is not relevant to the subject matter of the proceeding nor is it reasonably calculated to lead to the discovery of admissible evidence; and, e) to the extent the request asks for documents prepared in anticipation of litigation.

Lastly, MAWC notes that the requested information includes documents and information of a highly sensitive and confidential nature, with, among other things, federal securities laws implications associated with their disclosure.

Without waiving this objection, MAWC will provide copies of analyst reports for American Water and American Capital Corporation. I would note that it is my understanding that MAWC is not a rated entity.

<u>DR 100</u> – DR 100 requests "any and all" valuation analyses performed on American Water's current and/or previous water utility operations since January 1, 2005. MAWC objects to this data request for the following reasons: a) the data request is vague in that it is unclear what types of "valuation analyses" are sought; b) the responsive information is not in the possession, custody or control of MAWC; c) the responsive information is not relevant to the subject matter of the proceeding nor is it reasonably calculated to lead to the discovery of admissible evidence; and, d) further, the request for "any and all" valuation analyses would be unduly burdensome as it would require production of documents not relevant nor reasonably calculated to lead to the discovery of admissible evidence; and, e) to the extent the request asks for documents prepared in anticipation of litigation.

Lastly, MAWC notes that the requested information includes documents of and information of a highly sensitive and confidential nature, with, among other things, federal securities laws implications associated with their disclosure.

<u>DR 101</u> – DR 101 requests "any and all" valuation analyses performed in conjunction with the planned initial public offering (IPO) of American Water. MAWC objects to this data request for the following reasons: a) the data request is vague in that it is unclear what types of "valuation analyses" are sought; b) the responsive information is not in the possession, custody or control of MAWC; c) the responsive information is not relevant to the subject matter of the proceeding nor is it reasonably calculated to lead to the discovery of admissible evidence; d)

Mr. Kevin Thompson General Counsel Page 3 of 3 February 9, 2007

further, the request for "any and all" valuation analyses would require production of documents not relevant nor reasonably calculated to lead to the discovery of admissible evidence; and, e) to the extent the request asks for documents prepared in anticipation of litigation.

Lastly, MAWC notes that the requested information includes documents of and information of a highly sensitive and confidential nature, with, among other things, federal securities laws implications.

Without waiving this objection, MAWC will notify the Staff when documents have been filed with the U.S. Securities and Exchange Commission.

<u>DR 104</u> – DR 104 requests "all" authorized returns on common equity and rates of return for all of American Water's jurisdictions since January 1, 2004, to include the recommendations of "all" the parties to "all" rate cases filed by American Water subsidiaries since January 1, 2004. MAWC objects to this data request for the following reasons: a) the request is overly broad and will cause undue burden and expense particularly where the information sought is not relevant to MAWC, the setting of its rates and its regulation by the Missouri Public Service Commission in that it requests information concerning entities not regulated by this Commission and in that the information pertaining to other parties' recommendations would have to be compiled from numerous sources not readily available; b) the responsive information is not in the possession, custody or control of MAWC; and, c) the responsive information is not relevant to the subject proceeding nor is it reasonably calculated to lead to the discovery of admissible evidence.

If you have any questions, please contact me.

Sincerely,

BRYDON, SWEARENGEN & ENGLAND, P.C.

By:

Dean L. Cooper

1. Com

DLC/st

Missouri-American Water Company Case No. WR-2007-0216 Staff Data Request No 0104 Attachment to Response

		Proposed	
	Proposed	Cost of	Case Number
	ROE	Capital	
Company Name	(%)	(%)	
Arizona-American Water Company			
Mohave Water/Wastewater (WW)	11.50%	7.93%	Docket No WS-01303A-02-0869
Anthem Water Anthem/Agua Fria WW	11.75%	8.33%	Docket No WS-01303A-02-0870
Sun City Wastewater	11.75%	8.33%	Docket No WS-01303A-06-0491
Sun City West Wastewater	11.75%	8.33%	Docket No WS-01303A-02-0867
California - American Water Company			
California-American LA District	11.50%	8.41%	Application No A-06-01-005
California-American Coronado	11.50%	8.41%	Application No A-07-01-036
California-American Village	11.50%	8.41%	Application No A-07-01-039
California-American Sacramento	11.50%	8.41%	Application No A-07-01-038
California-American Larkfield	11.50%	8.41%	Application No A-07-01-037
New Jersey-American Water Company	11.23%	8.61%	WR-06030257
New Mexico-American Water Company	11.40%	8.43%	Case No 06-00208
Ohio-American Water Company	11.00%	8.03%	Case No 06-433-WS-AIR
Tennessee-American Water Company	11.00%	8.46%	Docket No. 06-00290

# Comparison of Rate Awards versus Filing Amount for American Water Subsidiaries for Recent Rate Cases

## **Recent Final Orders**

Company/State	Case ID Number	Order Date	Awarded ROE	Requested ROE	Awarded Overall Return	Requested Overall Return
Arizona-American	Decision No. 68858	July-06	10.40%	12.00%	7.24%	7.84%
Arizona-American	Decision No. 67093	June-04	9.00%	11.50%	6.50%	7.52%
California-American Monterey/Felton	D06-11-050	November-06	9.97%	11.00%	8.33%	8.72%
California-American Sacramento	D04-12-055	May-04	9.85%	10.50%	6.81%	6.96%
California-American Los Angeles	D04-09-041	September-04	10.04%	10.70%	8.36%	8.45%
Etown and Mount Holly	WR03070510	February-04	9.75%	11.25%	7.30%	8.00%
Hawaii-American	D&O 05-0103	July-06	10.60%	10.60%	8.85%	8.85%
Hawaii-American	D&O 20966	April-04	10.60%	10.90%	8.85%	8.90%
Indiana-American	Cause No. 42520	November-04	9.25%	11.00%	7.17%	7.90%
Kentucky-American	2004-00103	February-05	10.00%	11.20%	7.75%	8.25%
New Jersey-American	WR03070511	February-04	9.75%	11.25%	7.91%	8.62%
New Mexico-American	04-00477-UT	February-05	10.00%	10.50%	7.43%	7.83%
New York	04-W-0577	March-05	10.10%	11.00%	7.52%	8.12%
Ohio-American	03-2390-WS-AIR	March-05	9.88%	11.00%	7.83%	8.33%
Pennsylvania-American	R00038304	January-04	10.60%	12.00%	8.05%	8.53%
Tennessee-American	03-00118	February-05	9.90%	10.70%	7.89%	8.00%
	Application Nos 34658-R;					
Texas-American	34659-R	February-05	12.00%	12.00%	12.00%	12.00%
Virginia-American	PUE 2003-00539	September-04	10.10%	10.75%	7.90%	8.26%
West Virginia-American	04-0373-W-42T	December-04	9.85%	10.60%	7.60%	8.01%

#### MISSOURI-AMERICAN WATER COMPANY CASE NO. WR-2007-0216

#### Other State Cost of Capital Based on Information Provided in First Attachment to Response Staff Data Request No 0104

Company Name	Case Number	Proposed ROE (%)	Proposed Cost of Capital (%)	Staff ROE (%)	Staff ROR (%)	Consumer Advocate ROE (%)	Consumer Advocate ROR (%)	Awarded ROE (%)	I Awarded ROR (%)
Company Name	Case Nulliber	(70)	(70)	(70)	(70)	(70)	(70)	(70)	(70)
Arizona									
Mohave Water/Wastewater (WW)	Docket No WS-01303A-02-0869 <sup>1</sup>	11.50%	7.93%	10.7% <sup>2</sup>	7.50%	9.10%	7.07%	10.70%	7.71%
Anthem Water Anthem/Agua Fria WW	Docket No WS-01303A-02-0870	11.75%	8.33%	10.40%	7.30%	10.01%	7.20%	Pending	Pending
Sun City Wastewater	Docket No WS-01303A-06-0491	11.75%	8.33%	10.40%	7.30%	10.01%	7.20%	Pending	Pending
Sun City West Wastewater	Docket No WS-01303A-02-0867	11.75%	8.33%	10.40%	7.30%	10.01%	7.20%	Pending	Pending
California									
California-American LA District	Application No A-06-01-005	11.5% <sup>3</sup>	8.41% NA	NA	١	9.96% NE		10%	, ND
California-American Coronado <sup>5</sup>	Application No A-07-01-036	11.5% <sup>6</sup>	8.41% NA	NA	١	9.96%	7.77% <sup>7</sup>		Pending
California-American Village <sup>5</sup>	Application No A-07-01-039	11.50%	8.41% NA	NA	١	9.96%	7.77% <sup>7</sup>	Pending	Pending
California-American Sacramento <sup>5</sup>	Application No A-07-01-038	11.50%	8.41% NA	NA	١	9.96%	7.77% <sup>7</sup>	Pending	Pending
California-American Larkfield <sup>5</sup>	Application No A-07-01-037	11.50%	8.41% NA	NA	١	9.96%	7.77% <sup>7</sup>	Pending	Pending
Indiana									
Indiana-American	43187	11.50%	8.92% NA	NA	١	8.75%	6.77%	Pending	Pending
New Jersey									
New Jersey-American Water Company	WR-06030257	11.23%	8.61% ND	NE	)	9.50% NE	)	10.00%	8.00%
New Mexico									
New Mexico-American Water Company <sup>8</sup>	Case No 06-00208	11.40%	8.43%	9.70%	7.67% N	D NE	)	Pending	Pending
Ohio Assariasa Watan Gannana	0 N- 00 400 M/O A/D	440/9	0.000/ 0.40	0/ 40 400/10 7 4	140/ 7.040/ 0	000/ 0.540/11 0.6	200/ 7050/11	40.000/	7.050/
Ohio-American Water Company	Case No 06-433-WS-AIR	11% <sup>9</sup>	8.03% 9.40	1%-10.42% 7.4	11%-7.84% 8.	23%, 8.54% <sup>11</sup> 6.9	92%, 7.05%	10.00%	7.65%
Tennessee	Dealest No. 00 00200	44.000/	0.400/ NIA	NIA		7.500/	C 400/	0.000/	7 000/
Tennessee-American Water Company <sup>12, 13</sup>	Docket No. 06-00290	11.00%	8.46% NA	NA	\	7.50%	6.40%	9.63%	7.89%
	Averages	11.36%	8.39%	10.18%	7.52%	9.05%	7.03%	10.07%	7.81%

#### Footnotes:

- 1 Worksheet sent to me by Arizona indicates that the Docket No. is WS-01303A-06-0014
- 2 Staff's recommendation increased from 10.4% in direct to 10.7% in surrebuttal.
- 3 ALJ decision indicates Company recommendation was 11.60%.
- 4 ALJ decision which is not binding on the Commission.
- 5 All figures are for the first year of a three year plan for 2008-2010.
- 6 Thomas Zepp testimony indicates a recommended ROE of 11.25%.
- 7 ROR increases over three years 7.77%-2008 and 7.80% for 2009 and 2010
- 8 Hearing examiner accepted Staff's recommendation, but the Commission has yet to rule on the case.
- 9 Although they only requested 11%, Ahern recommended 11.35%.
- 10 Based on an average of the DCF and CAPM and includes flotation costs.
- 11 Two ROE and ROR recommendations. Higher recommendation is for water operations and lower recommendation is for sewer operations.
- 12 AG capital structure recommendation based on American Water's historical consolidated capital structures
  - AG based its embedded cost of debt recommendation based on American Water and Thames Water's cost of debt.
- 13 Consumer advocate was the attorney general.

#### Notes:

NA = Not Applicable

ND = No Data Found

#### MISSOURI-AMERICAN WATER COMPANY CASE NO. WR-2007-0216

#### Other State Cost of Capital Based on Information Provided in First Attachment to Response to Staff Data Request No 0104

		Proposed	Proposed	Staff	Staff	Consume Advocate		Awarded	Awarded	
		ROE	ROR	ROE	ROR	ROE	ROR	ROE	ROR	Order
Company Name	Case/Decision Number	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
		(***)	(/	()	(,	(**/	()	(***)	()	
Arizona										
Arizona-American Water Company	Decision No. 68858	12.00%	7.84%	10.40%	7.249	6 10.00	7.10%	10.40%	7.24%	July-06
Arizona-American Water Company	Decision No. 67093	11.50%	7.52%	9.00%	6.509	6 9.6	1% 6.77%	9.00%	6.50%	June-04
California										
California-American Monterey(M)/Felton(F)	D06-11-050	11.00%	8.72% NA		NA	9.49	9% ND	9.97%	8.33%	November-06
California-American Sacramento	D04-12-055	10.50%	6.96% NA		NA	9.34	1% ND	9.85%	6.81%	May-04
California-American Los Angeles	D04-09-041	10.70%	8.45% NA		NA	ND	ND	10.04%	8.36%	September-04
Hawaii										
Hawaii-American	D&O 05-0103	10.60%	8.85% ND		ND	ND	ND	10.60%	8.85%	July-06
Hawaii-American	D&O 20966	10.90%	8.90% ND		ND	ND	ND	10.60%	8.85%	April-04
Indiana										
Indiana-American	Cause No. 42520	11.00%	7.90% NA		NA	8.75	5% 6.97%	9.25%	7.17%	November-04
Kentucky						_	_			
Kentucky-American	2004-00103	11.20%	8.25% NA		NA	8.75% <sup>7</sup>	7.5% <sup>7</sup>	10.00%	7.75%	February-05
New Jersey										
New Jersey-American <sup>1</sup>	WR03070511	11.25%	8.62%	9.73%		9%-9.25%	ND	9.75%	7.91%	February-04
Etown and Mount Holly <sup>1</sup>	WR03070510	11.25%	8.00%	9.73%	ND	9%-9.25%	ND	9.75%	7.30%	February-04
New Mexico	_	,								
New Mexico-American	04-00477-UT <sup>2</sup>	10.50%	7.83% NA		NA	NA	NA	10.00%	7.43%	February-05
New York										
Long Island Water Corporation	04-W-0577 <sup>3</sup>	11.00%	8.12%	10.30%	ND	NA	NA	10.10%	7.52%	March-05
Ohio		4								
Ohio-American	03-2390-WS-AIR	11% <sup>4</sup>	8.33% 9.33	3%-10.36%	7.60%-8.05%	NA	NA	9.88%	7.83%	March-05
Pennsylvania	D0000000	12% <sup>5</sup>	0.500/	40.000/	ND	0.44	20/ ND	40.000/	0.050/	
Pennsylvania-American	R00038304	12%	8.53%	10.00%	ND	8.40	0% ND	10.60%	8.05%	January-04
Tennessee						7				
Tennessee-American <sup>6</sup>	03-00118 (changed to 04-00288)		8.00% NA		NA	7.9% <sup>7</sup> (6.8% - 8.9%	S) 6 049/.7	9.90%	7.76%	February-05
Texas	(changed to 04-00266)	10.70%	8.00% NA		NA	(0.0% - 0.9%	0.94%	9.90%	7.76%	February-05
Texas	A . I' . I' . N . 04050 D 04050									
Texas-American <sup>8</sup>	Application Nos 34658-R; 34659-		12.00% NA		NA	NA	NA	12.00%	12.00%	February-05
Virginia	''	12.0070	12.00 /0 TVA		IVA	11/5	IVA	12.0070	12.00 /0	i ebidaiy-05
•	DUE 2002 20520	40.750/	0.000/	9.7%	7.000	/ NIA	NIA	40.400/	7.000/	0
Virginia-American	PUE 2003-00539	10.75%	8.26%	9.7%	7.669	6 NA	NA	10.10%	7.90%	September-04
West-Virginia American	04 0373 W 43T	10.600/	9.049/	7 400/	ND	9.40	00/ 6.970/	0.050/	7 600/	December 04
West Virginia-American	04-0373-W-42T	10.60%	8.01%	7.49%	ואט	8.49	9% 6.87%	9.85%	7.60%	December-04
	Avoragos	11.08%	8.37%	9.56%	7.319	6 8.99	9% 7.02%	9.96%	7.67%	
	Averages	11.00%	0.31 /0	9.00%	1.317	0 0.98	270 1.UZ70	5.50%	1.0176	
	Average of Schedule 2 & 3	11.16%	8.38%	9.76%	7.429	6 9.0°	1% 7.04%	10.00%	7.69%	
	Average of ochedule 2 & o	11.1070	0.0070	3.7070	7.72	0 3.0	1.0470	13.0070	7.0070	

#### Footnotes:

- 1 These two companies merged so they have the same ROR.
- 2 It appears that no party other than the Company filed ROR testimony in this case.
- 3 Does not propose a cost of common equity for revenue requirement. Sets target returns.
- 4 Although they requested 11%, Ahern recommended 11.5%.
- 5 Order indicated that they recommended 11.75%
- 6 AG proposes a double leverage capital structure based on RWE and 19% debt provided by TAWC Stipulated Agreement
- 7 Consumer advocate was the attorney general.
- 8 Received email from Texas PUC indicating that they don't regulate water utilities.
- 9 Based on a range of 9.2 to 10.2 percent.

### Notes:

NA = Not Applicable

ND = No Data Found