No.:
Witness: Michael P. Gorman
Type of Exhibit: Direct Testimony
Issues: Revenue Requirement
Sponsoring Party: Missouri Industrial Energy Consumers
Case No.: WR-2011-0337

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 Services Provided in Missouri Service Areas	))))))))	**Case No. WR-2011-0337**

Direct Testimony and Schedules of

Michael P. Gorman

On behalf of

Missouri Industrial Energy Consumers

November 17, 2011

BRUBAKER & ASSOCIATES, INC.
CHESTERFIELD, MO 63017

Project 9498

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 Services Provided in Missouri Service Areas	**Case No. WR-2011-0337**

STATE OF MISSOURI)
) **SS**
COUNTY OF ST. LOUIS)

Affidavit of Michael P. Gorman

Michael P. Gorman, being first duly sworn, on his oath states:

1. My name is Michael P. Gorman. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by the Missouri Industrial Energy Consumers in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my direct testimony and schedules which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. WR-2011-0337.

3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things that they purport to show.

Michael P. Gorman

Subscribed and sworn to before me this 17th day of November, 2011.

Notary Public

MARIA E. DECKER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis City
My Commission Expires: May 5, 2013
Commission # 09706793

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Direct Testimony of Michael P. Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q WHAT IS YOUR OCCUPATION?

A I am a consultant in the field of public utility regulation and a Managing Principal of Brubaker & Associates, Inc., energy, economic and regulatory consultants.

Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A This information is included in Appendix A to my testimony.

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A This testimony is presented on behalf of the Missouri Industrial Energy Consumers ("MIEC"). Member companies purchase substantial amounts of water from Missouri-American Water Company ("Missouri-American" or "Company").

Q WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A I will recommend an overall rate of return and fair return on common equity to use in setting Missouri-American's rates.

SUMMARY

Q PLEASE SUMMARIZE YOUR RATE OF RETURN RECOMMENDATIONS IN THIS PROCEEDING.

A As shown on my Schedule MPG-1, I recommend an overall rate of return of 7.90%. This overall rate of return is based on a 9.40% return on equity.

Q WHAT IS THE REVENUE REQUIREMENT IMPACT OF REDUCING THE RETURN ON EQUITY?

A Reducing the return on equity from 11.30% as proposed by Missouri-American to my recommended return on equity of 9.40% reduces the claimed revenue requirement deficiency for the total Company by $13.26 million.

RATE OF RETURN

Observable Market Evidence

Q IS THERE MARKET EVIDENCE OF RETURNS ON EQUITY RECENTLY AWARDED TO WATER UTILITIES?

A Yes. As shown in Table 1 below, reports from American Water Works ("AWW") disclose that regulatory authorized returns on equity for water utility affiliates of Missouri-American have averaged about 10.07%, and most Commission-awarded water utility returns are within the range of 9.5% to 10.3%, during this period.

TABLE 1

American Water Works
Water Utility Authorized Equity Returns
(2010 and 2011)

State	Allowed ROE[1]	Dates
Illinois	10.38%	4/23/2010
New Mexico	10.00%	5/10/2010
Indiana	10.00%	5/3/2010
Virginia (Eastern)	10.50%	5/8/2010
Ohio	9.34%	5/19/2010
Missouri	10.00%	7/1/2010
California (Sac, LA, Lark)	10.20%	7/1/2010
Michigan	10.50%	7/1/2010
Kentucky	9.70%	10/1/2010
New Jersey	10.30%	1/1/2011
Pennsylvania Wastewater	10.60%	1/1/2011
Arizona (Anthem, etc.)	9.50%	1/1/2011
Tennessee	10.00%	4/5/2011
West Virginia	9.75%	4/19/2011
Virginia	10.20%	4/6/2011
Average	**10.07%**	

Source:
[1]American Water Works, Institutional Investor Meeting Presentation, October 2011.

As shown in Table 1 above, authorized returns on equity for the period April 2010 through September 2011 averaged 10.07%. The range in authorized returns on equity was about 9.34% to 10.60%. Half of the observations were 10% or lower, and only five of the 15 awards were 10.3% or higher. Most (11 of 15) of these authorized equity return observations through September 2011 ranged between 9.5% and 10.3%.

Q HAVE THE AUTHORIZED RETURNS ON EQUITY SHOWN ABOVE SUPPORTED INVESTMENT GRADE UTILITY BOND RATINGS?

A Yes. The authorized returns on equity in 2010 and 2011 in Table 1 above are generally comparable to authorized returns prior to 2010. Recognizing the level of return on equity, Standard & Poor's ("S&P") noted that the water utility industry had a positive credit outlook and stated the following:

> **Industry Credit Outlook**
>
> U.S. investor-owned water utilities make up one of the most stable and highly rated sectors in U.S. Corporate Ratings.[1]
>
> **Industry Ratings Outlook**
>
> **Regulation Smoothes Cash Flows and Supports Cost Recovery**
>
> State regulation will continue to influence gas and water utility credit ratings in 2011. Many recent regulatory developments have been positive for credit quality. Commissions are increasingly putting into place rate mechanisms [that] insulate utilities from economic trends whereby the health of the overall economy is less of a factor for credit quality.[2]
>
> **Stable Outlook Is Likely To Continue**
>
> Our outlook for the gas and water utility industries remains stable based on gradual economic recovery, generally supportive regulatory decisions (including mechanisms that allow for timely cost recovery), receptive capital markets, and adequate access to liquidity.[3]

Clearly, Missouri-American's last authorized return on equity and those of affiliate utilities were perceived by the credit markets as credit-supportive.

[1]Standard & Poor's RatingsDirect on the Global Credit Portal: "Industry Report Card: U.S. Investor-Owned Water Utility Sector's Solid Performance Continues," December 21, 2010 at 2.

[2]Standard & Poor's RatingsDirect on the Global Credit Portal: "Industry Report Card: U.S. Regulated Gas And Water Utilities' Credit Quality Remains Stable," October 6, 2011 at 4.

[3]Standard & Poor's RatingsDirect on the Global Credit Portal: "Industry Economic And Ratings Outlook: U.S. Regulated Gas And Water Utilities' Credit Quality Should Remain Steady In 2011," July 8, 2011 at 4.

Q DO YOU BELIEVE YOUR RECOMMENDED RETURN ON EQUITY FOR MISSOURI-AMERICAN IS REASONABLE GIVEN THAT IT IS LOWER THAN THE AUTHORIZED RETURNS ON EQUITY TYPICALLY AWARDED OVER THE LAST YEAR?

A Yes. As discussed in more detail below, I believe my recommended return on equity reflects today's lower capital market costs than that experienced over this period. As detailed below, bond yields are lower, and authorized returns on equity recommendations by rate of return witnesses are lower today than they have been over this time period. Hence, I believe my recommended return on equity reflects a decline in capital market costs relative to this historical period.

Just as importantly, however, the authorized returns on equity for AWW affiliates illustrate that the Company's proposed 11.30% return on equity is excessive even by this historical period where bond yields were higher than they are today.

Q HOW DOES THE RISK OF WATER UTILITY OPERATIONS COMPARE TO THE RISK OF ELECTRIC AND GAS UTILITIES OPERATIONS?

A Water utilities have lower business risks relative to electric and gas utilities. This is evident by statements from S&P:

> Standard & Poor's Ratings Services views the overall business risk of the highly rated water utility sector as generally being lower than that of electric and gas utilities. This is mainly due to a mostly favorable regulatory environment, a lack of competition from other water utilities, and relatively low operating risk.[4]

Further, as noted above, S&P concludes that water utilities are one of the most stable industries in the corporate sector.

[4]Standard & Poor's RatingsDirect, "Key Rating Factors For Water Companies Around The World," July 17, 2006.

Q WHAT IS THE CURRENT RETURN ON EQUITY FOR MISSOURI-AMERICAN AUTHORIZED BY THE MISSOURI PUBLIC SERVICE COMMISSION ("COMMISSION")?

A On June 16, 2010, the Commission issued its final order (Case No. WR-2010-0131) and approved a settlement which included a return on equity of 10.0% for Missouri-American infrastructure charges.

Q HOW DOES UTILITY COST OF CAPITAL TODAY COMPARE WITH MISSOURI-AMERICAN'S LAST RATE CASE?

A An examination of spot data, a review of the data underlying my analysis in Missouri-American's last rate case, and the analysis underlying my data in this case indicate that at an absolute minimum, Missouri-American's cost of common equity is no higher today than it was in its last case, and that my estimated return of 9.40% is reasonable. Indeed, market information suggests that Missouri-American's current market cost of equity is much lower than Missouri-American's last authorized return on equity.

For example, right before the final order in Missouri-American's last rate case was issued, the 13-week average "A" and "Baa" utility bond yield ending June 11, 2010, was 5.64% and 6.12%, respectively. (See Schedule MPG-2, page 2). Currently, the 13-week average "A" and "Baa" utility bond yield ending on October 21, 2011 is 4.59% and 5.20%, respectively (Schedule MPG-2, page 1).

Utility bond yields have declined by approximately 90-100 basis points since Missouri-American's last rate case. Indeed, the decline in bond yields suggests that Missouri-American's return on equity should be lower in this case than it was in the last case. This would indicate that an authorized return on equity of well less than the

10.0% Missouri-American was authorized in its last rate case is appropriate in this case.

Q IS THERE OTHER MARKET EVIDENCE THAT SUPPORTS YOUR BELIEF THAT MISSOURI-AMERICAN'S COST OF COMMON EQUITY HAS DECREASED SINCE ITS LAST RATE CASE?

A Yes. This is evident by a thorough analysis and recommendation made by Missouri-American's own witness Ms. Ahern. In Missouri-American's last rate case, Ms. Ahern recommended a return on equity of 11.6%.[5] With this case, Ms. Ahern recommends a return on equity of 11.30%. Hence, Ms. Ahern acknowledges that cost of capital for Missouri-American decreased by about 30 basis points since the last rate case.

Missouri-American's Proposed Capital Structure

Q WHAT CAPITAL STRUCTURE IS THE COMPANY REQUESTING TO USE TO DEVELOP ITS OVERALL RATE OF RETURN FOR WATER AND WASTEWATER OPERATIONS IN THIS PROCEEDING?

A The Company's overall rate of return was developed using the capital structure shown in Table 2 below.

[5]Case No. WR-2010-0131, Ahern Direct at 3.

TABLE 2

Missouri-American's
Proposed Capital Structure

Description	Capital Weight
Long-Term Debt	49.36%
Preferred Equity	0.27%
Common Stock	50.37%
Total	100.00%

Source: Ahern Direct at 3.

Q USING MISSOURI-AMERICAN'S CAPITAL STRUCTURE, WHAT OVERALL RATE OF RETURN DO YOU RECOMMEND BE USED TO SET RATES?

A As shown on my Schedule MPG-1, I recommend that Missouri-American's overall rate of return be set at 7.90%.

Return on Common Equity

Q PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF COMMON EQUITY."

A A utility's cost of common equity is the return investors expect, or require, in order to make an investment. Investors expect to achieve their return requirement from receiving dividends and stock price appreciation.

Q PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED UTILITY'S COST OF COMMON EQUITY.

A In general, determining a fair cost of common equity for a regulated utility has been framed by two decisions of the U.S. Supreme Court: *Bluefield Water Works &*

Improvement Co. v. Public Serv. Commission of West Virginia, 262 U.S. 679 (1923) *and Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

These decisions identify the general standards to be considered in establishing the cost of common equity for a public utility. Those general standards provide that the authorized return should: (1) be sufficient to maintain financial integrity; (2) attract capital under reasonable terms; and (3) be commensurate with returns investors could earn by investing in other enterprises of comparable risk.

Q PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE THE COST OF COMMON EQUITY FOR MISSOURI-AMERICAN.

A I have used several models based on financial theory to support my recommendations regarding Missouri-American's cost of common equity. These models are: (1) a constant growth Discounted Cash Flow ("DCF") model using analyst growth data; (2) a sustainable growth DCF model; (3) a multi-stage growth DCF model; (4) a Risk Premium ("RP") analysis; and (5) a Capital Asset Pricing Model ("CAPM").

Q HOW DID YOU SELECT A UTILITY PROXY GROUP SIMILAR IN INVESTMENT RISK TO MISSOURI-AMERICAN TO ESTIMATE ITS CURRENT MARKET COST OF EQUITY?

A I relied on two proxy groups to estimate Missouri-American's cost of capital. First, I used the water utility proxy group developed by Ms. Ahern. Second, I developed a gas utility proxy group.

My gas utility proxy group was developed by starting with the gas distribution companies followed by *The Value Line Investment Survey Standard Edition*. I excluded the companies that did not meet the following criteria:

1. Investment grade credit rating from S&P and Moody's.
2. Common equity ratio equal to or greater than 40.0%.
3. No suspended or reduced dividends over the last two years.
4. Consensus analysts' growth rate estimates from Zacks, Reuters or SNL.
5. No involvement in recent merger and acquisition activities.

Based on the above criteria, I excluded two companies: AGL Resources and Nicor, Inc. These companies are involved in merger/acquisition activities as AGL Resources has proposed to acquire Nicor, Inc.

Q WHY DID YOU RELY ON GAS UTILITIES AS A PROXY GROUP IN ESTIMATING MISSOURI-AMERICAN'S COST OF EQUITY?

A I relied on a gas proxy group along with the water proxy group to better measure Missouri-American's cost of equity. This was necessary for several reasons. First, a gas proxy group's securities are more widely followed than are water utility stocks, and therefore the estimated cost of equity from a gas proxy group provides a more robust estimate of Missouri-American's current market cost of equity. Second, considering water utility proxy groups in conjunction with gas utility proxy groups is consistent with industry reports published by S&P. S&P typically combines water utilities and gas utilities in providing industry report assessments to investors. Further, the assets capitalization and operations of gas utilities and water utilities are very similar. Both utility groups' operations are dependent on large main investment and operations, infrastructure replacement and upgrades, and reliability and safety

compliance with state, local and federal regulations. The two groups produce a better investment risk proxy than only a water group.

For these reasons, I believe these two proxy groups are reasonable to estimate the investment risk of Missouri-American.

Q HOW DID YOU MEASURE MISSOURI-AMERICAN'S INVESTMENT RISK?

A I relied on the bond ratings of Missouri-American's parent company and its financing affiliate as a proxy for Missouri-American's bond rating. I next relied on Missouri-American's stand-alone capital structure to get a general measure of Missouri-American's investment risk relative to that of the two proxy groups.

Q WHY IS IT APPROPRIATE TO USE AWW'S AND AMERICAN WATER CAPITAL CORP.'S ("AWC") BOND RATINGS AS A PROXY FOR MISSOURI-AMERICAN'S BOND RATING?

A Missouri-American is a wholly-owned subsidiary of AWW. AWW operates its affiliates in a manner to reduce its consolidated investment risk, reduce its cost of capital and provide efficiencies in utility operations relative to what those utility affiliates could do on their own. Therefore, this diversification and minimization of risk is captured in AWW and AWC and is transferred to the utility affiliates in terms of reduced cost of capital, ability to attract qualified management and executive personnel, and produce operational economies.

Further, the cost of this holding structure risk mitigation is paid for via customers through service company management fees allocated to all utility affiliates and recovered in utility affiliates' cost of service. Hence, the AWW holding company structure creates benefits and costs to retail customers. Therefore, all the costs and

benefits of this holding company structure are properly considered in the estimate of Missouri-American's cost of service in this proceeding.

Q PLEASE CONTINUE, AND EXPLAIN WHY AWC IS A REASONABLE RISK PROXY FOR MISSOURI-AMERICAN'S OPERATING AND FINANCIAL RISKS?

A Missouri-American relies on its affiliate company AWC to issue debt on its behalf. Missouri-American will normally only issue debt by itself through a tax-exempt government authority that can issue low cost tax-exempt debt issues. All corporate debt used to finance Missouri-American is issued through AWC.

AWC is simply a financing subsidiary that acts as a treasury function for all the operating affiliates of AWW. As such, AWC does not generate cash flows on its own. Rather, it gets all of its credit standing through its affiliation with all AWC's operating affiliates. As such, since Missouri-American along with all other utility affiliates gives credit standing to AWC, it is reasonable to use AWC's credit rating as a proxy for Missouri-American's credit rating.

It is reasonable and accurate to use AWC as an investment risk proxy for Missouri-American and other AWC utility operating affiliates because AWW is structured in a way to mitigate operating risk and financial risks by consolidating all of its utility operations within the AWW holding company structure. This consolidation lowers operating and financial risks for all affiliates, including Missouri-American, via corporate structure in the following ways:

1. It eliminates small company risk for operating affiliates because the affiliates rely on a much larger capitalized parent company for management, engineering, treasury, accounting, and executive expertises which allow it to compete with larger companies for employee talent.

2. AWC is able to go to the market for larger bond issuances by consolidating the funding needs of its affiliate companies, which creates a larger market for bond

issuances. These bond issuances are then allocated in the operating subsidiary most likely reducing the cost of borrowing for affiliates like Missouri-American.

3. Ratepayers pay for these risk reductions created by affiliation with AWC and AWW by paying an allocated share of the cost of these affiliates through the ratemaking process. Hence, customers pay the cost of this holding company corporate structure, and therefore should receive the benefits of this corporate structure via reduced financial and operating risks and lower capital costs.

Q HOW DOES THE WATER UTILITY PROXY GROUP INVESTMENT RISK COMPARE TO THE INVESTMENT RISK OF MISSOURI-AMERICAN?

A The water utility proxy group is shown on page 1 of Schedule MPG-3. The water utility proxy group has an average corporate credit rating from S&P of "A," which is slightly higher than, but comparable to, S&P's corporate credit rating for AWW and AWC of "BBB+."

The water utility proxy group has an average common equity ratio of 46.8% (including short-term debt) from *AUS Utility Reports* and 49.1% (excluding short-term debt) from *Value Line* in 2010. The water utility proxy group's common equity ratio is comparable to Missouri-American's proposed common equity ratio of 50.4%. A comparable common equity ratio demonstrates that Missouri-American's financial risk is reasonably comparable to the water utility proxy group.

I also compared Missouri-American's business risk to the business risk of the water utility proxy group based on S&P's ranking methodology. AWW and AWC have an "Excellent" business risk profile, which is identical to the business risk profile of the water utility proxy group.

Q HOW DOES THE GAS UTILITY PROXY GROUP'S INVESTMENT RISK COMPARE TO THE INVESTMENT RISK OF MISSOURI-AMERICAN?

A The gas utility proxy group is shown on page 2 of Schedule MPG-3. The gas utility proxy group has an average corporate credit rating from S&P of "A-," which is one notch higher than S&P's corporate credit rating of "BBB+" for AWW and AWC. The gas utility proxy group's corporate credit rating from Moody's is "A3," which is reasonably comparable to AWW's and AWC's corporate credit rating from Moody's of "Baa2." Therefore, the gas utility proxy group has reasonably comparable investment risk to Missouri-American.

The gas utility proxy group has an average common equity ratio of 51.9% (including short-term debt) from *AUS Utility Reports* and 56.9% (excluding short-term debt) from *Value Line* in 2010. The gas utility proxy group's common equity ratio is comparable to the common equity ratio of 50.4% for Missouri-American. A comparable common equity ratio demonstrates that Missouri-American's financial risks are reasonably comparable to my gas utility proxy group.

I also compared Missouri-American's business risk to the business risk of my gas utility proxy group based on S&P's ranking methodology. AWW and AWC have an "Excellent" business risk profile, which is identical to the business risk profile of my gas utility proxy group.

Discounted Cash Flow Model

Q PLEASE DESCRIBE THE DCF MODEL.

A The DCF model posits that a stock price is valued by summing the present value of expected future cash flows discounted at the investor's required rate of return or cost of capital. This model is expressed mathematically as follows:

$$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \ldots . \frac{D_\infty}{(1+K)^\infty} \text{ where} \qquad \text{(Equation 1)}$$

P_0 = Current stock price
D = Dividends in periods 1 - ∞
K = Investor's required return

This model can be rearranged in order to estimate the discount rate or investor-required return, "K." If it is reasonable to assume that earnings and dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

$$K = D_1/P_0 + G \qquad \text{(Equation 2)}$$

K = Investor's required return
D_1 = Dividend in first year
P_0 = Current stock price
G = Expected constant dividend growth rate

Equation 2 is referred to as the annual "constant growth" DCF model.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.

A As shown under Equation 2 above, the DCF model requires a current stock price, expected dividend, and expected growth rate in dividends.

Q WHAT STOCK PRICE AND DIVIDEND HAVE YOU RELIED ON IN YOUR CONSTANT GROWTH DCF MODEL?

A I relied on the average of the weekly high and low stock prices of the proxy groups over a 13-week period ended October 21, 2011. An average stock price is less susceptible to market price variations than a spot price. Therefore, an average stock price is less susceptible to aberrant market price movements, which may not be reflective of the stock's long-term value.

A 13-week average stock price is still short enough to contain data that reasonably reflect current market expectations, but is not so short a period as to be

susceptible to market price variations that may not be reflective of the security's long-term value. In my judgment, a 13-week average stock price is a reasonable balance between the need to reflect current market expectations and the need to capture sufficient data to smooth out aberrant market movements.

I used the most recently paid quarterly dividend, as reported in *The Value Line Investment Survey*. This dividend was annualized (multiplied by 4) and adjusted for next year's growth to produce the D_1 factor for use in Equation 2 above.

Q WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR CONSTANT GROWTH DCF MODEL?

A I have relied on two sources of growth for a constant growth DCF model. There are several methods one can use in order to estimate the expected growth in dividends. However, for purposes of determining the market-required return on common equity, one must attempt to estimate investors' consensus about what the dividend or earnings growth rate will be, and not what an individual investor or analyst may use to form individual investment decisions.

Security analysts' growth estimates have been shown to be more accurate predictors of future returns than growth rates derived from historical data. Assuming the market generally makes rational investment decisions, forward-looking growth projections are more likely to be the growth estimates considered by the market that influence observable stock prices than are growth rates derived from only historical data.

In my first constant growth DCF analysis, I have relied on a consensus, or mean, of professional security analysts' earnings growth estimates as a proxy for the investor consensus dividend growth rate expectations. I used the average of three

sources of analysts' growth rate estimates: Zacks, SNL Financial, and Reuters. All consensus analysts' projections used were available on October 26, 2011, as reported online.

This constant growth DCF model will be referenced as the constant growth DCF (analyst growth) model.

Q WHAT IS THE GROWTH RATE YOU USED IN YOUR CONSTANT GROWTH DCF (ANALYST GROWTH) MODEL?

A The growth rates I used in my DCF analysis are shown in Schedule MPG-4. The average growth rates for the two proxy groups are summarized in Table 3 below.

TABLE 3

Growth Rates Summary

Proxy Group	Average
Water	7.24%
Gas	4.36%

Q WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF (ANALYST GROWTH) MODEL?

A As shown in Schedule MPG-5, the average constant growth DCF returns for the two proxy groups are as follows:

TABLE 4

Constant Growth DCF (Analyst Growth) Summary

Proxy Group	Average
Water	10.81%
Gas	8.27%

Q DO YOU HAVE ANY COMMENTS CONCERNING THE RESULTS OF YOUR CONSTANT GROWTH DCF (ANALYST GROWTH) ANALYSIS?

A Yes. The constant growth DCF return for the water utility proxy group is not reasonable and represents an inflated return for Missouri-American at this time. The constant growth DCF result for the water utility proxy group is based on a growth rate of 7.24%, which is far too high to be a reasonable or reliable estimate of a long-term sustainable growth rate, which is a required input by the constant growth model.

The constant growth DCF return estimate for the gas utility proxy group is based on an average analysts' growth rate that is slightly below the reasonable long-term sustainable growth rate estimate as discussed below. As such, the constant growth DCF model using consensus analysts' growth rate estimates for the water utility proxy group does not produce a reasonable estimate of Missouri-American's cost of equity.

Q WHY DO YOU BELIEVE THE THREE- TO FIVE-YEAR GROWTH RATE FOR YOUR WATER UTILITY PROXY GROUP IS IN EXCESS OF A LONG-TERM SUSTAINABLE GROWTH?

A The average three- to five-year growth rate of 7.24% for the water utility proxy group, exceeds the growth rate of the overall U.S. economy by approximately 234 basis points. As explained below, the consensus of published economists is a projection that the U.S. Gross Domestic Product ("GDP") will grow at a rate of no more than 4.9% over the next 5 to 10 years. A company cannot grow, indefinitely, at a faster rate than the market in which it sells its products. The U.S. economy, or GDP, growth projection represents a ceiling, or high-end, sustainable growth rate for a utility over an indefinite period of time.

Q WHY IS THE GDP GROWTH PROJECTION CONSIDERED A CEILING GROWTH RATE FOR A UTILITY?

A Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the overall economy. Utilities' earnings/dividend growth is created by increased utility investment or rate base. Utility plant investment, in turn, is driven by service area economic growth and demand for utility service. In other words, utilities invest in plant to meet sales demand growth, and sales growth is in turn tied to economic growth in their service areas. The Energy Information Administration ("EIA") has observed that utility sales growth is less than U.S. GDP growth. As shown in Schedule MPG-6, utility sales growth has lagged behind GDP growth. Hence, nominal GDP growth is a very conservative, albeit overstated, proxy for utility sales growth, rate base growth, and earnings growth. Therefore, GDP growth is a reasonable proxy for the highest long-term sustainable growth rate of a utility.

Q IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER THE LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT GROW AT A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?

A Yes. This concept is supported in both published analyst literature and academic work. Specifically, in a textbook entitled *Fundamentals of Financial Management*, published by Eugene Brigham and Joel F. Houston, the authors state as follows:

> The constant growth model is most appropriate for mature companies with a stable history of growth and stable future expectations. Expected growth rates vary somewhat among companies, but dividends for mature firms are often expected to grow in the future at about the same rate as nominal gross domestic product (real GDP plus inflation).[6]

Also, Morningstar's *Stocks, Bonds, Bills and Inflation 2009 Yearbook Valuation Edition* tracked dividends of the stock market in comparison to GDP growth over the period 1926 through the end of 2008.[7] Based on that study, the authors found that earnings and dividends for the market have historically grown in tandem with the overall economy. It is important to note that the growth of companies included in the overall market will normally be higher than that of utility companies. These non-utility companies achieve a higher level of growth because they retain a larger percentage of their earnings and pay out a much smaller percentage of their earnings as dividends. Retaining higher percentages of total earnings fuels stronger growth for these non-utility companies. Since the market in general grows at the overall GDP growth rate, it is very conservative to assume that utility companies could achieve this same level of sustained growth without a material reduction in their dividend payout ratios. As such, using the GDP as a maximum sustainable growth rate is a very conservative and high-end estimate for utility companies.

[6] *Fundamentals of Financial Management*, Eugene F. Brigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation, at 298.

[7] *Stocks, Bonds, Bills and Inflation 2009 Yearbook Valuation Edition* (Morningstar, Inc.), at 67.

Sustainable Growth DCF

Q PLEASE DESCRIBE HOW YOU ESTIMATED A SUSTAINABLE LONG-TERM GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF MODEL.

A A sustainable growth rate is based on the percentage of the utility's earnings that are retained and reinvested in utility plant and equipment. These reinvested earnings increase the earnings base (rate base). Earnings grow when plant funded by reinvested earnings is put into service, and the utility is allowed to earn its authorized return on such additional rate base investment.

The internal growth methodology is tied to the percentage of earnings retained in the company and not paid out as dividends. The earnings retention ratio is 1 minus the dividend payout ratio. As the payout ratio declines, the earnings retention ratio increases. An increased earnings retention ratio will fuel stronger growth because the business funds more investments with retained earnings. As shown in Schedule MPG-7, *Value Line* projects that the proxy groups will have a declining dividend payout ratio over the next three to five years. These dividend payout ratios and earnings retention ratios then can be used to develop a sustainable long-term earnings retention growth rate. A sustainable long-term retention ratio will help gauge whether analysts' current three- to five-year growth rate projections can be sustained over an indefinite period of time.

The data used to estimate the long-term sustainable growth rate is based on the proxy group companies' current market to book ratios and on *Value Line's* three-to-five year projections of earnings, dividends, earned returns on book equity, and stock issuances for each company.

As shown in Schedule MPG-8, page 1 of 4, the average and median sustainable growth rates for the water utility proxy group using this internal growth

rate model are 6.13% and 6.49%, respectively. As shown on page 3 of 4, the average and median growth rates for the gas utility proxy group are 5.97% and 5.57%, respectively.

Q WHAT IS THE CONSTANT GROWTH DCF ESTIMATE USING THIS SUSTAINABLE LONG-TERM GROWTH RATE?

A A DCF estimate based on this sustainable growth rate is developed in Schedule MPG-9. As shown on page 1 of 2, a sustainable growth DCF analysis for the water utility proxy group produces average and median DCF results of 9.67% and 9.67%, respectively. As shown on page 2 of 2, the average and median DCF results for the gas utility proxy group are 9.93% and 9.49%.

The sustainable growth DCF result is based on the dividend and price data used in my constant growth DCF studies (using analyst growth rates) and the sustainable growth rates discussed above and developed in Schedule MPG-8**.** The results are summarized in Table 5 below.

TABLE 5

Sustainable Growth DCF Summary

Proxy Group	Average
Water	9.67%
Gas	9.93%

Multi-Stage Growth DCF Model

Q HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?

A Yes. My first constant growth DCF is based on consensus analysts' growth rate projections, so it is a reasonable reflection of rational investment expectations over the next three to five years. The limitation of the constant growth DCF model is that it cannot reflect a rational expectation that a period of high/low short-term growth can be followed by a change in growth to a rate that is more reflective of long-term sustainable growth level. Hence, I performed a multi-stage growth DCF analysis to reflect this outlook of changing growth expectations.

Q PLEASE DESCRIBE YOUR MULTI-STAGE GROWTH DCF MODEL.

A The multi-stage growth DCF model reflects the possibility of non-constant growth for a company over time. The multi-stage growth DCF model reflects three growth periods: (1) a short-term growth period, which consists of the first five years; (2) a transition period, which consists of the next five years (6 through 10); and (3) a long-term growth period, starting in year 11 through perpetuity.

For the short-term growth period, I relied on the consensus analysts' growth projections described above in relationship to my constant growth DCF model. For the transition period, the growth rates were reduced or increased by an equal factor, which reflects the difference between the analysts' growth rates and the GDP growth rate. For the long-term growth period, I assumed each company's growth would converge to the maximum sustainable growth rate for a utility company as proxied by the consensus analysts' projected growth for the U.S. GDP of 4.9%, starting in 11 years.

Q WHAT DO YOU BELIEVE IS A REASONABLE LONG-TERM SUSTAINABLE GROWTH RATE?

A A reasonable growth rate that can be sustained in the long run should be based on consensus analysts' projections. *Blue Chip Economic Indicators* publishes consensus GDP growth projections twice a year. Based on its latest issue, the consensus economists published a GDP growth rate outlook of 5.0% to 4.7% over the next 5 and 10 years, respectively.[8]

Therefore, I use the midpoint of the consensus economists' projected 5- and 10-year GDP consensus growth rate of 4.85% (rounded to 4.9%), as published by *Blue Chip Economic Indicators,* as an estimate of long-term sustainable growth. This consensus GDP growth forecast represents the most likely views of market participants because it is based on published economist projections. *Blue Chip Economic Indicators'* projections reflect real GDP growth of 2.8% and 2.5%, and GDP inflation of 2.1% and 2.1%[9] over the 5-year and 10-year projection periods, respectively.

Q DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM GDP GROWTH?

A Yes. The U.S. Energy Information Administration ("EIA") in its Annual Energy Outlook projects the real GDP out until 2035. In its 2011 Annual Report, the EIA projects real GDP through 2035 to be in the range of 2.1% to 3.2%, with a midpoint or reference case of 2.7%.[10]

[8] *Blue Chip Economic Indicators*, October 10, 2011, at 15.
[9] GDP growth is the product of real and inflation GDP growth.
[10] DOE/EIA Annual Energy Outlook 2011 With Projections to 2035, April 2011.

Also, the Congressional Budget Office ("CBO") makes long-term economic projections -- including one for the period 2016-2019. The CBO, like the consensus *Blue Chip Economic* projections, is projecting real GDP growth of 2.3% during the period beyond five years, with GDP price inflation around 1.6%. The CBO's projections are lower than the consensus economists as published by *Blue Chip Economic Indicators*.

The real GDP and nominal GDP growth projections made by the U.S. EIA and those made by the CBO support the use of the consensus analyst 5-year and 10-year projected GDP growth outlooks as a reasonable market assessment of long-term prospective GDP growth.

Q WHAT STOCK PRICE, DIVIDEND AND GROWTH RATES DID YOU USE IN YOUR MULTI-STAGE GROWTH DCF ANALYSIS?

A I relied on the same 13-week stock price and the most recent quarterly dividend payment discussed above. For stage one growth, I used the consensus analysts' growth rate projections discussed above in my constant growth DCF model. The transition period begins in year 6 and ends in year 10. For the long-term sustainable growth rate starting in year 11, I used 4.9%, the average of the consensus economists' projected 5- and 10-year GDP growth rates.

Q WHAT ARE THE RESULTS OF YOUR MULTI-STAGE GROWTH DCF MODEL?

A As shown in Schedule MPG-10, the average multi-stage growth DCF returns on equity for my proxy groups are summarized in Table 6 below.

TABLE 6

Multi-Stage Growth DCF Summary

Proxy Group	Average
Water	9.01%
Gas	8.69%

Q PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.

A The results from my DCF analyses are summarized in Table 7 below:

TABLE 7

Summary of DCF Results

Description	Water	Gas
Constant Growth DCF Model (Analyst Growth)	10.81%	8.27%
Constant Growth DCF Model (Sustainable Growth)	9.67%	9.93%
Multi-Stage Growth DCF Model	9.01%	8.69%
Avg. DCF Return	9.83%	8.96%
DCF Return (Excluding Analyst Growth DCF)	9.34%	9.31%

As shown in Table 7 above, my DCF returns for the water utility proxy group average 9.83%, and the gas utility proxy group averages 8.96%. For the reasons set forth above, I believe the constant growth DCF model using analysts' growth rates for the water utility proxy group in particular is unreasonably high. The average of the sustainable growth and multi-stage growth DCF studies for the water and gas proxy groups are 9.34% and 9.31%, respectively. Using all DCF estimates produces a DCF return range of 9.83% to 8.96%, with a midpoint estimate of 9.40. This midpoint is conservatively high because it gives some weight to the overstated constant growth DCF estimate using the analysts' short-term growth projection for water utilities.

Risk Premium Model

Q PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

A This model is based on the principle that investors require a higher return to assume greater risk. Common equity investments have greater risk than bonds because bonds have more security of payment in bankruptcy proceedings than common equity and the coupon payments on bonds represent contractual obligations. In contrast, companies are not required to pay dividends on common equity, or to guarantee returns on common equity investments. Therefore, common equity securities are considered to be more risky than bond securities.

In this case, my risk premium model is based on two estimates of an equity risk premium. First, I estimated the difference between the required return on utility common equity investments and Treasury bonds. The difference between the required return on common equity and the bond yield is the risk premium. I estimated the risk premium on an annual basis for each year over the period 1986 through the third quarter of 2011. The common equity required returns were based on regulatory commission-authorized returns for gas utility companies.[11] Authorized returns are typically based on expert witnesses' estimates of the contemporary investor's required return.

The second equity risk premium method is based on the difference between regulatory commission-authorized returns on common equity and contemporary "A" rated utility bond yields. This time period was selected because over the period 1986 through the third quarter of 2011, public utility stocks have consistently traded at a premium to book value. This is illustrated in Schedule MPG-11, where the market-to-book ratio since 1986 for the water utility industry was consistently been above or

[11] Information for water utility authorized returns is not available for this time period.

equal to 1.0. Over this time period, regulatory authorized returns were sufficient to support market prices that at least exceeded book value. This is an indication that regulatory authorized returns on common equity supported a utility's ability to issue additional common stock, without diluting existing shares. It further demonstrates that utilities were able to access equity markets without a detrimental impact on current shareholders.

Based on this analysis, as shown in Schedule MPG-12, the average indicated equity risk premium over U.S. Treasury bond yields has been 5.10%. Of the 26 observations, 20 indicated risk premiums fall in the range of 4.15% to 5.93%. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best method to measure the current return on common equity using this methodology.

As shown in Schedule MPG-13, the average indicated equity risk premium over contemporary Moody's utility bond yields was 3.68% over the period 1986 through the second quarter of 2011. The indicated equity risk premium estimates based on this analysis primarily fall in the range of 3.04% to 4.47% over this time period.

Q DO YOU BELIEVE THAT THIS RISK PREMIUM IS BASED ON A TIME PERIOD THAT IS TOO LONG OR TOO SHORT TO DRAW ACCURATE RESULTS CONCERNING CONTEMPORARY MARKET CONDITIONS?

A No. Relying on a relatively long period of time where stock valuations reflect premium to book value is an indication that the authorized returns on equity and the corresponding equity risk premiums were supportive of investors' return expectations

and provided utilities access to the equity markets under reasonable terms and conditions. Further, this time period is long enough to smooth abnormal market movement that might distort equity risk premiums. While market conditions and risk premiums do vary over time, this historical time period is a reasonable period to estimate contemporary risk premiums.

The time period I use in this risk premium analysis is a generally accepted period to develop a risk premium study using "expectational" data. Conversely, studies have recommended that use of "actual achieved return data" should be based on very long historical time periods. The studies find that achieved returns over short time periods may not reflect investors' expected returns due to unexpected and abnormal stock price performance. However, these short-term abnormal actual returns would be smoothed over time and the achieved actual returns over long time periods would approximate investors' expected returns. Therefore, it is reasonable to assume that averages of annual achieved returns over long time periods will generally converge on the investors' expected returns.

My risk premium study is based on expectational data, not actual returns, and, thus, need not encompass very long time periods.

Q BASED ON HISTORICAL DATA, WHAT RISK PREMIUM HAVE YOU USED TO ESTIMATE MISSOURI-AMERICAN'S COST OF EQUITY IN THIS PROCEEDING?

A The equity risk premium should reflect the relative market perception of risk in the utility industry today. I have gauged investor perceptions in utility risk today in Schedule MPG-14. On that exhibit, I show the yield spread between utility bonds and Treasury bonds over the last 30 years.

As shown, the 2008 utility bond yield spreads for "A" rated and "Baa" rated utility bonds over Treasury bonds are 2.25% and 2.97%, respectively. The utility bond yield spreads over Treasury bonds for "A" and "Baa" rated utility bonds for 2009 are 1.96% and 2.98%, respectively. In 2010, these spreads declined to 1.21% and 1.71%, respectively. These utility bond yield spreads over Treasury bond yields are now lower than the 30-year average spreads of 1.59% and 1.99%, respectively.

A current 13-week average "A" rated utility bond yield of 4.82%, when compared to the current Treasury bond yield of 3.79% as shown in Schedule MPG-2, page 1 of 4, implies a yield spread of around 1.03%. This current utility bond yield is lower than the 30-year average spread for "A" utility bonds of 1.59%. The current spread for the "Baa" utility yields of 1.55% is also lower than the 30-year average spread of 1.99%. These reduced utility bond yield spreads are clear evidence that the market considers the utility industry to be a relatively low risk investment and demonstrates that utilities continue to have strong access to capital.

Q HOW DID YOU ESTIMATE MISSOURI-AMERICAN'S COST OF COMMON EQUITY WITH THIS RISK PREMIUM MODEL?

A I added a projected long-term Treasury bond yield to my estimated equity risk premium over Treasury yields. *Blue Chip Financial Forecasts* projects the 30-year Treasury bond yield to be 3.9%, and a 10-year Treasury bond yield to be 2.8%.[12] Using the projected 30-year bond yield of 3.9% and a Treasury bond risk premium of 4.15% to 5.93%, as developed above, produces an estimated common equity return in the range of 8.05% to 9.83%, with a midpoint of 8.99%.

[12] *Blue Chip Financial Forecasts*, October 1, 2011, at 2.

I next added my equity risk premium over utility bond yields to a current 13-week average yield on "Baa" rated utility bonds for the period ending October 21, 2011 of 5.20%. (Schedule MPG-2, page 1 of 4). Adding the utility equity risk premium of 3.04% to 4.47%, as developed above, to a "Baa" rated bond yield of 5.20%, produces a cost of equity in the range of 8.24% to 9.67%, with a midpoint of 8.96%.

My risk premium analyses produce a return estimate in the range of 8.94% to 8.96%, with a midpoint estimate of 8.95%, rounded to 9.00%.

Capital Asset Pricing Model ("CAPM")

Q PLEASE DESCRIBE THE CAPM.

A The CAPM method of analysis is based upon the theory that the market required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. This relationship between risk and return can be expressed mathematically as follows:

$R_i = R_f + B_i \times (R_m - R_f)$ where:

R_i = Required return for stock i
R_f = Risk-free rate
R_m = Expected return for the market portfolio
B_i = Beta - Measure of the risk for stock

The stock-specific risk term in the above equation is beta. Beta represents the investment risk that cannot be diversified away when the security is held in a diversified portfolio. When stocks are held in a diversified portfolio, firm-specific risks can be eliminated by balancing the portfolio with securities that react in the opposite direction to firm-specific risk factors (e.g., business cycle, competition, product mix, and production limitations).

The risks that cannot be eliminated when held in a diversified portfolio are nondiversifiable risks. Nondiversifiable risks are related to the market in general and are referred to as systematic risks. Risks that can be eliminated by diversification are regarded as non-systematic risks. In a broad sense, systematic risks are market risks, and non-systematic risks are business risks. The CAPM theory suggests that the market will not compensate investors for assuming risks that can be diversified away. Therefore, the only risk that investors will be compensated for are systematic or non-diversifiable risks. The beta is a measure of the systematic or non-diversifiable risks.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.

A The CAPM requires an estimate of the market risk-free rate, the company's beta, and the market risk premium.

Q WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?

A As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield is 3.9%.[13] The current 30-year bond yield is 3.41%. I used *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield of 3.9% for my CAPM analysis.

Q WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE OF THE RISK-FREE RATE?

A Treasury securities are backed by the full faith and credit of the United States government. Therefore, long-term Treasury bonds are considered to have negligible credit risk. Also, long-term Treasury bonds have an investment horizon similar to that

[13] *Blue Chip Financial Forecasts*, September 1, 2011, at 2.

of common stock. As a result, investor-anticipated long-run inflation expectations are reflected in both common stock required returns and long-term bond yields. Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a long-term bond yield is a reasonable estimate of the nominal risk-free rate included in common stock returns.

Treasury bond yields, however, do include risk premiums related to unanticipated future inflation and interest rates. A Treasury bond yield is not a risk-free rate. Risk premiums related to unanticipated inflation and interest rates are systematic or market risks. Consequently, for companies with betas less than 1.0, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis can produce an overstated estimate of the CAPM return.

Q WHAT BETA DID YOU USE IN YOUR ANALYSIS?

A As shown in Schedule MPG-15, the water and gas utility proxy groups' average *Value Line* beta estimates are 0.74 and 0.68, respectively.

Q HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATE?

A I derived two market risk premium estimates, a forward-looking estimate and one based on a long-term historical average.

The historical estimate of the market risk premium was also estimated by Morningstar in *Stocks, Bonds, Bills and Inflation 2011 Classic Yearbook*. Over the period 1926 through 2010, Morningstar's study estimated that the arithmetic average of the achieved total return on the S&P 500 was 11.90%, and the total return on long-term Treasury bonds was 5.9%. The indicated equity risk premium is 6.0% (11.90% - 5.9% = 6.0%).

The forward-looking estimate was derived by estimating the expected return on the market (as represented by the S&P 500) and subtracting the risk-free rate from this estimate. I estimated the expected return on the S&P 500 by adding an expected inflation rate to the long-term historical arithmetic average real return on the market. The real return on the market represents the achieved return above the rate of inflation.

Morningstar's *Stocks, Bonds, Bills and Inflation 2011 Classic Yearbook* publication estimates the historical arithmetic average real market return over the period 1926 to 2010 as 8.7%.[14] A current consensus analysts' inflation projection, as measured by the Consumer Price Index, is 2.3%.[15] Using these estimates, the expected market return is 11.20%.[16] The market risk premium then is the difference between the 11.20% expected market return, and my 3.9% risk-free rate estimate, or 7.3%.

Q HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE COMPARE TO THAT ESTIMATED BY MORNINGSTAR?

A Morningstar's analysis indicates that a market risk premium falls somewhere in the range of 6.0% to 6.7%. My market risk premium falls in the range of 6.0% to 7.3%. My average market risk premium of 6.65% is within Morningstar's range.

Morningstar estimates a forward-looking market risk premium based on actual achieved data from the historical period of 1926 through 2010. Using this data, Morningstar estimates a market risk premium derived from the total return on large company stocks (S&P 500), less the income return on Treasury bonds. The total

[14] Morningstar Inc. *SBBI 2011 Classic Yearbook* at 86.
[15] *Blue Chip Financial Forecasts*, September 23, 2011 at 2.
[16] [(1 + 0.087) ∗ (1 + 0.023) – 1] ∗ 100.

return includes capital appreciation, dividend or coupon reinvestment returns, and annual yields received from coupons and/or dividend payments. The income return, in contrast, only reflects the income return received from dividend payments or coupon yields. Morningstar argues that the income return is the only true risk-free rate associated with the Treasury bond and is the best approximation of a truly risk-free rate. I disagree with this assessment from Morningstar, because it does not reflect a true investment option available to the marketplace and therefore does not produce a legitimate estimate of the expected premium of investing in the stock market versus that of Treasury bonds. Nevertheless, I will use Morningstar's conclusion to show the reasonableness of my market risk premium estimates.

Morningstar's range is based on several methodologies. First, Morningstar estimates a market risk premium of 6.7% based on the difference between the total market return on common stocks (S&P 500) less the income return on Treasury bond investments. Second, Morningstar found that if the New York Stock Exchange (the "NYSE") was used as the market index rather than the S&P 500, that the market risk premium would be 6.5% and not 6.7%. Third, if only the two deciles of the largest companies included in the NYSE were considered, the market risk premium would be 6.0%.[17]

Finally, Morningstar found that the 6.7% market risk premium based on the S&P 500 was impacted by an abnormal expansion of price-to-earnings ("P/E") ratios relative to earnings and dividend growth during the period 1980 through 2001. Morningstar believes this abnormal P/E expansion is not sustainable. Therefore, Morningstar adjusted this market risk premium estimate to normalize the growth in the P/E ratio to be more in line with the growth in dividends and earnings. Based on this

[17]Morningstar observes that the S&P 500 and the NYSE Decile 1-2 are both large capitalization benchmarks. Morningstar, Inc. *Ibbotson SBBI 2011 Valuation Yearbook* at 54.

alternative methodology, Morningstar published a long-horizon supply-side market risk premium of 6.0%.[18]

Q WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A As shown in Schedule MPG-16, based on Morningstar's market risk premium of 6.70%, a risk-free rate of 3.9%, and beta estimates of 0.74 and 0.68 for the water utility proxy group and my gas utility proxy group, respectively, a CAPM analysis will produce the following results.

TABLE 8

CAPM Summary

Proxy Group	Average
Water	8.86%
Gas	8.46%

Based on the results of my CAPM study, I believe a return on equity for Missouri-American will fall in the range of 8.86% to 8.46%. However, I placed primary weight on the high-end of this CAPM return estimate for essentially two reasons. First, the CAPM return estimate seems to be reasonably close to my risk premium estimate. Second, water utility beta estimates appear to be somewhat higher than the gas utility proxy group. To be conservative, I believe it is appropriate to include more weight to the beta estimates for water utilities. Hence, based on my CAPM study, I believe the return on equity for Missouri-American in this case would be 8.86%, rounded to 8.90%.

[18] *Id.* at 66.

Return on Equity Summary

Q BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO YOU RECOMMEND FOR MISSOURI-AMERICAN?

A Based on my analyses, I estimate Missouri-American's current market cost of equity to be 9.40%.

TABLE 9

Return on Common Equity Summary

Description	Recommended
DCF	9.40%
Risk Premium	9.00%
CAPM	8.90%

I am concerned about the low results being produced at this time by my CAPM and Risk Premium studies. Therefore, I propose to use the high end of my range, or 9.4% in this case.

Financial Integrity

Q WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT AN INVESTMENT GRADE BOND RATING FOR MISSOURI-AMERICAN?

A Yes. I have reached this conclusion by comparing the key credit rating financial ratios for Missouri-American at its proposed capital structure, and my return on equity to S&P's benchmark financial ratios using S&P's new credit metric ranges.

Q PLEASE DESCRIBE THE MOST RECENT S&P FINANCIAL RATIO CREDIT METRIC METHODOLOGY.

A S&P publishes a matrix of financial ratios that correspond to its assessment of the business risk of the utility company and related bond rating. S&P updated its credit metric guidelines on November 30, 2007, and incorporated utility metric benchmarks with the general corporate rating metrics. However, the effect of integrating the utility metrics with those of general corporate bonds resulted in a reduction to the transparency in S&P's credit metric guideline for utilities. Most recently, on May 27, 2009 S&P expanded its matrix criteria and included an additional business and financial risk category.

Based on S&P's most recent credit matrix, the business risk profile categories are "Excellent," "Strong," Satisfactory," "Fair," Weak," and "Vulnerable." Most electric utilities have a business risk profile of "Excellent" or "Strong."

The S&P financial risk profile categories are "Minimal," "Modest," "Intermediate," "Significant," "Aggressive," and "Highly Leveraged." Most of the electric utilities have a financial risk profile of "Excellent" or "Aggressive."

Missouri-American's risk proxy affiliate, AWC, has an "Excellent" business risk profile and an "Aggressive" financial risk profile.

Q PLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK RATIOS IN ITS CREDIT RATING REVIEW.

A S&P evaluates a utility's credit rating based on an assessment of its financial and business risks. A combination of financial and business risks equates to the overall assessment of Missouri-American's total credit risk exposure. S&P publishes a

matrix of financial ratios that defines the level of financial risk as a function of the level of business risk.

S&P publishes ranges for three primary financial ratios that it uses as guidance in its credit review for utility companies. The three primary financial ratio benchmarks it relies on in its credit rating process include: (1) debt to EBITDA,[19] (2) funds from operations ("FFO") to total debt, and (3) total debt to total capital.

Q HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE REASONABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?

A I calculated each of S&P's financial ratios based on Missouri-American's cost of service for retail operations. While S&P would normally look at total consolidated financial ratios in its credit review process, my investigation in this proceeding is to judge the reasonableness of my proposed cost of capital for rate-setting in Missouri-American's utility operations. Hence, I am attempting to determine whether the rate of return and cash flow generation opportunity reflected in my proposed utility rates for Missouri-American will support target investment grade bond ratings and financial integrity.

Q PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS FOR MISSOURI-AMERICAN.

A The S&P financial metric calculations for Missouri-American are developed on Schedule MPG-17, page 1 of 3.

As shown in Schedule MPG-17, page 1 of 3, column 1, based on an equity return of 9.40%, Missouri-American will be provided an opportunity to produce a debt

[19] Earnings Before Interest, Taxes, Depreciation and Amortization.

to EBITDA ratio of 3.4x. This is within S&P's "Significant" guideline range of 3.0x to 4.0x and is stronger than the "Aggressive" guideline.[20] This ratio supports an investment grade credit rating.

Missouri-American's retail operations FFO to total debt coverage at a 9.40% equity return would be 17%, which is within the "Aggressive" metric guideline range of 12% to 20%. The FFO/total debt ratio will support Missouri-American's investment grade bond rating.

Finally, Missouri-American's total debt ratio to total capital is 50%. This is at the high end of the "Significant" guideline range of 45% to 50%. This total debt ratio will support Missouri-American's investment grade bond rating.

At my recommended return on equity, the Company's financial credit metrics are supportive of an investment grade bond rating.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

[20]Standard & Poor's RatingsDirect: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

Appendix A

Qualifications of Michael P. Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q PLEASE STATE YOUR OCCUPATION.

A I am a consultant in the field of public utility regulation and a Managing Principal with Brubaker & Associates, Inc., energy, economic and regulatory consultants.

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A In 1983 I received a Bachelors of Science Degree in Electrical Engineering from Southern Illinois University, and in 1986, I received a Masters Degree in Business Administration with a concentration in Finance from the University of Illinois at Springfield. I have also completed several graduate level economics courses.

In August of 1983, I accepted an analyst position with the Illinois Commerce Commission (ICC). In this position, I performed a variety of analyses for both formal and informal investigations before the ICC, including: marginal cost of energy, central dispatch, avoided cost of energy, annual system production costs, and working capital. In October of 1986, I was promoted to the position of Senior Analyst. In this position, I assumed the additional responsibilities of technical leader on projects, and my areas of responsibility were expanded to include utility financial modeling and financial analyses.

In 1987, I was promoted to Director of the Financial Analysis Department. In this position, I was responsible for all financial analyses conducted by the staff. Among other things, I conducted analyses and sponsored testimony before the ICC on rate of return, financial integrity, financial modeling and related issues. I also supervised the development of all Staff analyses and testimony on these same issues. In addition, I supervised the Staff's review and recommendations to the Commission concerning utility plans to issue debt and equity securities.

In August of 1989, I accepted a position with Merrill-Lynch as a financial consultant. After receiving all required securities licenses, I worked with individual investors and small businesses in evaluating and selecting investments suitable to their requirements.

In September of 1990, I accepted a position with Drazen-Brubaker & Associates, Inc. In April 1995 the firm of Brubaker & Associates, Inc. (BAI) was formed. It includes most of the former DBA principals and Staff. Since 1990, I have performed various analyses and sponsored testimony on cost of capital, cost/benefits of utility mergers and acquisitions, utility reorganizations, level of operating expenses and rate base, cost of service studies, and analyses relating industrial jobs and economic development. I also participated in a study used to revise the financial policy for the municipal utility in Kansas City, Kansas.

At BAI, I also have extensive experience working with large energy users to distribute and critically evaluate responses to requests for proposals (RFPs) for electric, steam, and gas energy supply from competitive energy suppliers. These analyses include the evaluation of gas supply and delivery charges, cogeneration and/or combined cycle unit feasibility studies, and the evaluation of third-party asset/supply management agreements. I have also analyzed commodity pricing

indices and forward pricing methods for third party supply agreements, and have also conducted regional electric market price forecasts.

In addition to our main office in St. Louis, the firm also has branch offices in Phoenix, Arizona and Corpus Christi, Texas.

Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

A Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of service and other issues before the Federal Energy Regulatory Commission and numerous state regulatory commissions including: Arkansas, Arizona, California, Colorado, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Missouri, Montana, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, and before the provincial regulatory boards in Alberta and Nova Scotia, Canada. I have also sponsored testimony before the Board of Public Utilities in Kansas City, Kansas; presented rate setting position reports to the regulatory board of the municipal utility in Austin, Texas, and Salt River Project, Arizona, on behalf of industrial customers; and negotiated rate disputes for industrial customers of the Municipal Electric Authority of Georgia in the LaGrange, Georgia district.

Q PLEASE DESCRIBE ANY PROFESSIONAL REGISTRATIONS OR ORGANIZATIONS TO WHICH YOU BELONG.

A I earned the designation of Chartered Financial Analyst (CFA) from the CFA Institute. The CFA charter was awarded after successfully completing three examinations which covered the subject areas of financial accounting, economics, fixed income and

equity valuation and professional and ethical conduct. I am a member of the CFA Institute's Financial Analyst Society.

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Missouri-American Water Company

Rate of Return

Line	Description		Amount (000) (1)	Weight (2)	Cost (3)	Weighted Cost (4)
1	Long-Term Debt	$	423,115	49.36%	6.36%	3.14%
2	Preferred Stock		2,306	0.27%	9.23%	0.02%
3	Common Equity		431,742	50.37%	**9.40%**	4.73%
4	**Total**	**$**	**857,162**	**100.00%**		**7.90%**

Source:
Schedule PMA-1, page 1 of 2.

Missouri-American Water Company

Case No. WR-2011-0337
Treasury and Utility Bond Yields

Line	Date	Treasury Bond Yield[1] (1)	"A" Rated Utility Bond Yield[2] (2)	"Baa" Rated Utility Bond Yield[2] (3)
1	10/21/11	3.18%	4.62%	5.33%
2	10/14/11	3.17%	4.64%	5.40%
3	10/07/11	2.88%	4.48%	5.23%
4	09/30/11	3.02%	4.38%	5.07%
5	09/23/11	3.02%	4.32%	5.00%
6	09/16/11	3.32%	4.59%	5.23%
7	09/09/11	3.30%	4.46%	5.04%
8	09/02/11	3.52%	4.47%	5.04%
9	08/26/11	3.53%	4.67%	5.26%
10	08/19/11	3.57%	4.47%	5.01%
11	08/12/11	3.66%	4.71%	5.23%
12	08/05/11	3.88%	4.77%	5.25%
13	07/29/11	4.25%	5.09%	5.54%
14	**13-Wk Average**	**3.41%**	**4.59%**	**5.20%**
15	**Spread**		**1.18%**	**1.79%**

Sources:

[1] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.

[2] www.moodys.com, Bond Yields and Key Indicators.

Missouri-American Water Company

Case No. WR-2010-0131
Treasury and Utility Bond Yields

Line	Date	Treasury Bond Yield[1] (1)	"A" Rated Utility Bond Yield[2] (2)	"Baa" Rated Utility Bond Yield[2] (3)
1	06/11/10	4.15%	5.48%	6.24%
2	06/04/10	4.21%	5.48%	6.11%
3	05/28/10	4.15%	5.57%	6.16%
4	05/21/10	4.21%	5.32%	5.87%
5	05/14/10	4.42%	5.29%	5.95%
6	05/07/10	4.36%	5.49%	5.88%
7	04/30/10	4.60%	5.60%	5.98%
8	04/23/10	4.66%	5.75%	6.14%
9	04/16/10	4.70%	5.78%	6.17%
10	04/09/10	4.78%	5.90%	6.26%
11	04/02/10	4.76%	5.98%	6.33%
12	03/26/10	4.68%	5.93%	6.30%
13	03/19/10	4.59%	5.77%	6.16%
14	**13-Wk Average**	**4.48%**	**5.64%**	**6.12%**
15	**Spread**		**1.16%**	**1.64%**

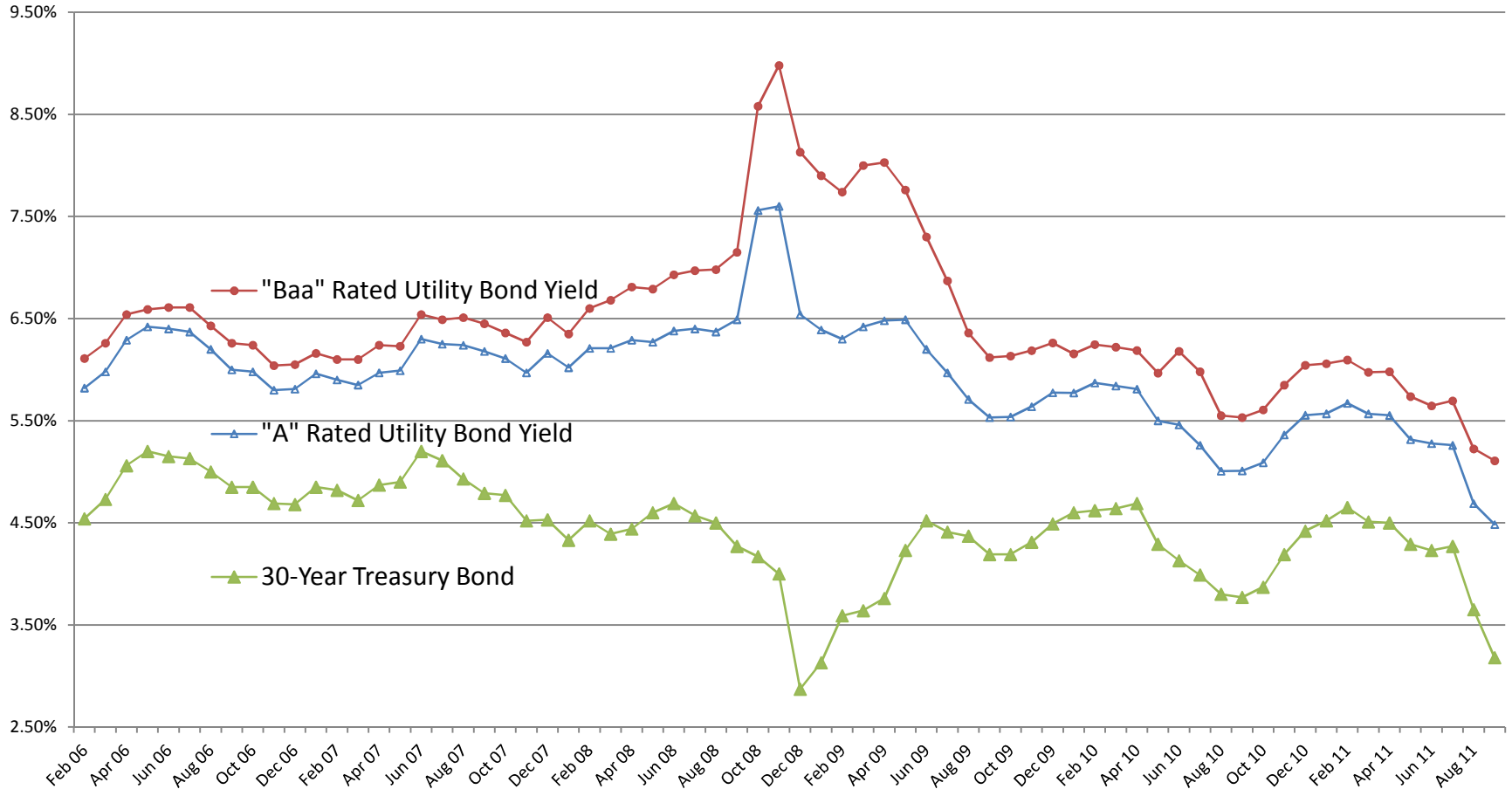
Sources:

[1] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.

[2] www.moodys.com, Bond Yields and Key Indicators.

Missouri-American Water Company

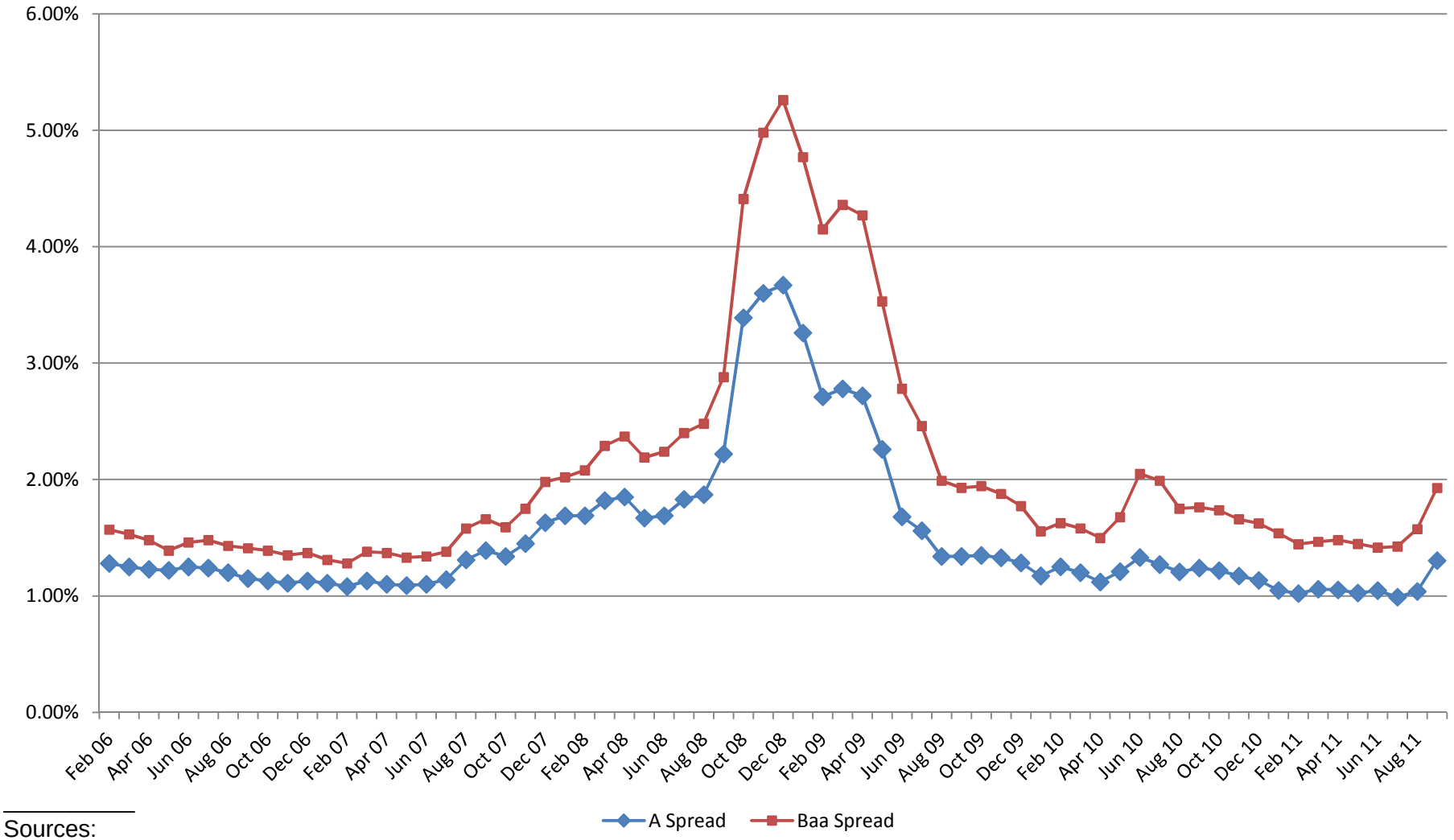
Trends in Utility Bond Yields



Sources:
Merchant Bond Record.
www.moodys.com, Bond Yields and Key Indicators.
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

Missouri-American Water Company

Spread Between "A" and "Baa" Rated Utility Bond Yield and 30-Year Treasury Bond Yield



Sources:
Merchant Bond Record.
www.moodys.com, Bond Yields and Key Indicators.
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

Missouri-American Water Company

Water Utilities
Proxy Group - Investment Risk

Line	Company	Corporate Credit Ratings S&P[1] (1)	Corporate Credit Ratings Moody's[2] (2)	Common Equity Ratios *AUS*[3] (3)	Common Equity Ratios *Value Line*[4] (4)	S&P Business Risk Score[1] (5)
1	American States Water	A+	N/R	52.7%	55.7%	Excellent
2	American Water Works Co.	BBB+	Baa2	41.6%	43.2%	Excellent
3	Aqua America, Inc.	A+	N/R	41.9%	43.4%	Excellent
4	California Water Serv. Grp.	A+	N/R	46.1%	47.6%	Excellent
5	Connecticut Water Services	A	N/R	45.7%	N/A	Excellent
6	Middlesex Water Company	A-	N/R	51.8%	55.8%	Excellent
7	SJW Corporation	A	N/R	42.0%	46.3%	Excellent
8	York Water Company	A-	N/R	52.3%	51.7%	Excellent
9	**Average**	**A**	**Baa2**	**46.8%**	**49.1%**	**Excellent**
10	Missouri-American Water Company American Water Works Co. Inc.	BBB+[1]	Baa2[2]		50.4%[5]	Excellent

Sources and Notes:

[1] *S&P RatingsDirect:* "U.S. Investor-Owned Water Utilities, Strongest To Weakest," October 7, 2011.

[2] *Moody's,* http://www.moodys.com, downloaded on October 28, 2011

[3] *AUS Utility Reports*, October 2011.

[4] *The Value Line Investment Survey,* October 21, 2011.

[5] Schedule MPG-1.

N/R: Not Rated.

N/A: Not Available.

Missouri-American Water Company

Gas Utilities
Proxy Group - Investment Risk

Line	Company	Corporate Credit Ratings[1] S&P (1)	Moody's (2)	Common Equity Ratios *AUS*[2] (3)	*Value Line*[3] (4)	S&P Business Risk Score[4] (5)
1	Atmos Energy Corp.	BBB+	Baa1	51.4%	54.6%	Excellent
2	Laclede Group, Inc.	A	Baa2	61.4%	59.5%	Excellent
3	New Jersey Resources	A	Aa3	57.9%	62.7%	Excellent
4	NiSource Inc.	BBB-	N/R	40.9%	45.3%	Excellent
5	Northwest Natural Gas	A+	A3	47.9%	53.5%	Excellent
6	Piedmont Natural Gas	A	A3	50.4%	59.0%	Excellent
7	South Jersey Industries	BBB+	N/R	48.4%	62.6%	Strong
8	Southwest Gas Corp.	BBB+	Baa2	51.7%	50.9%	Excellent
9	UGI Corporation	N/R	A3	45.3%	56.0%	N/A
10	WGL Holdings, Inc.	A+	N/R	64.0%	65.0%	Excellent
11	**Average**	**A-**	**A3**	**51.9%**	**56.9%**	**Excellent**
12	Missouri-American Water Company American Water Works Co. Inc.	BBB+[1]	Baa2[2]		50.4%[5]	Excellent

Sources and Notes:

[1] *SNL Financial,* http://www.snl.com, downloaded on October 25, 2011.

[2] *AUS Utility Reports* , October 2011.

[3] *The Value Line Investment Survey,* September 9, 2011.

[4] *S&P RatingsDirect:* "U.S. Nat. Gas Distributors And Integrated Gas Companies, Strongest To Weakest," October 7, 2011.

[5] Schedule MPG-1.

N/R: Not Rated.

Missouri-American Water Company

Water Utilities
Consensus Analysts' Growth Rates

Line	Company	Zacks Estimated Growth %[1] (1)	Zacks Number of Estimates (2)	SNL Estimated Growth %[2] (3)	SNL Number of Estimates (4)	Reuters Estimated Growth %[3] (5)	Reuters Number of Estimates (6)	Average of Growth Rates (7)
1	American States Water	12.00%	N/A	N/A	N/A	7.15%	2	9.58%
2	American Water Works Co.	8.00%	N/A	N/A	N/A	11.09%	8	9.55%
3	Aqua America, Inc.	8.30%	N/A	N/A	N/A	7.25%	4	7.78%
4	California Water Serv. Grp.	10.00%	N/A	N/A	N/A	6.00%	2	8.00%
5	Connecticut Water Services	N/A	N/A	N/A	N/A	8.00%	1	8.00%
6	Middlesex Water Company	N/A	N/A	N/A	N/A	-5.00%	1	-5.00%
7	SJW Corporation	N/A	N/A	N/A	N/A	14.00%	1	14.00%
8	York Water Company	N/A	N/A	N/A	N/A	6.00%	2	6.00%
9	**Average**	**9.58%**	**N/A**	**N/A**	**N/A**	**6.81%**	**3**	**7.24%**
10	**Median**							**8.00%**

Sources and Notes:

[1] Zacks Elite, http://www.zackselite.com/, downloaded on October 26, 2011.

[2] SNL Interactive, http://www.snl.com/, downloaded on October 26, 2011.

[3] Reuters, http://www.reuters.com/, downloaded on October 26, 2011.

N/A: Not Available.

Missouri-American Water Company

Gas Utilities
Consensus Analysts' Growth Rates

Line	Company	Zacks Estimated Growth %[1] (1)	Zacks Number of Estimates (2)	SNL Estimated Growth %[2] (3)	SNL Number of Estimates (4)	Reuters Estimated Growth %[3] (5)	Reuters Number of Estimates (6)	Average of Growth Rates (7)
1	Atmos Energy Corp.	4.50%	N/A	5.00%	1	3.75%	4	4.42%
2	Laclede Group, Inc.	3.00%	N/A	4.00%	1	5.00%	1	4.00%
3	New Jersey Resources	4.00%	N/A	5.00%	2	3.53%	4	4.18%
4	NiSource Inc.	0.00%	N/A	4.00%	1	6.64%	5	3.55%
5	Northwest Natural Gas	4.40%	N/A	4.00%	4	4.17%	3	4.19%
6	Piedmont Natural Gas	4.50%	N/A	4.00%	1	4.90%	4	4.47%
7	South Jersey Industries	6.00%	N/A	6.00%	3	8.00%	4	6.67%
8	Southwest Gas Corp.	6.00%	N/A	5.00%	1	1.60%	4	4.20%
9	UGI Corporation	3.20%	N/A	N/A	N/A	3.10%	1	3.15%
10	WGL Holdings, Inc.	5.30%	N/A	5.00%	1	4.15%	4	4.82%
11	**Average**	**4.09%**	**N/A**	**4.67%**	**2**	**4.48%**	**3**	**4.36%**
12	**Median**							**4.20%**

Sources and Notes:

[1] Zacks Elite, http://www.zackselite.com/, downloaded on October 26, 2011.

[2] SNL Interactive, http://www.snl.com/, downloaded on October 26, 2011.

[3] Reuters, http://www.reuters.com/, downloaded on October 26, 2011.

N/A: Not Available.

Missouri-American Water Company

Water Utilities
Consensus Analysts' Growth Rates
Constant Growth DCF Model

Line	Company	13-Week AVG Stock Price[1] (1)	Analysts' Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	American States Water	$33.95	9.58%	$1.12	3.61%	13.19%
2	American Water Works Co.	$29.04	9.55%	$0.92	3.47%	13.02%
3	Aqua America, Inc.	$21.38	7.78%	$0.62	3.13%	10.90%
4	California Water Serv. Grp.	$17.93	8.00%	$0.62	3.71%	11.71%
5	Connecticut Water Services	$26.17	8.00%	$0.95	3.93%	11.93%
6	Middlesex Water Company	$17.74	-5.00%	$0.73	3.92%	-1.08%
7	SJW Corporation	$22.57	14.00%	$0.69	3.49%	17.49%
8	York Water Company	$16.87	6.00%	$0.52	3.29%	9.29%
9	**Average**	**$23.21**	**7.24%**	**$0.77**	**3.57%**	**10.81%**
10	**Median**		**8.00%**			**11.82%**

Sources and Notes:

[1] http://moneycentral.msn.com, downloaded on October 25, 2011.

[2] Schedule MPG-4, Page 1 of 2.

[3] *The Value Line Investment Survey,* October 21, 2011.

Missouri-American Water Company

Gas Utilities
Consensus Analysts' Growth Rates
Constant Growth DCF Model

Line	Company	13-Week AVG Stock Price[1] (1)	Analysts' Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	Atmos Energy Corp.	$32.54	4.42%	$1.36	4.36%	8.78%
2	Laclede Group, Inc.	$37.94	4.00%	$1.62	4.44%	8.44%
3	New Jersey Resources	$44.26	4.18%	$1.44	3.39%	7.57%
4	NiSource Inc.	$20.96	3.55%	$0.92	4.54%	8.09%
5	Northwest Natural Gas	$44.04	4.19%	$1.74	4.12%	8.31%
6	Piedmont Natural Gas	$29.42	4.47%	$1.16	4.12%	8.59%
7	South Jersey Industries	$49.93	6.67%	$1.46	3.12%	9.79%
8	Southwest Gas Corp.	$36.29	4.20%	$1.06	3.04%	7.24%
9	UGI Corporation	$28.08	3.15%	$1.04	3.82%	6.97%
10	WGL Holdings, Inc.	$39.40	4.82%	$1.56	4.15%	8.97%
11	**Average**	**$36.29**	**4.36%**	**$1.34**	**3.91%**	**8.27%**
12	**Median**		**4.20%**			**8.37%**

Sources and Notes:

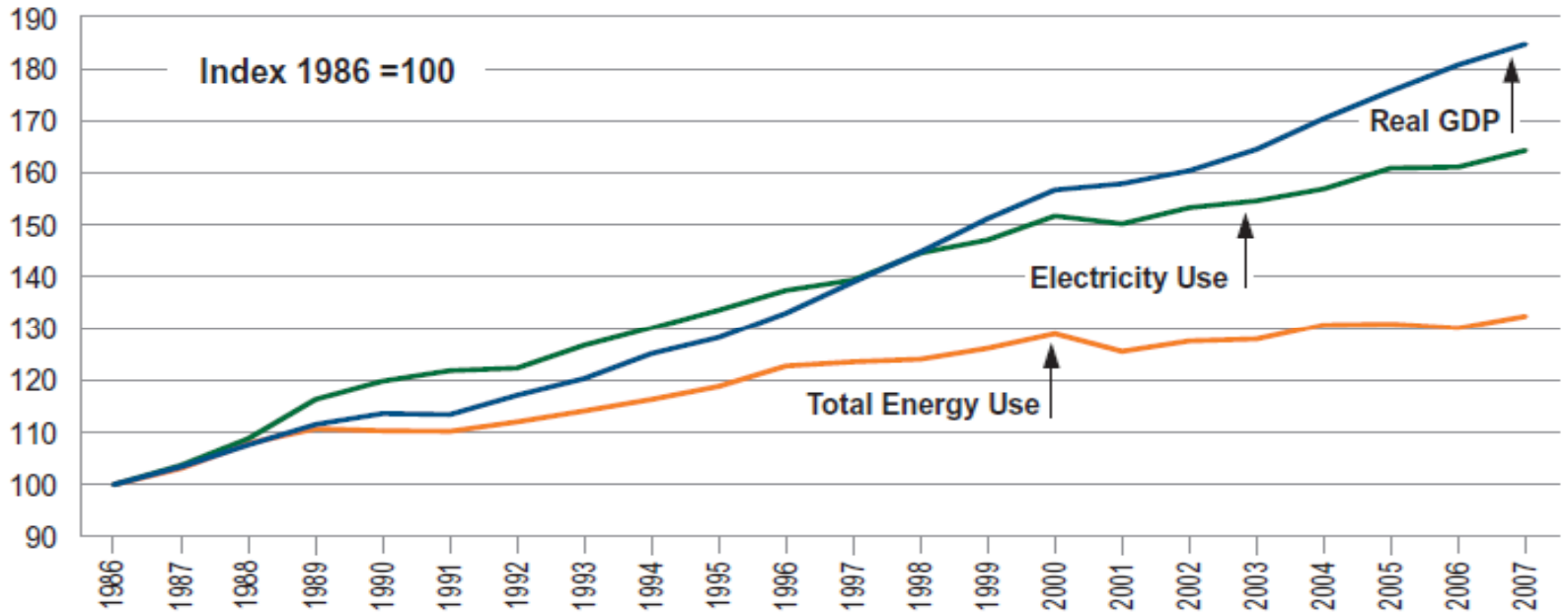
[1] http://moneycentral.msn.com, downloaded on October 25, 2011.

[2] Schedule MPG-4, Page 2 of 2.

[3] *The Value Line Investment Survey,* September 9, 2011.

Missouri-American Water Company

Electricity Sales Are Linked to U.S. Economic Growth



1986 represents the base year. Graph depicts increases or decreases from the base year.

Source: U.S. Department of Energy, Energy Information Administration (EIA).

Missouri-American Water Company

Water Utilities
Payout Ratios

Line	Company	Dividends Per Share		Earnings Per Share		Payout Ratio	
		2010	Projected	2010	Projected	2010	Projected
		(1)	(2)	(3)	(4)	(5)	(6)
1	American States Water	$1.04	$1.28	$2.22	$2.50	46.85%	51.20%
2	American Water Works Co.	$0.86	$1.10	$1.53	$2.25	56.21%	48.89%
3	Aqua America, Inc.	$0.59	$0.78	$0.90	$1.40	65.56%	55.71%
4	California Water Serv. Grp.	$0.60	$0.70	$0.91	$1.35	65.93%	51.85%
5	Connecticut Water Services	$0.92	N/A	$1.13	N/A	81.42%	N/A
6	Middlesex Water Company	$0.72	$0.80	$0.96	$1.20	75.00%	66.67%
7	SJW Corporation	$0.68	$0.82	$0.84	$1.40	80.95%	58.57%
8	York Water Company	$0.52	N/A	$0.71	N/A	73.24%	N/A
9	**Average**	**$0.74**	**$0.91**	**$1.15**	**$1.68**	**68.14%**	**55.48%**

Source:
The Value Line Investment Survey, October 21, 2011.

Missouri-American Water Company

Gas Utilities
Payout Ratios

Line	Company	Dividends Per Share		Earnings Per Share		Payout Ratio	
		2010	Projected	2010	Projected	2010	Projected
		(1)	(2)	(3)	(4)	(5)	(6)
1	Atmos Energy Corp.	$1.34	$1.45	$2.16	$2.70	62.04%	53.70%
2	Laclede Group, Inc.	$1.57	$1.80	$2.43	$3.05	64.61%	59.02%
3	New Jersey Resources	$1.36	$1.60	$2.46	$3.20	55.28%	50.00%
4	NiSource Inc.	$0.92	$0.92	$1.06	$1.85	86.79%	49.73%
5	Northwest Natural Gas	$1.68	$1.90	$2.73	$3.40	61.54%	55.88%
6	Piedmont Natural Gas	$1.11	$1.31	$1.55	$1.90	71.61%	68.95%
7	South Jersey Industries	$1.36	$2.00	$2.70	$4.10	50.37%	48.78%
8	Southwest Gas Corp.	$1.00	$1.25	$2.27	$3.10	44.05%	40.32%
9	UGI Corporation	$0.90	$1.16	$2.38	$2.90	37.82%	40.00%
10	WGL Holdings, Inc.	$1.50	$1.71	$2.27	$2.65	66.08%	64.53%
11	**Average**	**$1.27**	**$1.51**	**$2.20**	**$2.89**	**60.02%**	**53.09%**

Source:
The Value Line Investment Survey, September 9, 2011.

Missouri-American Water Company

Water Utilities
Sustainable Growth Rates

Line	Company	3 to 5 Year Projections: Dividends Per Share (1)	Earnings Per Share (2)	Book Value Per Share (3)	Book Value Growth (4)	ROE (5)	Adjustment Factor (6)	Adjusted ROE (7)	Payout Ratio (8)	Retention Rate (9)	Internal Growth Rate (10)	Sustainable Growth Rate (11)
1	American States Water	$1.28	$2.50	$20.00	-0.26%	12.50%	1.00	12.48%	51.20%	48.80%	6.09%	7.06%
2	American Water Works Co.	$1.10	$2.25	$24.05	0.39%	9.36%	1.00	9.37%	48.89%	51.11%	4.79%	5.17%
3	Aqua America, Inc.	$0.78	$1.40	$11.05	5.36%	12.67%	1.03	13.00%	55.71%	44.29%	5.76%	6.82%
4	California Water Serv. Grp.	$0.70	$1.35	$11.95	2.72%	11.30%	1.01	11.45%	51.85%	48.15%	5.51%	7.10%
5	Connecticut Water Services	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Middlesex Water Company	$0.80	$1.20	$11.75	1.09%	10.21%	1.01	10.27%	66.67%	33.33%	3.42%	4.48%
7	SJW Corporation	$0.82	$1.40	$16.20	3.33%	8.64%	1.02	8.78%	58.57%	41.43%	3.64%	6.17%
8	York Water Company	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	**Average**	**$0.91**	**$1.68**	**$15.83**	**2.11%**	**10.78%**	**1.01**	**10.89%**	**55.48%**	**44.52%**	**4.87%**	**6.13%**
10	**Median**											**6.49%**

Sources and Notes:
Cols. (1), (2) and (3): *The Value Line Investment Survey,* October 21, 2011.
Col. (4): [Col. (3) / Page 2 Col. (2)] ^ (1/5) - 1.
Col. (5): Col. (2) / Col. (3).
Col. (6): [2 * (1 + Col. (4))] / (2 + Col. (4)).
Col. (7): Col. (6) * Col. (5).
Col. (8): Col. (1) / Col. (2).
Col. (9): 1 - Col. (8).
Col. (10): Col. (9) * Col. (7).
Col. (11): Col. (10) + Page 2 Col. (9).

Missouri-American Water Company

Water Utilities
Sustainable Growth Rates

Line	Company	13-Week Average Stock Price[1] (1)	2010 Book Value Per Share[2] (2)	Market to Book Ratio (3)	Common Shares Outstanding (in Millions)[2] 2010 (4)	Common Shares Outstanding (in Millions)[2] 3-5 Years (5)	Growth (6)	S Factor[3] (7)	V Factor[4] (8)	S * V[5] (9)
1	American States Water	$33.95	$20.26	1.68	18.63	20.00	1.43%	2.40%	40.33%	0.97%
2	American Water Works Co.	$29.04	$23.59	1.23	175.00	190.00	1.66%	2.04%	18.77%	0.38%
3	Aqua America, Inc.	$21.38	$8.51	2.51	137.97	142.90	0.70%	1.77%	60.19%	1.07%
4	California Water Serv. Grp.	$17.93	$10.45	1.72	41.67	46.50	2.22%	3.81%	41.73%	1.59%
5	Connecticut Water Services	$26.17	$13.05	2.01	8.68	N/A	N/A	N/A	50.14%	N/A
6	Middlesex Water Company	$17.74	$11.13	1.59	15.57	17.00	1.77%	2.83%	37.27%	1.05%
7	SJW Corporation	$22.57	$13.75	1.64	18.55	22.50	3.94%	6.46%	39.09%	2.53%
8	York Water Company	$16.87	$7.19	2.35	12.69	N/A	N/A	N/A	57.39%	N/A
9	**Average**	**$23.21**	**$13.49**	**1.84**	**53.60**	**73.15**	**1.95%**	**3.22%**	**43.11%**	**1.26%**

Sources and Notes:

[1] http://moneycentral.msn.com, downloaded on October 25, 2011.

[2] *The Value Line Investment Survey,* October 21, 2011.

[3] Expected Growth in the Number of Shares, Column (3) * Column (6).

[4] Expected Profit of Stock Investment, [1 - 1 / Column (3)].

[5] Column (7) * Column (8).

Missouri-American Water Company

Gas Utilities
Sustainable Growth Rates

Line	Company	3 to 5 Year Projections										Sustainable
		Dividends Per Share (1)	Earnings Per Share (2)	Book Value Per Share (3)	Book Value Growth (4)	ROE (5)	Adjustment Factor (6)	Adjusted ROE (7)	Payout Ratio (8)	Retention Rate (9)	Internal Growth Rate (10)	Growth Rate (11)
1	Atmos Energy Corp.	$1.45	$2.70	$30.10	4.49%	8.97%	1.02	9.17%	53.70%	46.30%	4.24%	5.32%
2	Laclede Group, Inc.	$1.80	$3.05	$31.15	5.34%	9.79%	1.03	10.05%	59.02%	40.98%	4.12%	5.93%
3	New Jersey Resources	$1.60	$3.20	$24.15	6.62%	13.25%	1.03	13.67%	50.00%	50.00%	6.84%	5.82%
4	NiSource Inc.	$0.92	$1.85	$20.90	3.46%	8.85%	1.02	9.00%	49.73%	50.27%	4.53%	4.60%
5	Northwest Natural Gas	$1.90	$3.40	$34.50	5.86%	9.86%	1.03	10.14%	55.88%	44.12%	4.47%	4.62%
6	Piedmont Natural Gas	$1.31	$1.90	$15.00	2.36%	12.67%	1.01	12.81%	68.95%	31.05%	3.98%	2.52%
7	South Jersey Industries	$2.00	$4.10	$26.45	6.75%	15.50%	1.03	16.01%	48.78%	51.22%	8.20%	12.44%
8	Southwest Gas Corp.	$1.25	$3.10	$32.00	4.57%	9.69%	1.02	9.90%	40.32%	59.68%	5.91%	6.69%
9	UGI Corporation	$1.16	$2.90	$25.10	8.56%	11.55%	1.04	12.03%	40.00%	60.00%	7.22%	7.76%
10	WGL Holdings, Inc.	$1.71	$2.65	$26.85	3.31%	9.87%	1.02	10.03%	64.53%	35.47%	3.56%	3.97%
11	**Average**	**$1.51**	**$2.89**	**$26.62**	**5.13%**	**11.00%**	**1.02**	**11.28%**	**53.09%**	**46.91%**	**5.31%**	**5.97%**
12	**Median**											**5.57%**

Sources and Notes:
Cols. (1), (2) and (3): *The Value Line Investment Survey,* September 9, 2011.
Col. (4): [Col. (3) / Page 2 Col. (2)] ^ (1/5) - 1.
Col. (5): Col. (2) / Col. (3).
Col. (6): [2 * (1 + Col. (4))] / (2 + Col. (4)).
Col. (7): Col. (6) * Col. (5).
Col. (8): Col. (1) / Col. (2).
Col. (9): 1 - Col. (8).
Col. (10): Col. (9) * Col. (7).
Col. (11): Col. (10) + Page 2 Col. (9).

Missouri-American Water Company

Gas Utilities
Sustainable Growth Rates

Line	Company	13-Week Average Stock Price[1] (1)	2010 Book Value Per Share[2] (2)	Market to Book Ratio (3)	Common Shares Outstanding (in Millions)[2] 2010 (4)	Common Shares Outstanding (in Millions)[2] 3-5 Years (5)	Growth (6)	S Factor[3] (7)	V Factor[4] (8)	S * V[5] (9)
1	Atmos Energy Corp.	$32.54	$24.16	1.35	90.16	105.00	3.09%	4.17%	25.76%	1.07%
2	Laclede Group, Inc.	$37.94	$24.02	1.58	22.29	26.00	3.13%	4.94%	36.69%	1.81%
3	New Jersey Resources	$44.26	$17.53	2.52	41.36	40.00	-0.67%	-1.68%	60.39%	-1.02%
4	NiSource Inc.	$20.96	$17.63	1.19	279.30	285.00	0.40%	0.48%	15.89%	0.08%
5	Northwest Natural Gas	$44.04	$25.95	1.70	26.67	26.95	0.21%	0.35%	41.08%	0.15%
6	Piedmont Natural Gas	$29.42	$13.35	2.20	72.28	68.00	-1.21%	-2.67%	54.63%	-1.46%
7	South Jersey Industries	$49.93	$19.08	2.62	29.87	34.00	2.62%	6.87%	61.79%	4.24%
8	Southwest Gas Corp.	$36.29	$25.59	1.42	45.60	50.00	1.86%	2.64%	29.48%	0.78%
9	UGI Corporation	$28.08	$16.65	1.69	109.59	114.00	0.79%	1.34%	40.71%	0.54%
10	WGL Holdings, Inc.	$39.40	$22.82	1.73	50.54	52.00	0.57%	0.99%	42.09%	0.42%
11	**Average**	**$36.29**	**$20.68**	**1.80**	**76.77**	**80.10**	**1.08%**	**1.74%**	**40.85%**	**0.66%**

Sources and Notes:

[1] http://moneycentral.msn.com, downloaded on October 25, 2011.

[2] *The Value Line Investment Survey,* September 9, 2011.

[3] Expected Growth in the Number of Shares, Column (3) * Column (6).

[4] Expected Profit of Stock Investment, [1 - 1 / Column (3)].

[5] Column (7) * Column (8).

Missouri-American Water Company

Water Utilities
Sustainable Growth Rates
Constant Growth DCF Model

Line	Company	13-Week AVG Stock Price[1] (1)	Sustainable Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	American States Water	$33.95	7.06%	$1.12	3.53%	10.59%
2	American Water Works Co.	$29.04	5.17%	$0.92	3.33%	8.51%
3	Aqua America, Inc.	$21.38	6.82%	$0.62	3.10%	9.92%
4	California Water Serv. Grp.	$17.93	7.10%	$0.62	3.68%	10.78%
5	Connecticut Water Services	$26.17	N/A	$0.95	N/A	N/A
6	Middlesex Water Company	$17.74	4.48%	$0.73	4.31%	8.79%
7	SJW Corporation	$22.57	6.17%	$0.69	3.25%	9.42%
8	York Water Company	$16.87	N/A	$0.52	N/A	N/A
9	**Average**	**$23.21**	**6.13%**	**$0.77**	**3.53%**	**9.67%**
10	**Median**		**6.49%**			**9.67%**

Sources:
[1] http://moneycentral.msn.com, downloaded on October 25, 2011.
[2] Schedule MPG-8, Page 1 of 4.
[3] *The Value Line Investment Survey,* October 21, 2011.

Missouri-American Water Company

Gas Utilities
Sustainable Growth Rates
Constant Growth DCF Model

Line	Company	13-Week AVG Stock Price[1] (1)	Sustainable Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	Atmos Energy Corp.	$32.54	5.32%	$1.36	4.40%	9.72%
2	Laclede Group, Inc.	$37.94	5.93%	$1.62	4.52%	10.45%
3	New Jersey Resources	$44.26	5.82%	$1.44	3.44%	9.26%
4	NiSource Inc.	$20.96	4.60%	$0.92	4.59%	9.19%
5	Northwest Natural Gas	$44.04	4.62%	$1.74	4.13%	8.75%
6	Piedmont Natural Gas	$29.42	2.52%	$1.16	4.04%	6.56%
7	South Jersey Industries	$49.93	12.44%	$1.46	3.29%	15.73%
8	Southwest Gas Corp.	$36.29	6.69%	$1.06	3.12%	9.80%
9	UGI Corporation	$28.08	7.76%	$1.04	3.99%	11.75%
10	WGL Holdings, Inc.	$39.40	3.97%	$1.56	4.12%	8.09%
11	**Average**	**$36.29**	**5.97%**	**$1.34**	**3.96%**	**9.93%**
12	**Median**		**5.57%**			**9.49%**

Sources:
[1] http://moneycentral.msn.com, downloaded on October 25, 2011.
[2] Schedule MPG-8, Page 3 of 4.
[3] *The Value Line Investment Survey,* September 9, 2011.

Missouri-American Water Company

Water Utilities
Multi-Stage Growth DCF Model

Line	Company	13-Week AVG Stock Price[1] (1)	Annualized Dividend[2] (2)	First Stage Growth[3] (3)	Second Stage Growth Year 6 (4)	Year 7 (5)	Year 8 (6)	Year 9 (7)	Year 10 (8)	Third Stage Growth[4] (9)	Multi-Stage Growth DCF (10)
1	American States Water	$33.95	$1.12	9.58%	8.80%	8.02%	7.24%	6.46%	5.68%	4.90%	9.51%
2	American Water Works Co.	$29.04	$0.92	9.55%	8.77%	8.00%	7.22%	6.45%	5.67%	4.90%	9.33%
3	Aqua America, Inc.	$21.38	$0.62	7.78%	7.30%	6.82%	6.34%	5.86%	5.38%	4.90%	8.55%
4	California Water Serv. Grp.	$17.93	$0.62	8.00%	7.48%	6.97%	6.45%	5.93%	5.42%	4.90%	9.27%
5	Connecticut Water Services	$26.17	$0.95	8.00%	7.48%	6.97%	6.45%	5.93%	5.42%	4.90%	9.52%
6	Middlesex Water Company	$17.74	$0.73	-5.00%	-3.35%	-1.70%	-0.05%	1.60%	3.25%	4.90%	7.06%
7	SJW Corporation	$22.57	$0.69	14.00%	12.48%	10.97%	9.45%	7.93%	6.42%	4.90%	10.43%
8	York Water Company	$16.87	$0.52	6.00%	5.82%	5.63%	5.45%	5.27%	5.08%	4.90%	8.39%
9	**Average**	**$23.21**	**$0.77**	**7.24%**	**6.85%**	**6.46%**	**6.07%**	**5.68%**	**5.29%**	**4.90%**	**9.01%**
10	**Median**										**9.30%**

Sources and Notes:

[1] http://moneycentral.msn.com, downloaded on October 25, 2011.

[2] *The Value Line Investment Survey,* October 21, 2011.

[3] Schedule MPG-4, Page 1 of 2.

[4] *Blue Chip Economic Indicators,* October 10, 2011 at 15.

Missouri-American Water Company

Gas Utilities
Multi-Stage Growth DCF Model

Line	Company	13-Week AVG Stock Price[1] (1)	Annualized Dividend[2] (2)	First Stage Growth[3] (3)	Second Stage Growth Year 6 (4)	Year 7 (5)	Year 8 (6)	Year 9 (7)	Year 10 (8)	Third Stage Growth[4] (9)	Multi-Stage Growth DCF (10)
1	Atmos Energy Corp.	$32.54	$1.36	4.42%	4.50%	4.58%	4.66%	4.74%	4.82%	4.90%	9.15%
2	Laclede Group, Inc.	$37.94	$1.62	4.00%	4.15%	4.30%	4.45%	4.60%	4.75%	4.90%	9.13%
3	New Jersey Resources	$44.26	$1.44	4.18%	4.30%	4.42%	4.54%	4.66%	4.78%	4.90%	8.15%
4	NiSource Inc.	$20.96	$0.92	3.55%	3.77%	4.00%	4.22%	4.45%	4.67%	4.90%	9.13%
5	Northwest Natural Gas	$44.04	$1.74	4.19%	4.31%	4.43%	4.55%	4.66%	4.78%	4.90%	8.86%
6	Piedmont Natural Gas	$29.42	$1.16	4.47%	4.54%	4.61%	4.68%	4.76%	4.83%	4.90%	8.92%
7	South Jersey Industries	$49.93	$1.46	6.67%	6.37%	6.08%	5.78%	5.49%	5.19%	4.90%	8.33%
8	Southwest Gas Corp.	$36.29	$1.06	4.20%	4.32%	4.43%	4.55%	4.67%	4.78%	4.90%	7.81%
9	UGI Corporation	$28.08	$1.04	3.15%	3.44%	3.73%	4.03%	4.32%	4.61%	4.90%	8.37%
10	WGL Holdings, Inc.	$39.40	$1.56	4.82%	4.83%	4.84%	4.86%	4.87%	4.89%	4.90%	9.03%
11	**Average**	**$36.29**	**$1.34**	**4.36%**	**4.45%**	**4.54%**	**4.63%**	**4.72%**	**4.81%**	**4.90%**	**8.69%**
12	**Median**										**8.89%**

Sources and Notes:

[1] http://moneycentral.msn.com, downloaded on October 25, 2011.

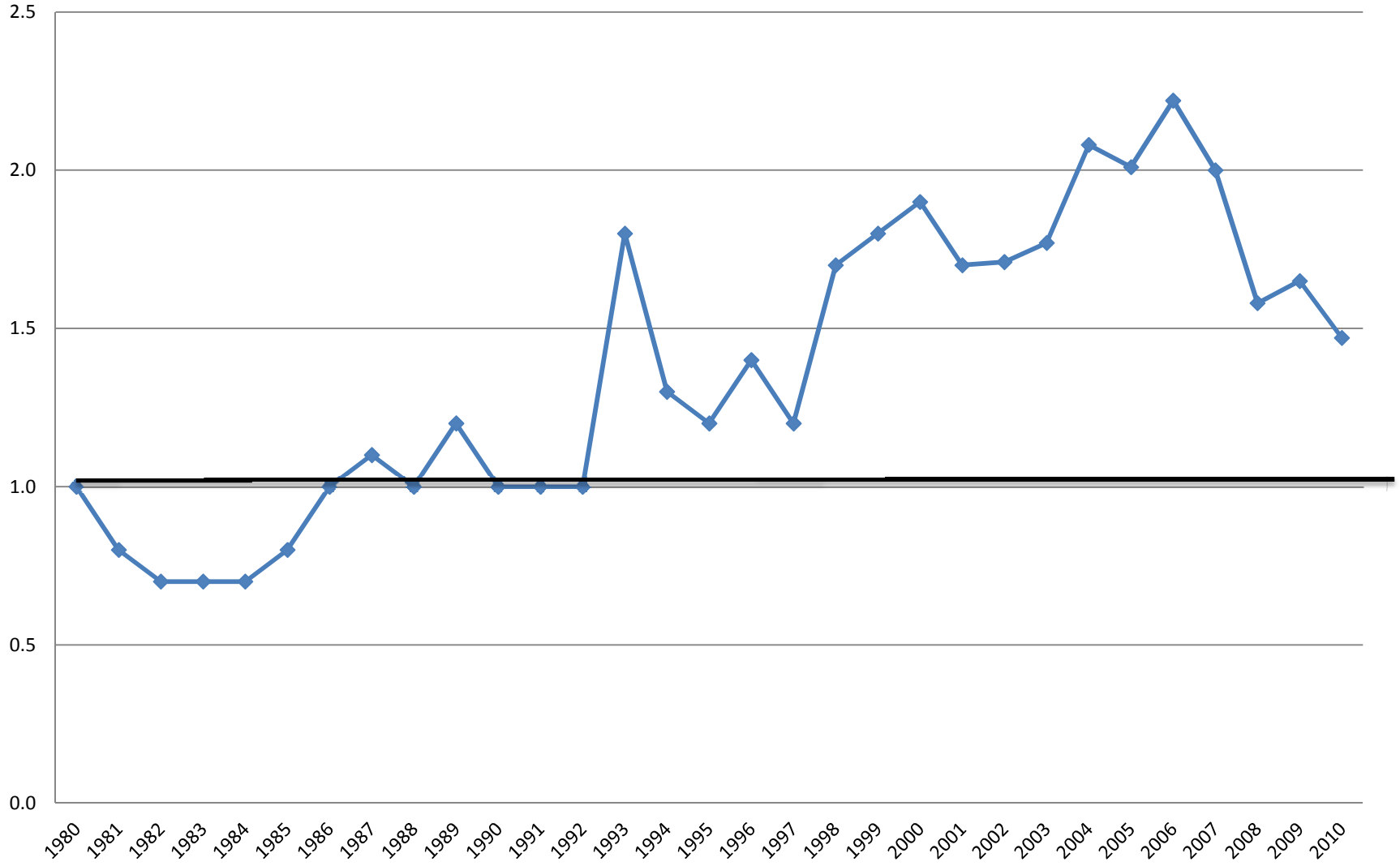
[2] *The Value Line Investment Survey,* September 9, 2011.

[3] Schedule MPG-4, Page 2 of 2.

[4] *Blue Chip Economic Indicators,* October 10, 2011 at 15.

Missouri-American Water Company

Common Stock Market/Book Ratio



Sources:
2001 - 2010: *AUS Utility Reports.*
1980 - 2000: Mergent Public Utility Manual, 2003.

Missouri-American Water Company

Equity Risk Premium - Treasury Bond

Line	Year	Authorized Gas Returns[1] (1)	Treasury Bond Yield[2] (2)	Indicated Risk Premium (3)
1	1986	13.46%	7.78%	5.68%
2	1987	12.74%	8.59%	4.15%
3	1988	12.85%	8.96%	3.89%
4	1989	12.88%	8.45%	4.43%
5	1990	12.67%	8.61%	4.06%
6	1991	12.46%	8.14%	4.32%
7	1992	12.01%	7.67%	4.34%
8	1993	11.35%	6.59%	4.76%
9	1994	11.35%	7.37%	3.98%
10	1995	11.43%	6.88%	4.55%
11	1996	11.19%	6.71%	4.48%
12	1997	11.29%	6.61%	4.68%
13	1998	11.51%	5.58%	5.93%
14	1999	10.66%	5.87%	4.79%
15	2000	11.39%	5.94%	5.45%
16	2001	10.95%	5.49%	5.46%
17	2002	11.03%	5.43%	5.60%
18	2003	10.99%	4.96%	6.03%
19	2004	10.59%	5.05%	5.54%
20	2005	10.46%	4.65%	5.81%
21	2006	10.43%	4.91%	5.52%
22	2007	10.24%	4.84%	5.40%
23	2008	10.37%	4.28%	6.09%
24	2009	10.19%	4.08%	6.11%
25	2010[3]	10.08%	4.25%	5.83%
26	Q3 2011[3]	9.93%	4.20%	5.73%
27	**Average**	**11.33%**	**6.23%**	**5.10%**

Sources:

[1] Regulatory Research Associates, Inc., *Regulatory Focus,* Jan. 85 - Dec. 06, and October 6, 2011.

[2] Economic Report of the President 2010: Table 73. The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

[3] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.

Missouri-American Water Company

Equity Risk Premium - Utility Bond

Line	Year	Authorized Gas Returns[1] (1)	Average "A" Rated Utility Bond Yield[2] (2)	Indicated Risk Premium (3)
1	1986	13.46%	9.58%	3.88%
2	1987	12.74%	10.10%	2.64%
3	1988	12.85%	10.49%	2.36%
4	1989	12.88%	9.77%	3.11%
5	1990	12.67%	9.86%	2.81%
6	1991	12.46%	9.36%	3.10%
7	1992	12.01%	8.69%	3.32%
8	1993	11.35%	7.59%	3.76%
9	1994	11.35%	8.31%	3.04%
10	1995	11.43%	7.89%	3.54%
11	1996	11.19%	7.75%	3.44%
12	1997	11.29%	7.60%	3.69%
13	1998	11.51%	7.04%	4.47%
14	1999	10.66%	7.62%	3.04%
15	2000	11.39%	8.24%	3.15%
16	2001	10.95%	7.76%	3.19%
17	2002	11.03%	7.37%	3.66%
18	2003	10.99%	6.58%	4.41%
19	2004	10.59%	6.16%	4.43%
20	2005	10.46%	5.65%	4.81%
21	2006	10.43%	6.07%	4.36%
22	2007	10.24%	6.07%	4.17%
23	2008	10.37%	6.53%	3.84%
24	2009	10.19%	6.04%	4.15%
25	2010[3]	10.08%	5.46%	4.62%
26	Q2 2011[3]	9.93%	5.26%	4.67%
27	**Average**	**11.33%**	**7.65%**	**3.68%**

Sources:

[1] Regulatory Research Associates, Inc., *Regulatory Focus,* Jan. 85 - Dec. 06, and October 6, 2011.

[2] Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record. The utility yields were obtained from http://credittrends.moodys.com/.

[3] www.moodys.com, Bond Yields and Key Indicators.

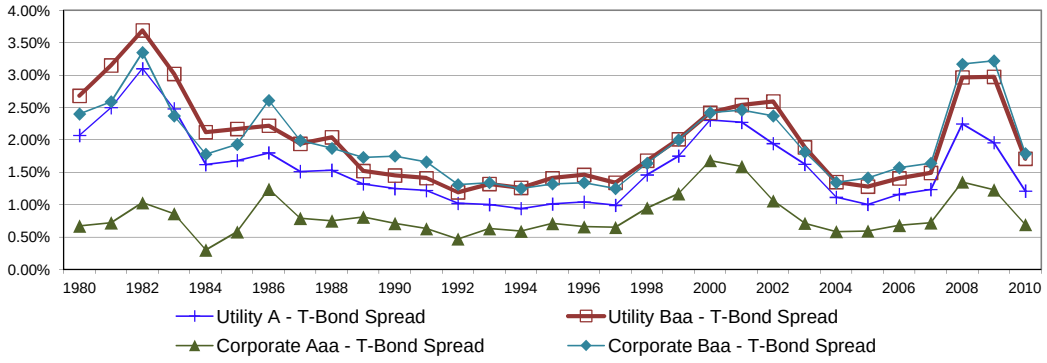
Missouri-American Water Company

Bond Yield Spreads

Line	Year	T-Bond Yield[1] (1)	Public Utility Bond Yields A[2] (2)	Baa[2] (3)	A-T-Bond Spread (4)	Baa-T-Bond Spread (5)	Corporate Bond Yields Aaa[1] (6)	Baa[1] (7)	Aaa-T-Bond Spread (8)	Baa-T-Bond Spread (9)	Baa Utility - Corporate (10)
1	1980	11.27%	13.34%	13.95%	2.07%	2.68%	11.94%	13.67%	0.67%	2.40%	0.28%
2	1981	13.45%	15.95%	16.60%	2.50%	3.15%	14.17%	16.04%	0.72%	2.59%	0.56%
3	1982	12.76%	15.86%	16.45%	3.10%	3.69%	13.79%	16.11%	1.03%	3.35%	0.34%
4	1983	11.18%	13.66%	14.20%	2.48%	3.02%	12.04%	13.55%	0.86%	2.37%	0.65%
5	1984	12.41%	14.03%	14.53%	1.62%	2.12%	12.71%	14.19%	0.30%	1.78%	0.34%
6	1985	10.79%	12.47%	12.96%	1.68%	2.17%	11.37%	12.72%	0.58%	1.93%	0.24%
7	1986	7.78%	9.58%	10.00%	1.80%	2.22%	9.02%	10.39%	1.24%	2.61%	-0.39%
8	1987	8.59%	10.10%	10.53%	1.51%	1.94%	9.38%	10.58%	0.79%	1.99%	-0.05%
9	1988	8.96%	10.49%	11.00%	1.53%	2.04%	9.71%	10.83%	0.75%	1.87%	0.17%
10	1989	8.45%	9.77%	9.97%	1.32%	1.52%	9.26%	10.18%	0.81%	1.73%	-0.21%
11	1990	8.61%	9.86%	10.06%	1.25%	1.45%	9.32%	10.36%	0.71%	1.75%	-0.30%
12	1991	8.14%	9.36%	9.55%	1.22%	1.41%	8.77%	9.80%	0.63%	1.66%	-0.25%
13	1992	7.67%	8.69%	8.86%	1.02%	1.19%	8.14%	8.98%	0.47%	1.31%	-0.12%
14	1993	6.59%	7.59%	7.91%	1.00%	1.32%	7.22%	7.93%	0.63%	1.34%	-0.02%
15	1994	7.37%	8.31%	8.63%	0.94%	1.26%	7.96%	8.62%	0.59%	1.25%	0.01%
16	1995	6.88%	7.89%	8.29%	1.01%	1.41%	7.59%	8.20%	0.71%	1.32%	0.09%
17	1996	6.71%	7.75%	8.17%	1.04%	1.46%	7.37%	8.05%	0.66%	1.34%	0.12%
18	1997	6.61%	7.60%	7.95%	0.99%	1.34%	7.26%	7.86%	0.65%	1.25%	0.09%
19	1998	5.58%	7.04%	7.26%	1.46%	1.68%	6.53%	7.22%	0.95%	1.64%	0.04%
20	1999	5.87%	7.62%	7.88%	1.75%	2.01%	7.04%	7.87%	1.17%	2.00%	0.01%
21	2000	5.94%	8.24%	8.36%	2.30%	2.42%	7.62%	8.36%	1.68%	2.42%	0.00%
22	2001	5.49%	7.76%	8.03%	2.27%	2.54%	7.08%	7.95%	1.59%	2.46%	0.08%
23	2002	5.43%	7.37%	8.02%	1.94%	2.59%	6.49%	7.80%	1.06%	2.37%	0.22%
24	2003	4.96%	6.58%	6.84%	1.62%	1.89%	5.67%	6.77%	0.71%	1.81%	0.07%
25	2004	5.05%	6.16%	6.40%	1.11%	1.35%	5.63%	6.39%	0.58%	1.34%	0.00%
26	2005	4.65%	5.65%	5.93%	1.00%	1.28%	5.24%	6.06%	0.59%	1.41%	-0.14%
27	2006	4.91%	6.07%	6.32%	1.16%	1.41%	5.59%	6.48%	0.68%	1.57%	-0.16%
28	2007	4.84%	6.07%	6.33%	1.23%	1.49%	5.56%	6.48%	0.72%	1.64%	-0.15%
29	2008	4.28%	6.53%	7.25%	2.25%	2.97%	5.63%	7.45%	1.35%	3.17%	-0.20%
30	2009	4.08%	6.04%	7.06%	1.96%	2.98%	5.31%	7.30%	1.23%	3.22%	-0.24%
31	2010	4.25%	5.46%	5.96%	1.21%	1.71%	4.94%	6.04%	0.69%	1.79%	-0.08%
32	**Average**	**7.40%**	**9.00%**	**9.39%**	**1.59%**	**1.99%**	**8.24%**	**9.36%**	**0.83%**	**1.96%**	**0.03%**

Yield Spreads

Treasury Vs. Corporate & Treasury Vs. Utility



Sources:

[1] Economic Report of the President 2008: Table 73 at 316. The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

[2] *Mergent Public Utility Manual* 2003. Moody's Daily News Reports.

Missouri-American Water Company

Water Utilities
Value Line Beta

Line	Company	Beta
1	American States Water	0.75
2	American Water Works Co.	0.65
3	Aqua America, Inc.	0.65
4	California Water Serv. Grp.	0.70
5	Connecticut Water Services	0.80
6	Middlesex Water Company	0.75
7	SJW Corporation	0.90
8	York Water Company	0.70
9	**Average**	**0.74**

Source:
The Value Line Investment Survey, October 21, 2011.

Missouri-American Water Company

Gas Utilities
Value Line Beta

Line	Company	Beta
1	Atmos Energy Corp.	0.70
2	Laclede Group, Inc.	0.60
3	New Jersey Resources	0.65
4	NiSource Inc.	0.85
5	Northwest Natural Gas	0.60
6	Piedmont Natural Gas	0.65
7	South Jersey Industries	0.65
8	Southwest Gas Corp.	0.75
9	UGI Corporation	0.70
10	WGL Holdings, Inc.	0.65
11	**Average**	**0.68**

Source:
The Value Line Investment Survey, September 9, 2011.

Missouri-American Water Company

Water Utilities
CAPM Return

Line	Description	Gorman Market Risk Premium (1)	Morningstar Market Risk Premium (2)
1	Risk-Free Rate[1]	3.90%	3.90%
2	Risk Premium[2]	6.65%	6.70%
3	Beta[3]	0.74	0.74
4	CAPM	8.82%	8.86%

Sources:

[1] *Blue Chip Financial Forecasts;* October 1, 2011, at 2.

[2] Morningstar, Inc. *Ibbotson SBBI 2011 Classic Yearbook* at 86, and Morningstar, Inc. *Ibbotson SBBI 2011 Valuation Yearbook* at 54 and 66.

[3] *The Value Line Investment Survey,* October 21, 2011.

Missouri-American Water Company

Gas Utilities
CAPM Return

Line	Description	Gorman Market Risk Premium (1)	Morningstar Market Risk Premium (2)
1	Risk-Free Rate[1]	3.90%	3.90%
2	Risk Premium[2]	6.65%	6.70%
3	Beta[3]	0.68	0.68
4	CAPM	8.42%	8.46%

Sources:

[1] *Blue Chip Financial Forecasts;* October 1, 2011, at 2.

[2] Morningstar, Inc. *Ibbotson SBBI 2011 Classic Yearbook* at 86, and Morningstar, Inc. *Ibbotson SBBI 2011 Valuation Yearbook* at 54 and 66.

[3] *The Value Line Investment Survey,* September 9, 2011.

Missouri-American Water Company

Standard & Poor's Credit Metrics

Line	Description	Retail Cost of Service Amount (1)	S&P Benchmark[1/2] Intermediate (2)	Significant (3)	Aggressive (4)	Reference (5)
1	Rate Base	$ 849,106,802				Schedule CAS-1, page 1 of 3.
2	Weighted Common Return	4.73%				Page 2, Line 3, Col. 4.
3	Pre-Tax Rate of Return	10.93%				Page 2, Line 4, Col. 5.
4	Income to Common	$ 40,202,312				Line 1 x Line 2.
5	EBIT	$ 92,769,680				Line 1 x Line 3.
6	Depreciation & Amortization	$ 30,523,449				Schedule CAS-2, Page 1 of 3.
7	Deferred Income Taxes & ITC	$ 553,560				Schedule CAS-2, Page 1 of 3.
8	Funds from Operations (FFO)	$ 71,279,321				Sum of Lines 4, and 6 to 7.
9	EBITDA	$ 123,293,129				Sum of Lines 5 and 6.
10	Total Debt Ratio	50%	35% - 45%	45% - 50%	50% - 60%	Page 3, Line 3, Col. 2.
11	Debt to EBITDA	3.4x	2.0x - 3.0x	3.0x - 4.0x	4.0x - 5.0x	(Line 1 x Line 10) / Line 9.
12	FFO to Total Debt	17%	30% - 45%	20% - 30%	12% - 20%	Line 8 / (Line 1 x Line 10).

Sources:

[1] Standard & Poor's: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

[2] *S&P RatingsDirect:* "U.S. Investor-Owned Water Utilities, Strongest To Weakest," October 7, 2011.

Note:

Based on the May 2009 S&P metrics, AWC has an "Excellent" business profile and an "Aggressive" financial profile.

Missouri-American Water Company

Standard & Poor's Credit Metrics
(Pre-Tax Rate of Return)

Line	Description	Amount (000) (1)	Weight (2)	Cost (3)	Weighted Cost (4)	Pre-Tax Weighted Cost (5)
1	Long-Term Debt	$ 423,115	49.36%	6.36%	3.14%	3.14%
2	Preferred Stock	2,306	0.27%	9.23%	0.02%	0.02%
3	Common Equity	431,742	50.37%	**9.40%**	4.73%	7.76%
4	**Total**	**$ 857,162**	**100.00%**		**7.90%**	**10.93%**
5	Tax Conversion Factor*					1.63925

Sources:
Schedule PMA-1, page 1 of 2.
* Schedule CAS-1, page 1 of 3.

Missouri-American Water Company

Standard & Poor's Credit Metrics
(Financial Capital Structure)

Line	Description		Amount (000) (1)	Weight (2)
1	Long-Term Debt	$	423,115	49.36%
2	Preferred Stock		2,306	0.27%
3	**Total Long-Term Debt**	**$**	**425,421**	**49.63%**
4	Common Equity		431,742	50.37%
5	**Total**	**$**	**857,162**	**100.00%**

Source:
Schedule PMA-1, page 1 of 2.