Exhibit No.: BJC-002
Issues: Return on Equity
Witness: Billie Sue LaConte
Sponsoring Party: BJC Healthcare
Type of Exhibit: Rebuttal Testimony
Case No.: WR-2011-0337
Date Testimony Prepared: January 19, 2012

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	)	File No. WR-2011-0337
Increase for Water and Sewer Service Provided in	)	File No. SR-2011-0338
Missouri Service Areas	)	

REBUTTAL TESTIMONY AND SCHEDULES

OF

BILLIE SUE LACONTE

ON BEHALF OF

BJC HEALTHCARE

BJC Exhibit No. 2
Date 2-21-12 Reporter JL
File No. WR-2011-0337

TABLE OF CONTENTS

1   *Evaluation of Company's Analyses*

2   **Q   WHAT IS THE RETURN ON EQUITY THAT MAWC IS REQUESTING?**

3   A   MAWC is requesting a RoE of 11.3%.

4   **Q   WHAT IS THE BASIS FOR THIS LEVEL OF RETURN?**

5   A   Ms. Ahern used several methods to estimate MAWC's return on equity: (1) the

6   Discounted Cash Flow (DCF) method; (2) a risk premium method; (3) Capital Asset

7   Pricing Model (CAPM); (4) an Empirical Capital Asset Pricing Model (ECAPM); and (5) a

8   "comparable risk" method. She then made adjustments to reflect financial and business

9   risk and added an adjustment for flotation cost to determine her recommended return

10   on equity.

Table 1

MAWC Recommended RoE

Method	RoE	Adjustments	%	Recommended Return on Equity
DCF Method	9.54%	Financial Risk	-0.07%	
Risk Premium Method	10.40%	Flotation Cost	0.12%	
CAPM/ECAPM	10.33%	Business Risk	0.40%	
Comparable Risk Method	13.26%			
Average*	10.85%	Total Adjustments	0.45%	11.30%

*Actual average is 10.88%; Schedule PMA-1, Page. 2 of 2, shows 10.85%.

1		For example, the average growth rate for SJW Corporation is 12.33%. This is much
2		higher than the long-term GDP forecast of 5.2%. If SJW Corporation were to grow at
3		that rate every year, it would eventually exceed GDP. Analysts' growth rates should be
4		viewed in conjunction with other growth estimates to achieve a reasonable forecast of
5		expected earnings.
6	Q	WHAT DO YOU RECOMMEND?
7	A	Ms. Ahern should use the two-stage DCF method in addition to the single-stage DCF.
8		The two-stage model recognizes short-term growth (whether it be lower or higher than
9		the long-term), but also accounts for a more realistic, long-term growth rate. The
10		combination of these two methods provides a more balanced RoE estimate.
11	Q	WHY IS THE TWO-STAGE METHOD USED?
12	A	Analysts' growth forecasts for the first stage (next five years) may not be sustainable for
13		the long-term. The two-stage model uses a short-term growth rate along with a long-
14		term growth rate to estimate the RoE. The underlying assumption is that mature,
15		established companies can grow at a rate that is similar to or lower than the GDP
16		growth rate. While some companies in the economy will grow faster than GDP for a
17		while, this cannot happen consistently over a long period.
18	Q	DID YOU ESTIMATE MAWC'S ROE USING MS. AHERN'S DATA AND THE TWO-STAGE
19		DCF METHOD?

4

1 $$R_b + \beta * ERP = RoE$$

2 Where R_b is the prospective yield on an A-rated utility bond, β is the price volatility of a

3 stock relative to the market as a whole and the equity risk premium (ERP) is the

4 difference between total market return from 1924-2010 and the average yield on

5 corporate bonds.

6 **Q** **DO YOU HAVE ANY COMMENTS ABOUT MS. AHERN'S ESTIMATE OF THE PROSPECTIVE**

7 **BOND YIELD?**

8 **A** Yes. Ms. Ahern uses a series of adjustments to estimate the prospective bond yield.

9 These adjustments include the difference in historical yields for Aaa-rated corporate

10 bonds (current yield of 5.43%) and A-rated public utility bonds, plus another adjustment

11 to reflect the difference in the bond yield for the proxy group and an A-rated public

12 utility bond. The first adjustment is 0.40%, which is the difference in prospective Aaa

13 corporate bond yields and prospective A-rated public utility bonds (Schedule PMA-10,

14 Page 4). The second adjustment is based on the assumption that the average rating for

15 the proxy group is A3 (Schedule PMA-10, p.2). This is based on two of the nine

16 companies' Moody's ratings information (seven of the nine companies in the proxy

17 group do not have Moody's ratings information). The companies with Moody's ratings

18 are rated A2 and Baa1 or an average of A3. An average based on two companies is not

19 an accurate representation of the group. Schedule PMA-10 Page 4 shows that all of the

20 companies have Standard and Poor's bond ratings. The average is A+, which is

Table 4

Example of Average Calculation

Month	Monthly Usage Gallons
1	1,175
2	1,100
3	900
4	875
5	1,180
6	1,150
7	1,425
8	1,200
9	1,000
10	950
11	1,225
12	1,250
13	1,325
14	1,500
15	1,600
Overall average	1,190
1-10 avg. (actual):	1,096
11-15 avg. (forecast):	1,380
Average of 2 avgs:	1,238
Difference (gallons):	47.4
Difference (%):	4.0%

1   Using Ms. Ahern's method, the average is 1,238 gallons per month, or 4% higher than

2   the overall average of 1,190 gallons per month. For estimating the ERP, equal weight

3   should be given to the forecast data. Table 5 shows the correct calculation of the ERP.

8

1	Q	HOW DID MS. AHERN CALCULATE THE ROE USING THE CAPM?
2	A	She calculated a risk-free rate of 4.78%, a beta of 0.7 and a MRP of 7.52%. The result,
3		therefore, was:

$$10.04\% = 4.78\% + .7 \times 7.52\%$$

5	Q	HOW DID MS. AHERN CALCULATE THE MARKET RISK PREMIUM?
6		Ms. Ahern's market risk premium for her CAPM analysis is based on a combination of
7		the historical market risk premium (MRP) over the income component of long-term
8		treasury bonds for the period 1926 to 2010 and a forecast market risk premium for the
9		next 3-5 years, which produces an average MRP of 7.52%.

10	Q	WHAT IS MS. AHERN'S ESTIMATED BETA?
11	A	Her estimated beta is 0.7. The beta is the average beta of the nine water utilities in her
12		proxy group.

13	Q	DO YOU HAVE ANY COMMENTS ABOUT MS. AHERN'S CAPM ANALYSIS?
14	A	Yes, her calculation of the MRP is overstated. Similar to her risk premium method, Ms.
15		Ahern gives too much weight to her forecast MRP. A more accurate MRP would give
16		equal weight to the forecast data.

1 $$\text{Adjusted beta} = .25 + .75B$$

2 In other words, the adjusted beta is a weighted average of the actual beta (weighted

3 75%) and the market average beta of 1.00 (weighted 25%). The beta Ms. Ahern used for

4 her CAPM analysis is 0.7, so the adjusted beta is:

5 $$.25 + .75 \times .70 = .775$$

6 The ECAPM formula is:

7 Expected RoE = Risk-free Rate + *Adjusted beta* x Market Risk Premium

8 The equivalent ECAPM formula used by Ms. Ahern is:

9 $$RoE = R_f + .25\ (MRP) + .75 * B * MRP$$

10 The ECAPM gives less weight to the equity risk premium and more weight to the total

11 market risk premium, which increases the RoE.

12 Q **WHAT IS MS. AHERN'S ESTIMATED ROE USING THE ECAPM METHOD?**

13 A She calculated a risk-free rate of 4.78%, an adjusted beta of 0.775 and a MRP of 7.52%.

14 The result, therefore, was:

15 $$10.61\% = 4.78\% + .775 \times 7.52\%$$

16 Q **DO YOU AGREE WITH MS. AHERN'S ECAPM ANALYSIS?**

17 A No. The betas she uses, which come from Value Line, have been adjusted by analysts;

18 no further adjustment is necessary. Most regulated water utilities have a beta that is

19 less than one, so ECAPM will always result in higher RoEs. Furthermore, as described

20 above, the MRP is overstated.

1   A   No. Ms. Ahern's comparable risk method relies partially on the accounting return on

2   book value of common equity, net worth or partner's capital, which may be more or less

3   than the rate of return required by investors.

4   Q   **ARE THE ROE ESTIMATES USING THE DCF, RPM, CAPM AND ECAPM METHODS USING**

5   **THE COMPARABLE RISK COMPANIES RELIABLE?**

6   A   No. It is not appropriate to compare regulated companies with those that face market-

7   based competition with respect to allowed return. Furthermore, these methods used

8   by Ms. Ahern have the same errors as stated previously.

9   Q   **SHOULD THE COMPANY USE THE COMPARABLE RISK METHOD TO ESTIMATE ITS**

10   **RETURN ON EQUITY?**

11   A   No. For the reasons stated above, the comparable risk method should be excluded from

12   the Company's estimated RoE. Indeed, the comparable *earnings method* (estimating

13   the RoE based on the book value of common equity, net worth or partners' capital,

14   which Ms. Ahern uses in her comparable risk method) is not an accepted method and

15   has been disallowed by other commissions, including the Illinois Commerce Commission

16   *(Re Consumers Illinois Water Company Docket No. 03-0403)* and the Connecticut

17   Department of Public Utility Control *(Re Aquarion Water Company of Connecticut*

18   *Docket No. 04-02-14)*. Including the comparable risk method inflates Ms. Ahern's

19   overall RoE recommendation. Without the comparable risk method, her recommended

20   RoE would be 10.54%, as compared to 11.45%.

1		compared MAWC's capitalization to the average capitalization of the proxy group to		
2		determine the size of the business risk adjustment.		

3 Q **DO YOU AGREE WITH THIS ADJUSTMENT?**

4 A No, I do not. Ms. Ahern is comparing an estimated market capitalization of $776 million

5   for MAWC to the average market capitalization of the proxy group. However, the

6   average market capitalization is overstated. MAWC's parent company, American Water

7   Works, Inc., has a $5.3 billion market capitalization, which has the effect of significantly

8   increasing the average.

Table 7

Calculation of MAWC's Business Risk as Compared to Proxy Group

Line	Company	Description	Market to Book Ratio (1)	Market Cap. $ millions (2)
1	American States Water Co.		170.6%	$644.26
2	American Water Works Co., Inc.		127.1%	5,251.63
3	Aqua America, Inc.		268.5%	3,152.49
4	Artesian Resources Corp.		157.8%	150.14
5	California Water Service Group		181.0%	788.32
6	Connecticut Water Service, Inc.		191.9%	218.74
7	Middlesex Water Company		168.5%	292.02
8	SJW Corporation		169.3%	431.88
9	York Water Company		244.6%	$223.25
10	Average		186.6%	$1,239.19
11	Average excluding AWW		194.0%	$737.64
12	Median		170.6%	$431.88
13	Median excluding AWW		175.8%	$361.95
14	MAWC total common equity as of 12/31/10			$415.72
	MAWC estimated market capitalization			
15	Using median	l.14, c.2 * l.12, c.2		$709.21
16	Using average excluding AWW	l. 14, c.2 * l.11, c.2		$806.59

1		using the Hamada equation, which uses the CAPM to estimate the proxy group's RoE
2		using a beta that has been altered to reflect MAWC's financial risk. The difference in
3		this new RoE and the original proxy group RoE using the CAPM is the financial risk
4		adjustment.
5	Q	DO YOU AGREE WITH HER FINANCIAL RISK ADJUSTMENT?
6	A	The calculation of the re-levered beta is incorrect. Ms. Ahern states that she compared
7		MAWC's December 31, *2011* common equity ratio to the proxy group's average
8		December 31, *2010* common equity ratio to estimate the financial adjustment.
9		However, it appears that she used MAWC's December 31, 2010 common equity ratio of
10		50.39%, which is slightly lower than its December 31, 2011 common equity ratio of
11		50.64%. Using the 2011 figure lowers the financial adjustment to -0.14%, using Ms.
12		Ahern's CAPM assumptions and to -0.15%, using the corrected CAPM assumptions, as
13		described above.

Table 10

Ms. Ahern's RoE Calculations with BJH's Adjustments

Method	Ms. Ahern	Changes
Single-stage DCF (no chg)	9.54%	9.54%
Two-stage DCF	N/A	8.30%
RPM	10.40%	9.96%
CAPM/ECAPM	10.33%	9.53%
Comparable Risk	13.26%	N/A
Average	10.85%	9.33%
Financial risk adjustment	-0.07%	-0.15%
Business risk adjustment	0.40%	-0.53%
Flotation cost adjustment	.12%	N/A
Overall average	11.3%	8.65%

1 Q PLEASE SUMMARIZE YOUR COMMENTS REGARDING MS. AHERN'S ANALYSIS.

2 A Ms. Ahern's estimated RoE for MAWC is 11.3%. Her estimate is based on several

3 analyses and adjustments for flotation costs and business and financial risks. The

4 estimated RoE is too high due to her reliance on the single-stage DCF model, errors in

5 her RPM, CAPM and ECAPM analyses, her inclusion of a comparable risk method, her

6 errors in the calculation of the financial and business risk adjustments and her inclusion

7 of a flotation adjustment. My corrections to her analysis show that MAWC's requested

8 RoE is excessive and should not be allowed.

9 Q DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

10 A Yes.

Missouri American Water Company

Estimated RoE Using Two-Stage DCF Model with Long Term GDP using Data from Schedule PMA-8 pages 1-10

Utility	Close 8/2011-11/2011 Avg. Stock Price	2011 Dividend	Est. 2015 Dividend	Annual Change to 2015	Recent Price	2011 Year 1 Div.	2012 Year 2 Div.	2013 Year 3 Div.	2014 Year 4 Div.	2015 Year 5 Div.	Year 6-150 Div Growth	IRR Years 0-150 RoE
American States Water	34.33	1.04	1.25	0.05	(34.33)	1.04	1.09	1.15	1.20	1.25	5.20%	8.1%
American Water	27.90	0.88	1.10	0.06	(27.90)	0.88	0.94	0.99	1.05	1.10	5.20%	8.4%
Aqua America	21.94	0.62	0.79	0.04	(21.94)	0.62	0.66	0.71	0.75	0.79	5.20%	8.1%
Artesian Resources Corporation *	19.42	0.79	-	0.03	(19.42)	0.79	0.82	0.85	0.88	0.92	5.20%	9.1%
California Water	36.39	1.23	1.38	0.04	(36.39)	1.23	1.27	1.31	1.34	1.38	5.20%	8.3%
Connecticut Water Services *	25.01	0.93	-	0.02	(25.01)	0.93	0.95	0.96	0.98	0.99	5.20%	8.4%
Middlesex Water	18.14	0.73	0.80	0.02	(18.14)	0.73	0.75	0.77	0.78	0.80	5.20%	8.8%
SJW Corporation	22.65	0.69	0.82	0.03	(22.65)	0.69	0.72	0.76	0.79	0.82	5.20%	8.1%
York Water Company *	16.52	0.52	-	0.01	(16.52)	0.52	0.53	0.54	0.55	0.56	5.20%	7.9%
Average												8.4%
Median												8.3%

* Estimated 2016 dividend not available. Annual dividend growth (col. 5) based on historical 5 year dividend growth rate.