Exhibit No. ____
Issue: Rate of Return
Witness: Harold Walker, III
Type of Exhibit: Rebuttal
Sponsoring Party: MAWC
Case No.: WR-2000-281
Case No.: SR-2000-282
Date: May 4, 2000

MISSOURI PUBLIC SERVICE COMMISSION
Case No. WR-2000-281
Case No. SR-2000-282

REBUTTAL TESTIMONY

OF HAROLD WALKER, III

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, INC.

HARRISBURG, PENNSYLVANIA

FILED[3]

MAY 04 2000

Missouri Public Service Commission

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water Company's tariff sheets designed to implement general rate increases for water and sewer service provided to customers in the Missouri service area of the Company.	)))))	Case No. WR-2000-281

County of Montgomery)
) ss
State of Pennsylvania)

AFFIDAVIT OF Harold Walker

Harold Walker, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Rebuttal Testimony of Harold Walker, III"; that said testimony was prepared by him and/or under his direction and supervision; that if inquiries were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge, information and belief.

Harold Walker III

Subscribed and sworn to before me this 2nd day of May, 2000.

Ruth Ann Burns

Notary Public

My Commission expires:

October 21, 2002

Notarial Seal
Ruth Ann Burns, Notary Public
Lower Merion Twp., Montgomery County
My Commission Expires Oct. 21, 2002

REBUTTAL TESTIMONY
OF
HAROLD WALKER, III
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INTRODUCTION

Q. ARE YOU THE SAME HAROLD WALKER WHO PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY AT THIS TIME?

A. The purpose of my rebuttal testimony, is to comment on the rate of return testimonies submitted by Commission Staff (Staff) witness Roberta McKiddy, Office of the Public Counsel (OPC) witness Mark Burdette and the end result of the rate base disallowances proposed by various witnesses. My rebuttal testimony is supported by Schedule HW-4, which is composed of 8 parts.

SUMMARY

Q. PLEASE SUMMARIZE YOUR COMMENTS ON THE RATE OF RATE OF RETURN TESTIMONY SUBMITTED BY MS. MCKIDDY AND MR. BURDETTE.

A. I do not believe Ms. McKiddy's and Mr. Burdette's rate of return testimonies should be accepted by the Commission. This is because: (1) Both Ms. McKiddy's and Mr. Burdette's recommended return on equity for MAWC fails a comparison test of

alternative investment opportunities when compared to bond yields, forecasted ROEs and authorized returns for other water utilities; (2) Their calculated cost of equity would result in the reduction of many water utilities' dividend per share; (3) Their recommendations have "financial prejudices" against MAWC.; and (4) Their recommendations do not reflect the risks associated the large rate base disallowances that have been proposed.

Ms. McKiddy and Mr. Burdette have not considered the disincentives that their cost of common equity recommendations could create if they were adopted by the Commission. Ms. McKiddy (9.50% to 10.75%) and Mr. Burdette (9.92%) cost of equity recommendation for an investor owned water utility would discourage future investment in Missouri. Most likely, these low opportunity return rates when combined with large rate base disallowances would slow or halt most future capital additions of existing systems.

ANALYSIS OF MS. MCKIDDY'S EQUITY COST

Q. WHAT IS MS. MCKIDDY'S RECOMMENDED COST OF COMMON EQUITY IN THESE PROCEEDINGS?

A. Ms. McKiddy recommends a 9.50% to 10.75% range of return on common equity.

Q. IS A 9.50% TO 10.75% RANGE OF RETURN ON COMMON EQUITY

REASONABLE FOR AN INVESTOR OWNED WATER UTILITY?

A. No. A 9.50% to 10.75% range of return on common equity provides an inadequate spread over the prospective cost of A rated public utility debt capital. Currently, A rated public utility debt is yielding 8.42%. Accordingly, Ms. McKiddy's recommendation provides only a 108-basis point premium to 2.33-basis point premium over A rated public utility debt capital. My analysis shows that the current premium is at least 450 basis points. Moreover, Value Line's projected returns on common equity for water utilities, for the period 2002 to 2004, is 12.0%.

Schedule HW-4.1 shows the most recent authorized returns since 1997 for 47 water utilities as reported in the NAWC 1998 Financial & Operating Data for Investor-Owned Water Utilities. On average the 47 water utilities were authorized a return of 10.9% when A rated public utility bonds yielded 7.20% or over 120-basis points lower than today's yield of 8.42%. The authorized returns were adjusted to take into account changes in A rated public utility bond yields since the authorization date. As shown on Schedule HW-4.1, adjusting for bond yield changes results in an average authorized return of 12.08% for the 47 water utilities. A comparable opportunity return of 12.1% for similar risk enterprises demonstrates the inequities of Ms. McKiddy's recommendation 9.50% to 10.75% for MAWC.

Capital is provided by investors based upon risk and return opportunities. Investors will not provide common equity capital when higher risk-adjusted returns are

available. Ms. McKiddy's recommended common equity cost rate is unreasonably low.

Q. PLEASE EXPLAIN WHY MS. MCKIDDY'S COMMON EQUITY COST RATE RANGE IS BELOW THE ZONE OF REASONABLENESS FOR MAWC.

A. Ms. McKiddy's recommended range of common equity cost rate was developed from calculating a DCF for American Water Works (AWK) and directly applying that to MAWC without reflecting risk differences.

Q. WHAT ARE SOME OF THE DIFFERENCES BETWEEN MAWC AND AWK?

A. MAWC is many times smaller than AWK. The size of a company affects risk. AWK has a more diverse geographic operation than MAWC, which enables it to sustain earnings fluctuations caused by abnormal levels of rainfall in one portion of its service territory. Since AWK operates in more than one regulatory jurisdiction, it enjoys "regulatory diversification" which makes it less susceptible to adverse regulatory developments in any single jurisdiction. Further, AWK has a more diverse customer base and is less susceptible to downturns associated with regional economic conditions than MAWC. For example, the operations of AWK provide water service in 22 states for 1,942,000 customers. The population of the communities served by AWK are more than 7,000,000 people. These wide ranging operations provide AWK shareholders' substantial geographic, economic, regulatory, weather and customer

diversification. MAWC provides water service to a population of about 260,000 people and to 94,000 customers.

AWK's dividend payout ratio is only 52% whereas MAWC and most other water utilities payout 70% to 75% of earnings. Even if MAWC's assets possessed the same or identical earnings power as AWK, investors would choose AWK over MAWC as an investment due to its large size and accompanying risk reducing diversification. Accordingly, even if Ms. McKiddy's equity cost rate were appropriate for AWK, it understates MAWC's cost of equity.

Q. DOES MS. MCKIDDY'S RECOMMENDED COST OF COMMON EQUITY RECOGNIZE MAWC'S ADDITIONAL RISK ASSOCIATED WITH ITS SMALLER SIZE?

A. No. Ms. McKiddy does not reflect MAWC's additional risk associated with its smaller size and therefore, Ms. McKiddy's recommendation reflects "financial prejudices" in regards to MAWC.

Q. PLEASE EXPLAIN MS. MCKIDDY'S "FINANCIAL PREJUDICES" CONCERNING THE COMPANY.

A. Investors who invest in a risky asset, expose themselves to investment risk particular to that investment. The greater the risk associated with a risky asset, the higher the required return. This is a basic tenet of corporate finance concerning risk and return.

The investment risk of an asset does not change, regardless of who owns the asset. Whether the asset is owned by a tall person or a short person, the required return is the same because the risk of owning that asset is the same. Likewise, whether the owner or investor of a risky asset is rich or poor, the risk of owning the asset is unchanged and hence the required return is unchanged. For example, if the U.S. Government auctioned long-termTreasury Bonds today at 6.2%, the richest man in the world would receive the same return by purchasing those bonds as would a charitable organization because the return of this particular asset, Treasury Bond, provides the same return irrespective of the owner. Every investor is entitled to equal treatment. Ms. McKiddy recommendation results in "financial prejudice" by applying a calculated equity cost of AWK to MAWC without reflecting the measurable risk differences.

This "financial prejudice" concerning AWK's investment in MAWC leads to an erroneous conclusion. Schedule HW-4.2 demonstrates the end result of applying this philosophy to two identical portfolios. The first portfolio, the hypothetical portfolio, has a weighted average expected return of 8.5% as a result of investing 50% of the money in certificates of deposit, 25% in T-Bonds and 25% in common stocks. However, applying Ms. McKiddy's philosophy concerning risk and return to a similar portfolio produces a return of only 6.8% based upon the identical investments in certificates of deposit, T-Bonds, and common stocks. Specifically, Ms. McKiddy essentially advocates applying the overall portfolio return to each component of the

portfolio. However, the banks issuing certificates of deposits will not provide an 8.5% return, rather they will only pay 6.1%. Likewise, the U.S. Government will not pay an 8.5% return, they will only pay 6.2%. Accordingly, the entire burden of applying the weighted average portfolio return falls on the common stock investor, in this case, MAWC. The end result of Ms. McKiddy's recommendation produces a hypothetical return of only 6.8% on the entire portfolio versus the correct return of 8.5%.

Ms. McKiddy is penalizing MAWC due to lack of recognition of its small size, because of who owns its common stock, which violates the basic premise concerning risk and return. The composition of the investors who hold utility common stock varies widely. The stockholders may include some millionaires as well as senior citizens living on fixed retirement income. However, when a commission determines return on equity appropriate for utility, all investors, regardless of status, should receive identical returns.

Q. WHAT IS A REASONABLE RISK ADJUSTMENT NECESSARY TO REFLECT MAWC'S GREATER RISK ATTRIBUTED TO ITS SMALL SIZE?

A. In Schedule HW-1, I estimated a reasonable risk adjustment for MAWC to be at least 0.3%. Office of the Public Counsel witness Mr. Burdette recommends an upward adjustment of 0.25 % but attributes the adjustment to future interest rate increases.

Q. DO YOU AGREE WITH MS. MCKIDDY TESTIMONY ON PAGE 11, THAT

STATES "COST OF CAPITAL CHANGES FOR UTILITIES ARE CLOSELY REFLECTED IN THE YIELDS ON PUBLIC UTILITY BONDS?"

A. Yes. Schedule HW-4.3 presents a comparison of measurable public utility cost rates movements since 1993. On average, A rated public utility money cost rates are about 74 basis points higher today than they have been since 1993 (today's yields of 8.42% verses the 1993-99 average yield of 7.68%). In fact, 1994 is the last time money cost rates averaged as close to what they are today (the average yield in 1994 was 8.30%). Today's money cost rates are almost 130 basis points higher than the average annual low money cost rate since 1993 (1993-99 average low yield was 7.12% verses today's yield of 8.42%). Given today's 8.4% interest rate level and the upward movement in interest rates over the last couple of years, show that Ms. McKiddy's recommendation of 9.5% to 10.75% is not reasonable and therefore, must be rejected.

Q. PLEASE COMMENT ON PAGE 15 OF MS. MCKIDDY'S TESTIMONY CONCERNING FUTURE INTEREST RATE LEVELS.

A. On page 15 Ms. McKiddy indicates that the Federal Reserve will increase interest rates another 50 basis points this year and an additional 100 basis points next year. Since August 1999, the Federal Reserve increased interest rates four times or a total of 100 basis points. April 1991 was the last time the discount rate (5.5%) was last set as high as it is today. Similarly, February 1995 was the last time the prime rate (9.0%) was set as high as it is today. Given today's interest rate levels and prospective levels shows that Ms. McKiddy's recommendation of 9.5% to 10.75% is

not reasonable and therefore, must be rejected.

Q. HOW WAS MS. MCKIDDY'S RECOMMENDATION OF 9.5% TO 10.75% DEVELOPED?

A. Ms. McKiddy's recommendation was developed based upon a DCF calculated for AWK. Ms. McKiddy's recommendation includes a range of DCF costs rates for AWK of 9.5% to 10.75%. Ms. McKiddy supported the upper end of the calculated DCF cost rate (10.75%) by calculating a risk premium for AWK of 10.70% to 10.94%. An update of Ms. McKiddy's a risk premium for AWK reflecting today's interest rate level now supports a 11.0% to 11.2% cost for AWK (2.56% + 8.42% and 2.80% + 8.42%). Further, my analysis indicates that Ms. McKiddy's risk premium is too low.

Ms. McKiddy attempted to support the lower end of the calculated DCF cost rate (9.5%) by calculating a CAPM for AWK of 9.30% to 9.82%. However, Ms. McKiddy's CAPM contains errors and omissions.

Q. WHAT ERRORS AND OMISSIONS ARE CONTAINED IN MS. MCKIDDY'S CAPM?

A. A review of Schedule 19 of Ms. McKiddy's testimony reveals that "UWR's" beta of 0.50 was used instead of AWK's beta. As shown on Schedule MB-10 of Mr. Burdette's testimony, AWK's beta is 0.60, not the 0.50 used by Ms. McKiddy.

Employing AWK's correct beta in Ms. McKiddy's CAPM produces a 10.00% to 10.57% cost rate, which does not support the lower end of the calculated DCF cost rate (9.50%).

Ms. McKiddy's CAPM relies upon Ibbotson Associates' market premium found in their annual "Year Book" publication. Ibbotson Associates devote a significant amount of their annual "Year Book" publication to the discussion of size premiums and the importance of including size premiums when calculating a CAPM. Ms. McKiddy's CAPM does not include Ibbotson Associates' required size premium adjustment.

Q. PLEASE EXPLAIN IBBOTSON ASSOCIATES SIZE ADJUSTMENT.

A. As shown on page 3 of Schedule HW-4.4, a company's size is inversely related to returns on common stocks. Specifically, the NYSE common stocks were sorted by Ibbotson Associates based on size of market value (market price times shares) and placed into ten different decile portfolios and four different quartile portfolios. The common stock return differential, column B, and the size premium, column C, increases at an increasing rate as you move from a larger stock portfolio to a smaller stock portfolio. In fact, for every million-dollar decrease in market value between decile 9 and decile 10, common stock returns increases by almost 3 basis points. That is, within these deciles, moving from a company with a market value of $100 million to a company of $75 million, results in more than a 75-basis point increase in return.

AWK's and the other comparison companies are listed on page 2 of Schedule HW-4.4. In March 2000, the AWK's and the other comparison companies market value ranged from $50 million to $2,308 million. The indicated market size decile and quartile are shown along with Ibbotson Associates size premium. For example, AWK's market value of $2,308 million places it in the "Mid-Cap" quartile (market quartile number 2), which requires 0.19% be added to Ms. McKiddy's CAPM calculation for AWK. Further, Ms. McKiddy's Six Comparable Water Companies require an additional 2.21% be added to their CAPM result to account for their small size. These adjustments are necessary because beta (systematic risk) does not capture or reflect the comparison companies small size.

As shown on page 1 of Schedule HW-4.4, corrections and updates to Ms. McKiddy's CAPM are shown. Specifically, updates in the 30-year risk free rate are used as are the current Ibbotson Associates (updated) market premiums and size premiums along with the proper betas. After updating and accounting for the errors and omissions results in a CAPM cost rate of 10.87% to 11.50% for AWK and 11.85% to 12.48% for Ms. McKiddy's Six Comparable Water Companies.

Q. DO YOU AGREE WITH MS. MCKIDDY TESTIMONY, PAGE 32, THAT THE DCF ANALYSIS FOR THE SIX COMPARABLE WATER COMPANIES IS NOT USEFUL?

A. Yes. Ms. McKiddy's calculated DCF of 7.60% to 8.75% is far below the zone of reasonableness. This is apparent by comparing the results to current A rated bond yields (8.42%), Value Line project return on equity for the water industry (12.0%), average adjusted water company authorized return on equity (12.1%), and the average dividend book ratio (8.2%) for Ms. McKiddy's comparison companies.

The most recent dividend to book ratios are shown on Schedule HW-4.5. As is evident by viewing the information, 5 out of 6 (83%) of the companies in Ms. McKiddy's comparison group, would most likely cut their common dividend if their authorized return on common equity was set as low as that which is estimated by Ms. McKiddy's DCF.

A dividend to book ratio shows the level of earnings necessary to maintain the current dividend. Because a company cannot maintain a payout ratio greater than 100% indefinitely, several companies would be required to cut their dividend if their authorized rate of return were set as low as estimated by Ms. McKiddy.

Dividend reduction for a public utility is a sign of financial distress. I liken a reduction of common stock dividends to defaulting on a loan since common stock investors in the future will require a higher cost rate than otherwise. However, a review of the comparison groups' market-to-book ratios and price-earnings indicates that the groups are not financially distressed companies. Because dividend reduction

for a public utility is generally a sign of financial distress, it is reasonable to conclude that investors do not anticipate nor do they expect a dividend reduction at this time. Accordingly, I believe Ms. McKiddy's DCF derived cost of common equity is not representative of the cost of common equity for a water utility.

Q. WHY ARE MS. MCKIDDY'S DCF CALCULATIONS SO LOW?

A. A DCF will overstate a common equity cost rate when M/Bs are below 100% and understate when they are above 100%. Since the comparison companies' current M/Bs are over 200%, the DCF understates their common equity cost rate. In my direct testimony I explained this in more detail (see Page 2 of Schedule HW-2.17 for a numerical illustration of the impact of M/Bs on investors' market returns and DCF returns). The reason that DCF understates or overstates investors' return requirements depending upon M/B levels is that a DCF derived equity cost rate is applied to a book value rate base while investors' returns are measured relative to stock price levels.

Additionally, the merger activity in the water industry has resulted in abnormal or "tainted" stock prices in terms of a DCF analysis. Mr. Burdette agrees (pages 3 and 4 of his direct testimony) with this point of view, ". . . rumors of a merger can greatly effect a company's stock price, essentially making that company's financial information tainted in terms of market-based analysis tools such as the discounted cash flow."

Q. PLEASE EXPLAIN WHY THE MERGER ACTIVITY IN THE WATER INDUSTRY HAS RESULTED IN ABNORMAL OR "TAINTED" STOCK PRICES IN TERMS OF A DCF ANALYSIS.

As shown on page 1 of Schedule HW-4.6, six acquisitions of publicly traded water utility stocks have occurred or been announced since June 1998. This is a very large percentage of available publicly traded water utility stocks. On page 1,400 of the February 4, 2000 edition of Value Line, it states:

> At the present, the number of publicly traded water companies has been in decline due to the spate of acquisitions and will likely finish 2000 down by at least half, from the early-1999 figure of 16.
>
> Investors who held shares of takeover targets in 1999 were well rewarded with prices in the neighborhood of three times book value. Consequently, potential takeover targets in the U.S. have seen their share prices rise in recent months.

Page 1 of Schedule HW-4.6 shows that the average acquisition premium was 39.2%. Typically, premiums are paid in corporate acquisitions. That is, when a tender offer is made for the purchase of all the outstanding stock of a company, the amount of that offer usually exceeds the price at which the stock was previously traded in the market. Page 1 of Schedule HW-4.6 presents statistics concerning premiums offered over market price of publicly traded water companies. These large premiums are reflected in the prices of other water utilities that are not currently the announced subject of acquisition. The impact on stock price is greater the smaller the company as shown

on Page 2 of Schedule HW-4.6.

On page 2 of Schedule HW-4.6, the yields of the comparison water companies were indexed, or divided, by the yields of the S&P Utilities. A base period, January 1995 through May 1998, was used to measure the impact of each of the six announced merger. On average, the impact on stock price increased with each succeeding acquisition announcement.

For example, the yield of Connecticut Water (column G) was divided by the yields of the S&P Utilities producing a base indexed value of 0.94. Acquisition indexed values were then calculated to coincide with the period between each announced acquisition. The first acquisition (Consumers Water) covered the period June 1998 through October 1998. The second acquisition (Dominguez) covered the period November 1998 through April 1999. This procedure was followed for all six acquisition periods. For Connecticut Water, the acquisition indexed values fell from 0.89 in the first acquisition period to 0.86 in the second acquisition period. By the sixth acquisition period, the index was 0.69, representing a 26% decrease in yield when compared to the base index yield. As one would expect, there is a relationship between size and measured impact of acquisition. That is, large utilities such as AWK or Philadelphia Suburban, are not effected as much as the smaller companies such as Southwest Water and Connecticut Water.

Based upon these observations, I recommend that less weight be given the indicated DCF cost rate of acquisition subject companies and small water companies whose stock price has been greatly influenced by the speculation of acquisition.

Q. DO YOU AGREE WITH MS. MCKIDDY'S TESTIMONY ON PAGE 30 THAT IMPLIES THAT MAWC WOULD HAVE AN A BOND RATING BASED ON HER RECOMMENDED RETURN RATE?

A. No. S&P considers size as a large determinant of risk and therefore, MAWC would have to have benchmark ratios above that which would normally satisfy an "Average" business position for an A bond rating. Further, MAWC's business position would not be considered "Average" as a result of its large construction program and the unique rate base disallowances proposed in this case. Even if MAWC were able to achieve the coverage ratios indicated by Ms. McKiddy, MAWC would have a BBB bond rating based on its size and a "Below Average" business position.

As is evident from the information shown on Schedule HW-4.7, for the three years ended 1998, in most instances, MAWC's ratios were below the comparison companies. Prospectively, based upon the Company's capital expenditure program, the Company's ratios are likely to worsen. Based solely upon these ratios, MAWC's debt would likely be rated lower than the comparison companies. The impact on credit rating resulting from the proposed disallowances will be discussed later in this testimony.

Q. DO HAVE ANY OTHER OBSERVATIONS CONCERNING MS. MCKIDDY'S RECOMMENDED RETURN ON EQUITY?

A. Yes. In MAWC's last rate case, WR-97-237, Mr. Broadwater filed testimony for the Staff and recommended a common equity cost rate range of 10.10% to 11.10% at a time when A rated public utility bonds were yielding 60 basis points less than they are today. Clearly, the Staff's recommended cost of common equity in the present case should be higher than in the last case, yet it is lower. This by itself, brings into question the reasonableness of Ms. McKiddy's recommendation.

ANALYSIS OF MR. BURDETTE'S EQUITY COST

Q. WHAT IS MR. BURDETTE'S RECOMMENDED RETURN ON COMMON EQUITY IN THESE PROCEEDINGS?

A. Mr. Burdette recommends a 9.92% return on common equity based upon a DCF for AWK of 9.67% plus 0.25% for future interest rate increases.

Q. IS AN 9.92% RETURN ON COMMON EQUITY REASONABLE FOR THE COMPANY?

A. No. As explained previously, an 9.92% return on common equity provides an inadequate spread over A-rated public utility debt capital. Mr. Burdette's recommendations provides 150 basis point premium over the current yield on A rated public utility debt of 8.4%. Moreover, Value Line's projected returns on common

equity for its water utilities, for the period 2002 to 2004, is 12% or 208 basis points higher than Mr. Burdette's recommendation. As shown on Schedule HW-4.1, adjusting for bond yield changes results in an average authorized return of 12.08% for 47 water utilities. A comparable opportunity return of 12.1% for similar risk enterprises demonstrates the inequities of Mr. Burdette's recommendation 9.92% for MAWC. Capital is provided by investors based upon risk and return opportunities. Investors will not provide common equity capital to the Company when higher risk-adjusted returns are available. Mr. Burdette's recommended common equity cost rate is unreasonably low.

Q. PLEASE COMMENT ON MR. BURDETTE CALCULATED DCF FOR MAWC.

A. Mr. Burdette combined the dividend yield of AWK with the lowest growth rate found for AWK and called it a DCF for MAWC. This approach is not supported by financial theory because its a pairing of an apple and orange. As explained previously, AWK has a lot less risk than MAWC. MAWC's payout ratio is almost 50% higher than AWK's. It is not appropriate to pick and choose yields and growth rates from different companies and apply them to a third company as Mr. Burdette has done for MAWC. Accordingly, Mr. Burdette's cost rate recommendation should be rejected by the Commission.

Q. DOES MR. BURDETTE'S RECOMMENDED COST OF COMMON EQUITY RECOGNIZE MAWC'S ADDITIONAL RISK ASSOCIATED WITH ITS

SMALLER SIZE?

A. No. Mr. Burdette does not reflect MAWC's additional risk associated with its smaller size and lower benchmark statistics and therefore, Mr. Burdette's recommendation results in "financial prejudices" in regards to MAWC. Previously, I explained "financial prejudices" as illustrated on Schedule HW-4.2.

Q. IS MR. BURDETTE'S DCF COST RATE FOR HIS COMPARISON COMPANIES REASONABLE?

A. No. Mr. Burdette calculated a DCF cost rate range of 5.56% to 11.66% for his comparison companies. The low end of the range, 5.56%, clearly fails a test of reasonableness when compared to A rated public utility bond yields, Value Lines projected returns, authorized returns for other water utilities and defies common sense when compared to dividend book ratios. Therefore, Mr. Burdette's low end of the range DCF, 5.56% should be rejected by the Commission.

As is evident by viewing the information shown on Schedule HW-4.5, 4 out of 4 (100%) of Mr. Burdette's comparison companies would cut their common dividend if their authorized return on common equity was set as low as 5.56%, or equal to the low end of Mr. Burdette's cost rate range. Previously, I discussed the impact of a dividend reduction. The upper end of Mr. Burdette's DCF cost rate is more reasonable but still has deficiencies.

Q. WHAT ARE THE DEFICIENCIES IN THE UPPER END OF MR. BURDETTE'S DCF CALCULATION?

A. Mr. Burdette's comparison group includes E'Town Corp who has been offered a 37.5% premium to be acquired. Therefore, E'Town's yield is deflated by the amount of the premium offered. E'town's deflated yield results in an understated DCF. Previously, I explained the impact of acquisition premiums on stock prices. Clearly, E'Town should not be in Mr. Burdette's comparison group for his DCF.

Removing E'Town from Mr. Burdette's comparison group's DCF indicates an upper end DCF cost rate of 12.32%. This upper end DCF cost rate passes the test of reasonableness when compared to A rated public utility bond yields (8.4%), Value Lines projected returns(12.0%), and authorized returns for other comparable water utilities(12.1%).

Q. DID MR. BURDETTE PROVIDE SUPPORT FOR HIS DCF ANALYSIS?

A. Yes. Mr. Burdette provided support for his DCF analysis by calculating a CAPM of AWK and two comparison groups of companies. The first group of comparison companies, Four Value Line Water Companies, is the same group that he used to calculate his comparison group's DCF and therefore, contains the subject of an acquisition, E'Town. E'Town should be removed from Mr. Burdette's CAPM analysis.

Mr. Burdette's second group of comparison companies, Five Value Line Water Companies, contains the two companies that are the subject of an acquisition, Dominguez and SJW Corp, as shown on page 1 of Schedule HW-4.6. The three remaining companies are affected by merger speculation as shown on page 2 of Schedule HW-4.6. Accordingly, the entire Five Value Line Water Companies group should be removed from Mr. Burdette's CAPM analysis .

Q. ARE THERE ANY OTHER PROBLEMS WITH MR. BURDETTE'S CAPM ANALYSIS?

A. Yes. Mr. Burdette's CAPM contains omissions that are similar to those of Ms. McKiddy. Mr. Burdette's CAPM relies upon Ibbotson Associates' market premium found in their annual "Year Book" publication. However, Mr. Burdette's CAPM does not include Ibbotson Associates' required size premium adjustment. Previously, I explained the required size premium adjustment. As shown on page 2 of Schedule HW-4.4, the comparison companies market value ranged from $50 million to $2,308 million. For Mr. Burdette's comparison companies, the Ibbotson Associates size premiums are 0.84% for "Low-Cap" and 2.21% for "Micro-Cap." These adjustment are necessary because beta (systematic risk) does not capture or reflect the comparison companies size.

As shown on page 1 of Schedule HW-4.4, corrections and updates to Mr. Burdette's CAPM are shown. Specifically, updates in the 30-year risk free rate are used as are

the current Ibbotson Associates (updated) market premiums and size premiums. After updating and accounting for the omissions, the range of the CAPM cost rate are 11.82% to 11.95% for Mr. Burdette's comparison companies. These costs rates support the upper end of Mr. Burdette's comparison group's DCF.

Q. DO YOU HAVE ANY OTHER OBSERVATIONS CONCERNING MR. BURDETTE'S RECOMMENDED RETURN ON EQUITY?

A. Yes. As is evident from the information shown on Schedule HW-4.7, for the three years ended 1998, in most instances, MAWC's ratios were below Mr. Burdette's comparison companies. Prospectively, based upon the Company's capital expenditure program, the Company's ratios are likely to worsen. Based solely upon these ratios, MAWC's debt would likely be rated lower than the comparison companies. Therefore, the cost of capital developed for Mr. Burdette's comparison companies understates MAWC's cost of equity. The additional impact of the proposed disallowances on credit rating will be discussed later in this testimony.

It should be noted that in MAWC's last rate case, WR-97-237, Mr. Burdette filed testimony and recommended a common equity cost rate range of 10.62% at a time when A rated public utility bonds were yielding 60 basis points less than they are today. Clearly, Mr. Burdette's recommended cost of common equity in the present case should be higher than in the last case, yet it is lower. This by itself, brings into question the reasonableness of Mr. Burdette's recommendation in this case.

RISK AND COST RATES RESULTING FROM RATE BASE DISALLOWANCES

Q. HOW WOULD A PHASE-IN PLAN AFFECT THE FINANCIAL COMMUNITY'S ASSESSMENT OF MAWC?

A. MAWC's financial results would be significantly negatively affected for the duration of the deferral period. Specifically, earnings each year would be reduced by the net of tax amount of the revenue deferral. This would produce lower financial benchmark statistics and increases MAWC's risk profile. A phase-in plan would prevent MAWC from earning its authorized return on equity for several years. The lower than authorized returns on equity would jeopardize MAWC's ability to attract new common equity capital, to maintain its dividend and to maintain its credit.

Moreover, there are no assurances that future regulatory decisions will allow recovery of deferrals. Additionally, MAWC may be forced to continue deferrals or forgo recovery due to future rate increases required for other future capital additions.

A phase-in plan would cause MAWC to under-earn its allowed authorized return on equity in the deferral period and over-earn its authorized return on equity when higher revenues were permitted in future years. However, there is no guarantee that future regulators would tolerate apparent "over-earnings" for the required time period. Therefore, investors are likely to significantly discount deferrals, especially since they

would not be capitalized on financial statements.

Given MAWC's current financial position, I believe that a phase-in plan severely jeopardizes its credit rating. MAWC runs the risk of slipping closer to a non-investment grade status or junk bond rating. It is imperative that the Commission grant full and fair rate treatment of MAWC's plant investments in order to maintain access to the capital markets on reasonable terms. Anything less will impact MAWC's risk for years to come

Q. ARE YOU AWARE OF ANY LARGE RATE BASE DISALLOWANCES THAT HAVE OCCURRED IN THE WATER UTILITY INDUSTRY?

A. No. I am not aware of any large rate base disallowances that have occurred in the water utility industry.

Q. DO THE COMPANY'S PRESENT RATES FOR SERVICE REFLECT ANY RISK FOR DISALLOWANCE?

A. No. I am informed by the Company that the present rates for service do not reflect any risk for disallowance.

Q. DID YOU RECOMMEND ANY ADDITIONAL RETURN IN YOUR RECOMMENDATION TO REFLECT THE ADDED RISK ASSOCIATED WITH A DISALLOWANCE?

A. No. I am not aware of any large rate base disallowances that have occurred in the water utility industry and therefore, my recommendation did not reflect the risk associated with a disallowance. Moreover, since large rate disallowances have not occurred in the industry, the market data used to calculate an appropriate return for any of the comparison companies does not reflect the risk of disallowance as well.

Q. WOULD THE PROPOSED DISALLOWANCES IMPACT THE COMPARISON COMPANIES THE SAME AS IT COULD MAWC?

A. No. The proposed disallowances are equal to about 50% of MAWC common equity. However, they represent only about 3% of AWK's common equity, 23% of Ms. McKiddy's comparison group's common equity and 18% of Mr. Burdette's comparison group's common equity. Clearly, the potential impact on MAWC is far greater than the comparison companies.

Q. WOULD AN INVESTOR REQUIRE A HIGHER RATE OF RETURN ON COMMON EQUITY AND LONG TERM DEBT WHEN INVESTING IN A PUBLIC UTILITY WHOSE REGULATORY COMMISSION HAS ORDERED LARGE DISALLOWANCES?

A. Yes. Common sense would require investors to demand an additional premium for the use of capital in a State where regulators have ordered large unique disallowances. Ultimately, rate base disallowances have financial consequences such as higher capital costs and possibly bankruptcy. Further, disallowances provide or

result in future investment disincentives.

Q. WHY DO RATE BASE DISALLOWANCES RESULT IN FUTURE INVESTMENT DISINCENTIVES?

A. From an investor's stand point, rate base disallowances are a form of confiscation of capital unless the higher risk associated with the disallowances is included the rate of return established by the commission. In the late 1980's and early 1990's, some electric utilities experienced rate base disallowances. However, those disallowances occurred at the end of their construction cycle and therefore, they did not have to continually attract new capital. MAWC is not at the end of a construction cycle. It is necessary that the Company be allowed to have access to needed capital on reasonable terms and conditions in order to attract the required capital for their planned future capital expenditures.

Q. DOES MAWC'S ASSOCIATION WITH AWK MODERATE THE FINANCIAL IMPACTS OF THE PROPOSED DISALLOWANCES?

A. No. MAWC's ability to access capital is strictly based on its assets, earnings, and cash flow and not the resources of AWK. The property of MAWC is the collateral securing the debt issued by MAWC. Only MAWC earnings can be used to meet the earnings test to issue additional MAWC debt or preferred stock. Further, the cost for MAWC's fixed capital is determined by investors' evaluation of MAWC, not AWK or any other company. Finally, there is no guarantee by AWK regarding the payment

of MAWC principal or interest.

This is true regardless of who owns the common stock of MAWC, or whether it is widely dispersed or concentrated in a few or even a single investor. Fairness requires that all investors in the same or similar securities should be treated alike. Investors who invest in a risky asset, expose themselves to investment risk particular to that investment. The greater the risk associated with a risky asset, the higher the required return. This is a basic tenet of corporate finance concerning risk and return. The investment risk of an asset does not change, regardless of who owns the asset. Whether the asset is owned by a tall person or a short person, the required return is the same because the risk of owning that asset is the same. Likewise, whether the owner or investor of a risky asset is rich or poor, the risk of owning the asset is unchanged and therefore the required return is unchanged.

As the sole shareholder, AWK believes a utility subsidiary must exhibit the ability to attract the capital it requires as a prerequisite to the initiation to warrant new common equity investment. AWK is dedicated to providing the best possible water service at a reasonable cost consistent with adequate compensation for investors. AWK believes the ability to attract needed capital is dependent upon consistently achieving adequate earnings. The business of the AWK is the investment in common stock of water utilities. The purpose of this business is to protect and enhance the value of AWK's shareholders' investment through growth in earnings and dividends per share.

To date, AWK has advanced common equity funds solely at its discretion based, in part, on its expectation that MAWC will receive a full and fair return on investment, enabling it to support its traditional dividend policy. As the sole shareholder of a number of water utilities, AWK has the discretion to ration its common equity capital infusions to its subsidiaries based upon a risk / return profile. If an operating water subsidiary's risk does not provide sufficient returns, common equity capital will not be provided.

Q. IF YOU COMBINED THE PROPOSED RATE BASE DISALLOWANCES WITH THE RATE OF RETURN RECOMMENDATION OF EITHER MS. MCKIDDY OR MR. BURDETTE, WILL IT RESULT IN CONFISCATION OF CAPITAL?

A. Yes. The disallowance of plant from rate base subverts MAWC's capital integrity because its common equity will be reduced by the net of tax disallowance. However, investors supply capital not rate base. Each dollar of supplied capital has a required return irrespective of rate base. Disallowance of rate base results in some investor provided capital having no earnings power. When disallowances occur, the lack of earnings power is transferred or absorbed by all classes of investors (i.e., both debt and equity) in the form of lower interest coverage, less cash flow, greater financial risk (i.e., more debt leverage) and impacts the access to capital markets. These conditions result in greater risk for investors, reduction in stock values and bond ratings, thereby producing a much higher cost of capital.

The only remedy to this situation is to increase the allowed return on equity on rate base to a level that produces or yields the same total dollars of return necessary to satisfy each dollar of supplied capital irrespective of rate base. Anything less results in MAWC's having the inability to attract capital on reasonable terms, voids their credit quality, and provides returns that are far below that of similar risk enterprises.

Q. WHY WILL A RATE BASE DISALLOWANCE INCREASE MAWC'S RISK?

A. Based upon the combined rate base disallowance recommendations and rate of return recommendation of Ms. McKiddy, MAWC will no longer be able to pay any dividends as a result of having negative retained earnings. Further, its increased debt leverage resulting from a write-off will preclude it from issuing additional bonds due to its indenture because a pro forma debt issuance would result in more than 65% debt. In short, the only access to capital will be to extremely high cost short-term debt due to its poor credit quality. This scenario of limited access to capital markets and high cost short-term debt has occurred for other companies prior their filling of bankruptcy.

As shown on page 1 of Schedule HW-4.8, a disallowance will result in lower interest coverage, less cash flow, greater financial risk (i.e., more debt leverage) and thus, impacts the access to capital markets. Schedule HW-4.8 details the results of applying the S&P's various financial benchmarks for MAWC after reflecting the combined rate base disallowances and rate of return recommendation of Ms. McKiddy. Clearly,

these ratios place MAWC in a junk bond credit quality position of BB when compared to S&P's published benchmark ratios shown on page 1 of Schedule HW-4.8. Large disallowances would result in MAWC having a business position of "Below Average", thus requiring the most stringent benchmark ratios. Even without any disallowances, the financial benchmarks for MAWC, reflective of the recommendation of Ms. McKiddy or Mr. Burdette, place MAWC far below the benchmark statistics shown for the comparison companies as shown on Schedule HW-4.7. Accordingly, any equity cost rate developed from comparison companies understates MAWC's cost rate. It should be noted that the analysis presented on Schedule HW-4.8 only uses Ms. McKiddy's recommendation. Because her recommendation is higher than Mr. Burdette's, employing Mr. Burdette's recommendation would produce lower benchmark statistics and thus, result in a lower bond rating.

Ms. McKiddy advocates (page 30) that MAWC strive for a 2.95x pre-tax interest coverage. Adopting the rate base disallowance recommendations of St. Joseph Industrials Witness Morris and Staff requires that MAWC's return be set to achieve a ROE of 20.7% in order to produce a 2.95x interest coverage. Adopting the rate base disallowances recommendations of OPC Witness Biddy and Staff requires that MAWC's return be set to achieve a ROE of 23.6% in order to produce a 2.95x interest coverage. Similarly, MAWC would have to achieve a 14.5% ROE in order to result in a 2.95x interest coverage if only Staff's rate base recommendations were granted. The aforementioned levels of equity return rates are reasonable when

compared to the additional risk that results from large disallowances of rate base. It should be noted that the 14.5%, 20.7% and 23.6% returns on equity are achieved returns not authorized returns. The distinction lies in the impact on authorized earnings that result from phase-in plans. That is, during a phase-in plan, ROE's must be authorized at a higher level in order to result in the lower achievable earnings because earnings are reduced by the amount of the revenue deferral, net of taxes.

MAWC cannot attract the required capital if it maintains financial ratios that result from the rate base disallowance recommendations and the low returns recommended by either Ms. McKiddy or Mr. Burdette. In the future, it will be necessary for MAWC to achieve higher returns on equity, decrease leverage, and increase cash flow just to have access to the capital markets.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

RATE OF RETURN

SCHEDULES

TO ACCOMPANY THE

REBUTTAL TESTIMONY

OF HAROLD WALKER, III

ON BEHALF OF

MISSOURI-AMERICAN WATER COMPANY

MAY 4, 2000

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, INC.

HARRISBURG, PENNSYLVANIA

Indicated Cost of Capital
Based on Authorized ROE and Current A Rated Bond Yields

	Date Authorized	Authorized ROE	A Rated Public Utility Bond Yield	Spread	Current A Rated Public Utility Bond Yield of 8.42	Adjusted ROE For Current Capital Cost Rates
Artesian water	5/12/98	10.9	7.16	3.74	8.42	12.16
Avon water	3/11/98	12.3	7.16	5.14	8.42	13.56
Barnstable	5/29/98	12.5	7.16	5.34	8.42	13.76
Bluefield Valley	2/21/97	11.0	7.64	3.36	8.42	11.78
Bridgeport Hydraulic	8/1/97	11.6	7.51	4.09	8.42	12.51
California American	1/1/99	10.5	6.97	3.53	8.42	11.95
California Water Serv	7/1/98	10.4	7.03	3.37	8.42	11.79
Consumers Illinois	6/6/98	10.1	7.03	3.07	8.42	11.49
Consumers Maine	7/1/97	10.8	7.48	3.32	8.42	11.74
Consumers New Jersey	4/1/98	10.8	7.16	3.64	8.42	12.06
Consumers PA-Roaring Creek	10/1/97	11.0	7.35	3.65	8.42	12.07
Consumers PA-Shenango	12/24/97	11.0	7.16	3.84	8.42	12.26
Consumers PA-Susquehanna	7/24/98	10.5	7.03	3.47	8.42	11.89
Florida Water Services	7/20/98	10.5	7.03	3.47	8.42	11.89
Illinois American	12/22/97	10.6	7.16	3.44	8.42	11.86
Indiana American	7/1/99	10.7	7.71	2.99	8.42	11.41
Indianapolis Water	4/1/98	11.5	7.16	4.34	8.42	12.76
Iowa American	8/31/98	10.8	7.00	3.80	8.42	12.22
Kentucky American	9/30/97	11.0	7.47	3.53	8.42	11.95
Maryland American	5/28/99	10.5	7.47	3.03	8.42	11.45
Michigan American	1/1/98	10.0	7.04	2.96	8.42	11.38
Middlesex Water	1/29/98	11.0	7.04	3.96	8.42	12.38
Missouri American	11/4/97	11.0	7.25	3.75	8.42	12.17
New Jersey American	4/1/99	10.8	7.22	3.58	8.42	12.00
New Mexico American	1/1/99	10.1	6.97	3.13	8.42	11.55
New York American	8/1/98	10.8	7.00	3.80	8.42	12.22
Northern Illinois	3/14/98	10.4	7.16	3.24	8.42	11.66
Northwest Illinois	3/14/98	10.4	7.16	3.24	8.42	11.66
Northwest Indiana	5/27/98	10.3	7.16	3.14	8.42	11.56
Ohio American	10/1/98	11.5	6.96	4.54	8.42	12.96
Paradise Valley	7/14/99	11.0	7.71	3.29	8.42	11.71
Pennichuck	4/1/98	10.4	7.16	3.24	8.42	11.66
Pennsylvania American	10/1/97	10.7	7.35	3.35	8.42	11.77
Southern California	1/1/99	10.0	6.97	3.03	8.42	11.45
St. Louis County	1/1/98	11.1	7.04	4.06	8.42	12.48
Suburban Water System	1/1/98	10.0	7.04	2.96	8.42	11.38
Torrington Water	3/1/97	12.2	7.87	4.33	8.42	12.75
United Arkansas	10/1/97	10.8	7.35	3.45	8.42	11.87
United Delaware	5/11/98	11.7	7.16	4.54	8.42	12.96
United Florida	5/19/97	11.6	7.89	3.71	8.42	12.13
United Idaho	7/6/98	10.8	7.03	3.77	8.42	12.19
United Pennsylvania	2/3/98	11.0	7.12	3.88	8.42	12.30
United South Gate	11/1/97	11.3	7.25	4.05	8.42	12.47
United Toms River	1/1/98	11.3	7.04	4.26	8.42	12.68
United W Lafayette	7/8/98	10.5	7.03	3.47	8.42	11.89
Virginia American	12/22/98	10.8	6.91	3.89	8.42	12.31
West Virginia American	12/21/98	10.0	6.91	3.09	8.42	11.51
Average		10.9	7.20	3.66	8.42	12.08
Median		10.8	7.16	3.53	8.42	11.95
Lower Quartile		10.5	7.03	3.27	8.42	11.69
Upper Quartile		11.0	7.30	3.89	8.42	12.31

Source of Information: NAWC 1998 Financial & Operating Data for Investor-Owned Water Utilities and Company Provided Information

Analysis of Ms. McKiddy's and Mr. Burdette's Testimony
Concerning "Financial Prejudice"

	A	B	C	D

Hypothetical Portfolio

	CD	T-Bond	Common Stock	Portfolio Total
1. Percent Invested	50%	25%	25%	100%
2. Return of Asset	6.1	6.2	**15.0**	
3. Risk Measure	0.20	0.40	1.00	
4. Weighted Return	3.1	1.6	3.8	8.5
5. Weighted Risk Measure	0.10	0.10	0.25	0.45
6. Return Per Unit of Risk	30.50	15.50	**15.00**	
7. **Portfolio Return**				**8.5**

Ms. McKiddy's or Mr. Burdette's Portfolio

	CD	T-Bond	Common Stock	Portfolio Total
1. Percent Invested	50%	25%	25%	100%
2. Return of Asset	6.1	6.2	**8.5**	
3. Risk Measure	0.20	0.40	1.00	
4. Weighted Return	3.1	1.6	2.1	6.8
5. Weighted Risk Measure	0.10	0.10	0.25	0.45
6. Return Per Unit of Risk	30.50	15.50	**8.50**	
7. **Portfolio Return**				**6.8**

Comment : Weighted Return is calculated by multiplying line 1. by line 2. Weighted Risk Measure is calculated by multiplying line 1. by line 3. Return Per Unit of Risk is calculated by dividing line 2. by line 3.

Interest Rate Trends for A Rated Public Utility Bonds
Monthly for the Years 1993 To 2000

	1993	1994	1995	1996	1997	1998	1999	2000	
Jan	8.27	7.33	8.73	7.22	7.77	7.04	6.97	8.35	
Feb	8.04	7.42	8.52	7.37	7.64	7.12	7.09	8.25	
Mar	7.90	7.85	8.37	7.73	7.87	7.16	7.26	8.28	
Apr	7.81	8.22	8.27	7.89	8.03	7.16	7.22	8.29	
May	7.86	8.33	7.91	7.98	7.89	7.16	7.47	*8.42*	*Estimated*
Jun	7.75	8.31	7.60	8.06	7.72	7.03	7.74		
Jul	7.54	8.47	7.70	8.02	7.48	7.03	7.71		
Aug	7.25	8.41	7.83	7.84	7.51	7.00	7.91		
Sep	7.04	8.64	7.62	8.01	7.47	6.93	7.93		
Oct	7.03	8.86	7.46	7.77	7.35	6.96	8.06		
Nov	7.30	8.98	7.43	7.49	7.25	7.03	7.94		
Dec	7.34	8.76	7.23	7.59	7.16	6.91	8.14		
Annual Ranges:									
Lowest	7.03	7.33	7.23	7.22	7.16	6.91	6.97	8.25	
Highest	8.27	8.98	8.73	8.06	8.03	7.16	8.14	8.42	
Median	7.65	8.37	7.77	7.81	7.58	7.03	7.73	8.29	
Mean	7.59	8.30	7.89	7.75	7.60	7.04	7.62	8.32	
Mid-point	7.63	8.24	7.90	7.71	7.59	7.04	7.61	8.32	

Correction and Update of
Witnesses Mckiddy's and Burdette's CAPM
For Their Comparison Companies

A	B	C	D	E	F	G	H	I	J	K
	Ibbotson's Market Premium (1926-1999)	Beta	Adjusted Market Premium	Low End Risk Free Rate	High End Risk Free Rate	Low End Base Cost	High End Base Cost	Ibbotson's Size Premium (1926-1999)	Low End Cost of Equity	High End Cost of Equity
American Water Works Inc	7.8	0.60	4.68	6.00	6.63	10.68	11.31	0.19	10.87	11.50
Witness McKiddy's Six Comparable Water Cos.										
American States Water Co	7.8	0.60	4.68	6.00	6.63	10.68	11.31	2.21	12.89	13.52
California Water Service Gp	7.8	0.55	4.29	6.00	6.63	10.29	10.92	2.21	12.50	13.13
Connecticut Water Svc Inc	7.8	0.50	3.90	6.00	6.63	9.90	10.53	2.21	12.11	12.74
E'Town Corp	7.8	0.50	3.90	6.00	6.63	9.90	10.53	0.84	10.74	11.37
Middlesex Water Co	7.8	0.45	3.51	6.00	6.63	9.51	10.14	2.21	11.72	12.35
Philadelphia Suburban Corp	7.8	0.55	4.29	6.00	6.63	10.29	10.92	0.84	11.13	11.76
Average	7.8	0.53	4.10	6.00	6.63	10.10	10.73	1.75	11.85	12.48
Witness Burdette's Four Value Line Water Cos.										
American States Water Co	7.8	0.60	4.68	6.00	6.00	10.68	10.68	2.21	12.89	12.89
California Water Service Gp	7.8	0.55	4.29	6.00	6.00	10.29	10.29	2.21	12.50	12.50
E'Town Corp	7.8	0.50	3.90	6.00	6.00	9.90	9.90	0.84	10.74	10.74
Philadelphia Suburban Corp	7.8	0.55	4.29	6.00	6.00	10.29	10.29	0.84	11.13	11.13
Average	7.8	0.55	4.29	6.00	6.00	10.29	10.29	1.53	11.82	11.82
Witness Burdette's Five Additional Value Line Water Cos.										
Connecticut Water Svc Inc	7.8	0.50	3.90	6.00	6.00	9.90	9.90	2.21	12.11	12.11
Dominguez Services Corp	7.8	0.40	3.12	6.00	6.00	9.12	9.12	2.21	11.33	11.33
Middlesex Water Co	7.8	0.45	3.51	6.00	6.00	9.51	9.51	2.21	11.72	11.72
SJW Corp	7.8	0.50	3.90	6.00	6.00	9.90	9.90	2.21	12.11	12.11
Southwest Water Co	7.8	0.55	4.29	6.00	6.00	10.29	10.29	2.21	12.50	12.50
Average	7.8	0.48	3.74	6.00	6.00	9.74	9.74	2.21	11.95	11.95

	30-Year T-Bond Yield
Nov-99	6.15
Dec-99	6.35
Jan-00	6.63
Feb-00	6.23
Mar-00	6.05
4/27/00	6.00
Witness McKiddy	
6 Month Low	6.00
6 Month High	6.63
Witness Burdette	
Spot 4/27/00	6.00

Recent Market Values and
Ibbotson Associted Size Premiums
For Witnesses Mckiddy's and Burdette's Comparison Companies

	Current Market Value (Mill $)	Market Decile	Market Quartile	Market Quartile Name	Quartile Size Premium
American Water Works Inc	2,308.358	4	2	Mid-Cap	0.19
Witness McKiddy's Six Comparable Water Cos.					
American States Water Co	266.501	9	4	Mico-Cap	2.21
California Water Service Gp	295.103	9	4	Mico-Cap	2.21
Connecticut Water Svc Inc	137.307	10	4	Mico-Cap	2.21
E'Town Corp	552.046	8	3	Low-Cap	0.84
Middlesex Water Co	145.029	10	4	Mico-Cap	2.21
Philadelphia Suburban Corp	743.361	7	3	Low-Cap	0.84
Average	356.558	9	4	Mico-Cap	2.21
Witness Burdette's Four Value Line Water Cos.					
American States Water Co	266.501	9	4	Mico-Cap	2.21
California Water Service Gp	295.103	9	4	Mico-Cap	2.21
E'Town Corp.	552.046	8	3	Low-Cap	0.84
Philadelphia Suburban Corp	743.361	7	3	Low-Cap	0.84
Average	464.253	8	3	Low-Cap	0.84
Witness Burdette's Five Additional Value Line Water Cos.					
Connecticut Water Svc Inc	137.307	10	4	Mico-Cap	2.21
Dominguez Services Corp	49.657	10	4	Mico-Cap	2.21
Middlesex Water Co	145.029	10	4	Mico-Cap	2.21
SJW Corp	356.265	9	4	Mico-Cap	2.21
Southwest Water Co	69.305	10	4	Mico-Cap	2.21
Average	151.513	10	4	Mico-Cap	2.21

Source of Information: Ibbotson Associates, Inc., Stocks, Bonds, Bills and Inflation: 2000 Year Book
for the Period 1926-99
Standard & Poor's

Change in Return for
Size-Deciles Portfolio and Size-Quartile Portfolio of the NYSE Common Stocks

A	B	C	D	E	F	G	H	I	J	K	L
				Market Capitalization				Change in Return For Every Million in Value		Change in Size Premium Every Million in Value	
Size Grouping	Average Return 1926-99 (%)	Risk Adjusted Size Premium (%)	Recent Number Of Companies	Largest Market Value in the Decile (Mill $)	Calculated Average Market Value (Mill $)	Change in Largest Value (Mill $)	Change in Average Value (Mill $)	Largest Value	Average Value	Largest Value	Average Value
Decile Grouping of Stocks											
(Largest Stocks)											
1	12.13	(0.35)	186	369,722	190,111	--	--	--	--	--	--
2	13.55	(0.02)	182	10,499	7,361	359,223	182,750	0.0000	0.0000	0.0000	0.0000
3	13.92	(0.05)	185	4,222	3,213	6,277	4,148	0.0001	0.0001	0.0000	0.0000
4	14.55	0.28	183	2,204	1,754	2,018	1,459	0.0003	0.0004	0.0002	0.0002
5	15.28	0.76	185	1,304	1,088	900	666	0.0008	0.0011	0.0005	0.0007
6	15.44	0.74	183	872	725	432	364	0.0004	0.0004	0.0000	(0.0001)
7	15.75	0.64	184	577	480	295	245	0.0011	0.0013	(0.0003)	(0.0004)
8	16.80	1.38	184	382	299	195	181	0.0054	0.0058	0.0038	0.0041
9	17.59	1.61	184	215	157	167	142	0.0047	0.0056	0.0014	0.0016
10	20.73	3.95	185	98	49	117	108	0.0268	0.0292	0.0200	0.0218
(Smallest Stocks)											
Quartile Grouping of Stocks											
(Largest Stocks)											
1	13.30	--	368	369,722	186,972	--	--	--	--	--	--
2	14.35	0.19	553	4,222	2,547	365,500	184,425	0.0000	0.0000	0.0000	0.0000
3	15.81	0.84	551	872	544	3,350	2,004	0.0004	0.0007	0.0002	0.0003
4	18.40	2.21	369	215	215	657	329	0.0039	0.0079	0.0021	0.0042
(Smallest Stocks)											

Source of Information: Ibbotson Associates, Inc., Stocks, Bonds, Bills and Inflation: 2000 Year Book for the Period 1926-99

Recent Dividend Book Ratios,
P-E Multiples, Market/Book Multiples, Payout Ratios, ROEs and Market Value
For Witnesses Mckiddy's and Burdette's Comparison Companies

	Current Dividend Book Ratio	PE Mult	Market to Book Mult	Current Dividend Payout	Current Return on Equity	Current Market Value (Mill $)
American Water Works Inc	5.4	17.0	1.4	51.8	8.9	2,308.358
Witness McKiddy's Six Comparable Water Cos.						
American States Water Co	7.2	16.6	1.7	71.6	10.2	266.501
California Water Service Gp	8.0	14.9	1.7	69.6	11.5	295.103
Connecticut Water Svc Inc	9.2	18.4	2.2	74.3	12.3	137.307
E'Town Corp	7.8	26.5	2.4	75.8	9.1	552.046
Middlesex Water Co	8.7	18.8	2.1	80.4	11.0	145.029
Philadelphia Suburban Corp	8.1	20.4	2.0	72.8	10.2	743.361
Average	8.2	19.3	2.0	74.1	10.7	356.558
Witness Burdette's Four Value Line Water Cos.						
American States Water Co	7.2	16.6	1.7	71.6	10.2	266.501
California Water Service Gp	8.0	14.9	1.7	69.6	11.5	295.103
E'Town Corp	7.8	26.5	2.4	75.8	9.1	552.046
Philadelphia Suburban Corp	8.1	20.4	2.0	72.8	10.2	743.361
Average	7.8	19.6	2.0	72.5	10.3	464.253
Witness Burdette's Five Additional Value Line Water Cos.						
Connecticut Water Svc Inc	9.2	18.4	2.2	74.3	12.3	137.307
Dominguez Services Corp	9.0	22.2	2.9	97.4	13.2	49.657
Middlesex Water Co	8.7	18.8	2.1	80.4	11.0	145.029
SJW Corp	5.2	22.5	2.5	46.5	11.6	356.265
Southwest Water Co	3.9	11.9	1.7	24.8	15.4	69.305
Average	7.2	18.8	2.3	64.7	12.7	151.513

Source of Information: Quarterly Reports, Standard & Poor's and Value Line

Recent Acquisition Premium Paid or Offered for Publicly Traded
Water Utility Stocks

Announcement Date	Subject Company	Acquisition Premium(1)
6/27/98	Consumers Water Co.	32.48%
11/13/98	Dominguez Services Corp.	47.41%
5/31/99	Aquarion Co.	30.35%
8/18/99	United Water Resources	51.99%
10/29/99	SJW Corp.	35.49%
11/22/99	E'Town Corp.	37.52%
	Average	39.21%

Note: (1) Calculated based upon acquisition price to the average closing price for the 22 trading days (one month) prior to the announcement date.

Measuring the Impact of Acquisitions on Dividend Yields
Based on Indexing the Yields of Water Utilities To The S&P Utilities Yields

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
			Not Currently the Subject of Acquisition								Announced As the Subject of Acquisition					
			American States Water Co	American Water Works Inc	California Water Service Gp	Connecticut Water Svc Inc	Middlesex Water Co	Philadelphia Suburban Corp	Southwest Water Co		Consumers Water Co.	Dominguez Services Corp.	Aquarion Co.	United Water Resources	SJW Corp.	E'Town Corp.
	Base Period		Base Period Index Yield to S&P Utilities Yield (1)								Base Period Index Yield to S&P Utilities Yield (1)					
	Jan-95	May-98	0.9004	0.5487	0.8287	0.9483	0.9696	0.7269	0.5102		NA	0.8800	0.9551	0.9453	0.7930	1.0545
Acquisition Number	Months Between Acquisitions		Six Acquisition Period Index Yield to S&P Utilities Yield (1)							Acquisition Number	Six Acquisition Period Index Yield to S&P Utilities Yield (1)					
1	Jun-98	Oct-98	0.9045	0.4965	0.8263	0.8930	0.9859	0.5153	0.4119	1	NA	0.8287	0.8913	0.9334	0.7669	0.9141
2	Nov-98	Apr-99	0.8803	0.5220	0.7845	0.8678	0.9352	0.5212	0.4002	2	NA	0.6163	0.8062	0.8477	0.7280	0.9005
3	May-99	Jul-99	0.8862	0.5529	0.7991	0.8683	0.9307	0.5895	0.3785	3	NA	0.6189	0.6496	0.8368	0.6297	0.8843
4	Aug-99	Sep-99	0.6825	0.5395	0.6910	0.7333	0.7148	0.5609	0.2688	4	NA	0.5847	0.5635	0.5288	0.4962	0.7403
5	Oct-99	Oct-99	0.7429	0.5868	0.7444	0.7694	0.7581	0.6234	0.3029	5	NA	0.5793	0.6143	0.5665	0.4076	0.8820
6	Nov-99	Mar-00	0.7195	0.7027	0.7308	0.6992	0.7313	0.6557	0.3118	6	NA	0.5586	0.4035	0.6331	0.3750	0.5864
			Percentage Change From Base Period Index to Acquisition Periods								Percentage Change From Base Period Index to Acquisition Periods					
1	Jun-98	Oct-98	0%	-10%	0%	-6%	2%	-29%	-19%	1	NA	-6%	-7%	-1%	-3%	-13%
2	Nov-98	Apr-99	-2%	-5%	-5%	-8%	-4%	-28%	-22%	2	NA	-30%	-16%	-10%	-8%	-15%
3	May-99	Jul-99	-2%	1%	-4%	-8%	-4%	-19%	-26%	3	NA	-30%	-32%	-11%	-21%	-16%
4	Aug-99	Sep-99	-24%	-2%	-17%	-23%	-26%	-23%	-47%	4	NA	-34%	-41%	-44%	-37%	-30%
5	Oct-99	Oct-99	-17%	7%	-10%	-19%	-22%	-14%	-41%	5	NA	-34%	-36%	-40%	-49%	-16%
6	Nov-99	Mar-00	-20%	28%	-12%	-26%	-25%	-10%	-39%	6	NA	-37%	-58%	-33%	-53%	-44%
			Indicators of Size								Acquisition Information					
Market Value-Monthly (MM$)			266.501	2,308.358	295.103	137.307	145.029	743.361	69.305	Date	06/27/98	11/13/98	05/31/99	08/18/99	10/29/99	11/22/99
(Size Rank - Market Value)			4	1	3	6	5	2	7	Premium	32%	47%	30%	52%	35%	38%
										Order	1	2	3	4	5	6
Invested Capital-Total (MM$)			277.108	3,442.274	337.229	121.218	149.757	496.585	68.543							
(Size Rank - Invested Capital)			4	1	3	6	5	2	7							

Notes: (1) Calculated by taking the comparison company's yield and dividing it by the yield of the S&P Utilities, thus resulting in an indexed value. This procedure was followed for each month for the period January 1995 to March 2000.

Source of Information : S&P

Comparison of Standard and Poor's Credit Quality
Financial Benchmark Ratios
For Missouri-American Water Co. and
Witnesses Mckiddy's and Burdette's Comparison Companies

	For the Period 1996-98			Standard & Poor's Financial Benchmark Criteria For an "A" Bond Rating — Business Position			Standard & Poor's Financial Benchmark Criteria For a "BBB" Bond Rating — Business Position		
	Lower Quartile	Median	Upper Quartile	Above Average	Average	Below Average	Above Average	Average	Below Average
PreTax Interest Coverage (x)									
Missouri-American Water Company	2.8	2.6	2.8	2.3	3.0	3.8	1.3	2.0	2.8
American Water Works Co.	2.3	2.3	2.3	2.3	3.0	3.8	1.3	2.0	2.8
Witness McKiddy's Six Comparable Water Cos.	3.2	3.3	3.6	2.3	3.0	3.8	1.3	2.0	2.8
Witness Burdette's Four Value Line Water Cos.	3.1	3.2	3.4	2.3	3.0	3.8	1.3	2.0	2.8
Witness Burdette's Five Additional Value Line Water Cos	3.2	3.7	5.4	2.3	3.0	3.8	1.3	2.0	2.8
Total Debt / Total Capital (%)									
Missouri-American Water Company	58.4	59.2	56.7	56.0	52.0	48.0	64.0	59.0	54.0
American Water Works Co.	59.9	60.1	60.7	56.0	52.0	48.0	64.0	59.0	54.0
Witness McKiddy's Six Comparable Water Cos.	45.9	49.7	52.6	56.0	52.0	48.0	64.0	59.0	54.0
Witness Burdette's Four Value Line Water Cos.	44.0	48.6	54.2	56.0	52.0	48.0	64.0	59.0	54.0
Witness Burdette's Five Additional Value Line Water Cos	39.6	48.5	50.0	56.0	52.0	48.0	64.0	59.0	54.0
GCF / Interest Coverage (x)									
Missouri-American Water Company	3.0	2.9	3.0	3.0	3.0	3.0	2.5	3.3	4.0
American Water Works Co.	2.7	2.7	2.8	3.0	3.0	3.0	2.5	3.3	4.0
Witness McKiddy's Six Comparable Water Cos.	3.3	3.5	3.7	3.0	3.0	3.0	2.5	3.3	4.0
Witness Burdette's Four Value Line Water Cos.	3.3	3.4	3.6	3.0	3.0	3.0	2.5	3.3	4.0
Witness Burdette's Five Additional Value Line Water Cos	3.5	3.7	5.4	3.0	3.0	3.0	2.5	3.3	4.0

Comparison of Standard and Poor's Credit Quality
Financial Benchmark Ratios
For Missouri-American Water Co. and
Witnesses Mckiddy's and Burdette's Comparison Companies

	For the Period 1996-98			Standard & Poor's Financial Benchmark Criteria For an "A" Bond Rating			Standard & Poor's Financial Benchmark Criteria For a "BBB" Bond Rating		
				Business Position			Business Position		
	Lower Quartile	Median	Upper Quartile	Above Average	Average	Below Average	Above Average	Average	Below Average
GCF / Average Total Debt (%)									
Missouri-American Water Company	13.3	14.2	15.4	15.0	21.0	27.0	10.0	15.0	20.0
American Water Works Co.	13.0	13.3	13.5	15.0	21.0	27.0	10.0	15.0	20.0
Witness McKiddy's Six Comparable Water Cos.	16.4	18.3	22.0	15.0	21.0	27.0	10.0	15.0	20.0
Witness Burdette's Four Value Line Water Cos.	16.1	19.8	23.3	15.0	21.0	27.0	10.0	15.0	20.0
Witness Burdette's Five Additional Value Line Water Cos	18.3	23.7	31.0	15.0	21.0	27.0	10.0	15.0	20.0
NCF / Construction									
Missouri-American Water Company	19.2	23.1	27.8	60.0	75.0	90.0	35.0	50.0	65.0
American Water Works Co.	53.6	54.1	57.6	60.0	75.0	90.0	35.0	50.0	65.0
Witness McKiddy's Six Comparable Water Cos.	36.9	45.3	61.0	60.0	75.0	90.0	35.0	50.0	65.0
Witness Burdette's Four Value Line Water Cos.	36.0	45.3	59.3	60.0	75.0	90.0	35.0	50.0	65.0
Witness Burdette's Five Additional Value Line Water Cos	42.7	62.6	67.4	60.0	75.0	90.0	35.0	50.0	65.0

Source of Information: S&P and Company's Annual Reports

Missouri-American Water Company
Funds Flow Ratio Test of the Recommendations
of Witness McKiddy, Rate Base Disallowances of
Staff and Witnesses Biddy and Witness Morris

	Witness McKiddy & Rate Base Disallowances of Staff & Witness Morris For the Period 2000-02 (1)			Witness McKiddy & Rate Base Disallowances of Staff & Witnesses Biddy For the Period 2000-02 (1)			Standard & Poor's Financial Benchmark Criteria For a "BB" Bond Rating Business Position		
	Lower Quartile	Median	Upper Quartile	Lower Quartile	Median	Upper Quartile	Above Average	Average	Below Average
PreTax Interest Coverage (x)	-0.3	1.6	1.8	-0.6	1.6	1.8	0.8	1.0	1.5
Total Debt / Total Capital (%)	64.0	65.4	66.5	66.7	68.2	69.1	70.0	65.0	60.0
GCF / Interest Coverage (x)	0.7	1.9	2.1	0.4	1.9	2.1	1.0	1.3	1.8
GCF / Average Total Debt (%)	-2.3	6.9	8.3	-5.9	7.0	8.5	7.0	9.0	12.0
NCF / Construction (%)	-0.7	48.7	58.4	-9.3	58.1	63.8	20.0	30.0	40.0

	Witness McKiddy & Rate Base Disallowances of Staff For the Period 2000-02 (1)			Standard & Poor's Financial Benchmark Criteria For a "BBB" Bond Rating Business Position		
	Lower Quartile	Median	Upper Quartile	Above Average	Average	Below Average
PreTax Interest Coverage (x)	1.8	1.9	2.1	1.3	2.0	2.8
Total Debt / Total Capital (%)	58.9	59.6	60.2	64.0	59.0	54.0
GCF / Interest Coverage (x)	2.0	2.2	2.5	1.5	2.3	3.0
GCF / Average Total Debt (%)	7.2	8.4	10.2	10.0	15.0	20.0
NCF / Construction (%)	27.3	40.6	47.7	35.0	50.0	65.0

Note: (1) Developed on page 2 of this Schedule.

Missouri-American Water Company
Funds Flow Ratio Test of the Recommendations
of Witness McKiddy, Rate Base Disallowances of
Staff and Witnesses Biddy and Witness Morris

Line No		Witness McKiddy & Rate Base Disallowances of Staff & Witness Morris			Witness McKiddy & Rate Base Disallowances of Staff & Witnesses Biddy			Witness McKiddy & Rate Base Disallowances of Staff		
		2000	2001	2002	2000	2001	2002	2000	2001	2002
		(Millions of Dollars)			(Millions of Dollars)			(Millions of Dollars)		
1.	Net Operating Operating Income	(9.104)	9.435	10.911	(14.906)	9.899	11.588	8.784	9.764	12.642
2.	Less: Long-Term Debt Expenses	5.727	6.154	6.155	7.734	6.154	6.157	5.727	6.154	6.155
3.	Short-Term Debt Expenses (1)	1.926	1.628	0.994	1.930	1.683	1.103	1.386	1.217	0.884
4.	Total Interest Expenses	7.653	7.782	7.149	9.664	7.837	7.260	7.113	7.371	7.039
5.										
6.	Net Income (ln 1 - ln 4)	(16.757)	1.653	3.762	(24.570)	2.062	4.328	1.671	2.393	5.603
7.	Expenses Not Requiring Cash Outlays:									
8.	Depreciation	3.372	4.325	4.516	3.240	4.062	4.253	3.789	5.161	5.352
9.	Amortization	0.066	0.216	0.216	0.066	0.216	0.216	0.066	0.216	0.216
10.	Deferred Income Taxes	0.975	0.975	0.975	0.975	0.975	0.975	0.975	0.975	0.975
11.	Investment Tax Credits	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)
12.										
13.	Gross Cash Flow	(12.379)	7.134	9.434	(20.324)	7.280	9.737	6.466	8.710	12.111
14.										
15.	Less:									
16.	Preferred Stock Dividends	0.183	0.000	0.547	0.183	0.000	0.000	0.243	0.243	0.243
17.	Common Dividends	2.419	0.000	0.729	2.419	0.000	0.000	2.054	2.738	5.061
18.										
19.	Net Cash Flow	(14.981)	7.134	8.158	(22.926)	7.280	9.737	4.169	5.729	6.807
20.										
21.	Interest Charges (ln 4)	7.653	7.782	7.149	9.664	7.837	7.260	7.113	7.371	7.039
22.										
23.	Gross Construction	29.917	10.467	16.755	29.917	10.467	16.755	29.917	10.467	16.755
24.										
25.	Income Taxes	(8.194)	3.337	2.932	(11.868)	2.989	2.575	2.986	4.134	4.257
26.										
27.	Before Income Tax Interest Coverage									
28.	((ln 25 + ln 1) / ln 21)	-2.26	1.64	1.94	-2.77	1.64	1.95	1.65	1.89	2.40
29.										
30.	Debt / Total Capital	67.5%	65.4%	62.6%	70.0%	68.2%	65.1%	60.7%	59.6%	58.1%
31.										
32.	Funds From Operations Interest Coverage									
33.	((ln 13 + ln 21) / ln 21)	-0.62	1.92	2.32	-1.10	1.93	2.34	1.91	2.18	2.72
34.										
35.	Funds From Operations / Total Debt	-11.5%	6.9%	9.7%	-18.8%	7.0%	9.9%	6.0%	8.4%	12.1%
36.										
37.	Net Cash Flow / Capital Expenditures									
38.	(ln 19 / ln 23)	-50.1%	68.2%	48.7%	-76.6%	69.6%	58.1%	13.9%	54.7%	40.6%

Note: (1) Assumed to be prime plus 4 points times average short-term debt balance.
Source of Information: Company provided data.