Before the

Tennessee Regulatory Authority

Docket No. 04-00288

TENNESSEE-AMERICAN WATER COMPANY

Direct Testimony and Exhibit of

Michael Gorman

On behalf of

Chattanooga Manufacturers Association

Project 8303
December 23, 2004

BRUBAKER & ASSOCIATES, INC.
ST. LOUIS, MO 63141-2000

Before the
Tennessee Regulatory Authority
Docket No. 04-00288

TENNESSEE-AMERICAN WATER COMPANY

Direct Testimony of Michael Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A My name is Michael Gorman My business address is 1215 Fern Ridge Parkway, Suite 208, St Louis, MO 63141-2000

Q WHAT IS YOUR OCCUPATION?

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

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A I have been involved in public utility regulation and utility economic analysis for approximately 20 years A more detailed description of my work experience and education is included in Appendix A to my testimony

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A I am appearing on behalf of the Chattanooga Manufacturers Association (CMA) Intervention Group, a group of industrial companies, manufacturers, as well as others who support such companies, who purchase substantial amounts of water from Tennessee-American Water Company (TAWC or Company)

Q WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

A I will recommend adjustments to TAWC's proposed (attrition year) revenue requirement As detailed below, I believe TAWC's estimated revenue deficiency of $1 97 million is overstated by at least $1,087,000. Accordingly, I recommend TAWC's revenue deficiency to be no more than $873,000 However, I must note that I have not addressed every aspect of TAWC's filing Other parties may identify other issues where TAWC's costs have been overstated My silence on other issues should not be construed as acceptance of TAWC's position

I also take issue with the Company's proposal for an across-the-board increase Based on an assessment of the major cost drivers resulting in TAWC's claimed revenue deficiency in this proceeding, it would be more aligned with cost of service to spread at least 50% of the revenue deficiency to customer charges, with the balance going to the volumetric charge

This alternative method of spreading the revenue deficiency amongst customer rates is based on matching the major cost drivers causing a need for a rate increase in this proceeding to the rates intended to recover those costs. As set forth below, most of TAWC's increased costs are related to customer meter services and other small main expenses These costs are typically recovered in customer charges or are spread on maximum hour usage. Hence, my proposed alternative method of spreading the revenue deficiency in rates better reflects TAWC's cost of service and rate design methodologies advocated in previous proceedings Based on acceptance of the above, TAWC's proposal to spread the public fire hydrant cost based on total revenue is supportable

Q PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A I recommend adjustments to TAWC's attrition year revenue requirement as detailed in Table 1 below

TABLE 1

Recommended Adjustments to TAWC's Attrition Year Revenue Requirement

	Amount (000)
Revenue Deficiency	$1,970
Adjustments	
Attrition Year Pension Increase	375
Return on Equity to 9 9%	516
Working Capital	196
Total	$1,087

The Company's proposed attrition year pension expense is not supported and is an operating expense that has not been shown to be known and measurable Consequently, I recommend leaving the Company's pension expense at its test year actual amount This reduces the Company's attrition year revenue deficiency by $375 million

The Company is proposing an overall rate of return of 7 99% This is based on TAWC's capital structure and a 10 7% return on equity Reducing the return on equity to 9 9% from 10 7% will reduce TAWC's attrition year revenue requirement by $516,000, based on my adjusted rate base, as described below A 9 9% return on equity is the same as that previously authorized TAWC by the Tennessee Regulatory Authority (TRA) earlier this year I show in my testimony that a current estimate of TAWC's cost of capital still supports a 9 9% return, and market evidence also shows that there has been

little to no change in capital market costs since TRA's last rate decision for TAWC All of this supports no change to the Company's currently authorized return on equity.

I recommend an adjustment to the Company's rate base by reducing its proposed working capital component. The working capital adjustment is based on two factors First, I recommend the elimination of average cash balance because it is redundant with the cash balance estimated by the lead-lag study Second, I recommend the elimination of "Other Deferred Debts" (ODD) This second adjustment is reasonable because the Company's balances of ODD are inconsistent with what it provided in previous rate proceedings, there is no amortization of these expenses between historical periods and the attrition year, and the Company has not provided economic analysis to show that recovery of higher ODD costs are offset by affiliate savings For these reasons, the ODD should not be included in TAWC's cost of service. My proposed adjustment to TAWC's working capital allowance reduces rate base by $1,819,776, and the attrition year revenue requirement by $195,753 at my proposed 9 9% common equity return.

I. PENSION EXPENSE

Q WHAT PROJECTED PENSION EXPENSE HAS TAWC INCLUDED IN ITS FORECASTED FY06 TEST YEAR?

A TAWC is projecting an attrition year pension expense of $892,790. This is a substantial increase from its test year actual pension expense of $516,005.

Q WHAT ARE THE REASONS TAWC GIVES FOR THIS DRAMATIC INCREASE IN ITS PENSION EXPENSE?

A TAWC witness Mr Paul Diskin discusses the Company's pension expense estimate at Page 12 of his direct testimony. Mr Diskin states that American Water Works' actuary, Towers Perrin, prepares the parent company's pension calculation. Mr Diskin states that the Company's attrition year pension expense is based on Towers Perrin's actual report for 2003 and 2004 However, Mr Diskin provided little to no explanation or justification for this substantial increase in the Company's projected attrition year pension expense over the test year actual expense

The Company's projected pension expense is highly uncertain and it has not been shown that this projection will match the Company's actual pension expense during the period rates will be in effect Consequently, the Company's projected pension expense should be rejected

Q WHY HAVE YOU CONCLUDED THAT THE COMPANY'S PROJECTED ATTRITION YEAR PENSION EXPENSE IS HIGHLY UNCERTAIN AND SHOULD BE REJECTED?

A In TAWC's response to CMA's First Set of Data Requests, Item 3, it states that the Company's actual pension expense for the test year was based on an estimate made by Towers Perrin. However, the projected attrition year pension expense is not based on an actuarial study because as of the time it filed its testimony the Towers Perrin actuarial study for the attrition year had not been completed [1] Accordingly, the Company's actual actuarially derived pension expense for the attrition year is not yet known and measurable and, therefore, should not be reflected in the Company's rates

[1] TAWC's Response to Interrogatories and Requests for Production of Documents by the Chattanooga Manufacturers Association (First Set) Item 3

Further, even to the extent the Company can produce an actuarial study after testimony is filed in this case, that may not provide other parties adequate time to review the actuarial study to determine whether the annual expense reflected in that reasonably approximates the pension expense the Company will incur during the period rates determined in this proceeding will be in effect Therefore, the Company's substantial projected increase in attrition year pension expense should be rejected

Q IS THERE REASON TO BELIEVE THAT THE COMPANY'S PENSION EXPENSE WILL DECLINE GOING FORWARD RATHER THAN SUBSTANTIALLY INCREASE AS REFLECTED IN THE FILING?

A Yes In TAWC's response to CMA's First Set of Data Requests, Item 3, it states Towers Perrin relied on various economic factors in estimating what the attrition year and adjusted test year pension expenses will be Specifically, it relied on a discount rate of 6 25%, and expected return on assets of 8 75%, and the actual asset values as of December 31, 2003 These economic factors are highly uncertain and the Company's actual attrition year expense may be substantially different than that reflected in this forecast Actual attrition year pension expense will be determined based on an actuarial study for fiscal year ending calendar year 2005

Q ARE YOU AWARE OF ANY INDEPENDENT REPORTS WHICH PROJECT REDUCTIONS TO PENSION EXPENSE GOING FORWARD?

A Yes. A Bear Stearns report[2] has concluded that pension expense for companies included in the S&P 500 will decline by calendar year 2006 because trust fund balances

[2] Bear Stearns, Equity Research "Accounting Issues" September, 2004

will increase, and plan benefit obligations will decrease (present value) due to increases in interest rates and discount rates

Q WHAT IS THE REDUCTION TO TAWC'S ATTRITION YEAR REVENUE REQUIREMENT BY ADJUSTING THE PENSION EXPENSE TO THE TEST YEAR ACTUAL?

A TAWC'S attrition year revenue requirement should be reduced by $376,785 This revenue requirement adjustment removes the test year adjustment at present rates and the attrition year adjustment for pension expense as identified in the Company's Exhibit 2, Schedule 3, Page 1, Line 8

II. WORKING CAPITAL ALLOWANCE

Q WHAT IS THE COMPANY REQUESTING FOR A WORKING CAPITAL ALLOWANCE IN THIS PROCEEDING?

A As shown on Exhibit No 1, Schedule 3, the Company is requesting a working capital allowance of $1,385,205

Q IS THE COMPANY'S WORKING CAPITAL ALLOWANCE REASONABLE?

A No The Company's working capital allowance should be adjusted for at least two items

First, the Company's working capital allowance includes an average cash balance of $366,929, and a lead-lag study balance of $543,000 These are redundant cash working capital items. In essence, a lead-lag study estimates the amount of cash needed to be on hand if the Company pays expenses faster than it receives revenues Consequently, the amount of cash on hand needed to cover the period between paying expenses and recovering the cost of those expenses in rates is the lead-lag balance

The Company's average cash balance is a function of the amount of cash it needs on hand for lead-lag purposes. Accordingly, it is redundant to include both a lead-lag cash balance requirement, and an average cash balance in a working capital allowance

Second, the Company has also included an Other Deferred Debit balance of $1,452,847 in its working capital balance TAWC witness Diskin, summarizes the ODD' balances at page 18 of his testimony in three items

1 An amortized transition cost to the customer Call Center,

2 An amortized transition cost to the Shared Services center, and

3. Unamortized security cost

The Company's request for the ODD is unreasonable for several reasons First, TAWC didn't amortize the balance between the test year and the attrition year The deferred debits balance should reflect at least 15 months of amortization cost recovery to the mid-point of the attrition year compared to the test year Thus, the Company is overstating this balance at the midpoint of the attrition year.

Second, the Company's balance of ODD has not been shown to be reasonable and a legitimate cost Therefore the ODD costs should be rejected.

The ODD should be rejected in this proceeding for several reasons First, balances have increased in this proceeding relative to the balances the Company sought recovery for in TAWC's last rate proceeding. This is illogical given the transition costs that should be one-time events and amortized in rates. Indeed, the amortization since TAWC's last rate case should have produced a substantial decline in these costs. Second, unlike in TAWC's last rate proceeding, the Company provided no economic justification for recovery of these higher balances Specifically, in its last rate proceeding TAWC provided a cost/benefit analysis showing that recovery of these transition charges produced net benefits to customers in the form of service company cost reductions that

offset these cost increases The Company has made no such demonstration in this proceeding for the higher ODD balance

Q PLEASE COMPARE TAWC'S ODD COSTS IN THIS CASE TO ITS PREVIOUS RATE CASE?

A In the Company's last rate proceeding, it included an ODD balance of $1,521,988 for the 12-month period ending July 31, 2002 That was provided in TAWC witness Sheila Valentine's testimony Ms. Valentine recommended a three-year amortization of security costs in the Company's last rate proceeding based on the costs included in the test year, the 12-month period ending July 31, 2002 Hence, all security-related ODD costs would have been fully amortized by the mid-point of the attrition year, July 31, 2005, in this proceeding. Accordingly, the security costs included in the ODD balance should be fully amortized by the attrition year and should not be reflected in rates in this proceeding

Further, in TAWC's last rate proceeding, TAWC witness Michael A Miller offered testimony attempting to show the economic justification of recovering consolidated telephone call center transition charges (Call Center) and shared services center (Shared Service) costs. The test year in TAWC's last rate case was the 12-month period ending July 31, 2002 In that historical test year, Mr Miller stated that the Company's Call Center transition cost was $872,617 and he proposed a 10-year amortization of that cost. Further, Mr. Miller estimated the Company's Shared Service costs were $359,480 and also proposed a 10-year amortization

In this case, Mr. Diskin claims that the Call Center cost will be $915,000 at the midpoint of the attrition year or July 31, 2005 This is a dramatic increase to the Company's Call Center transition charges reflected in its last rate proceeding for a test

year of July 31, 2002. Just as questionable, Mr Diskin projects a substantial increase in Shared Service costs of $343,000 in this case at the midpoint of the attrition year of 2005, compared to $338,000 at a July 31, 2002 year

TAWC's Call Center and Shared Services deferred transition cost balances in this case, and in its last case, are shown below in Table 2

TABLE 2

	Deferred Transition Costs	
	Last Case (July 2002)	Current Case (July 2005)
Call Center	$872,617	$915,000
Shared Services	$338,000	$343,000

If these costs were appropriate to be recovered in retail rates, then the amortization expense would cause a decline in these balances over time The Company's evidence here indicates that the balance is not declining, therefore it is implicit in that demonstration that the Company does not have approval to reflect these costs in retail rates Consequently, it is appropriate to remove these other deferred charges from the Company's working capital balance

Q WHAT IS THE IMPACT ON THE ATTRITION YEAR REVENUE REQUIREMENT FROM YOUR PROPOSED ADJUSTMENT TO WORKING CAPITAL?

A I propose adjusting the Company's working capital requirement to $1,385,205 by eliminating the average cash balance of $366,929, and the ODD balance of $1,452,847. This reduces the Company's working capital balance by $1,819,776, which in turn reduces the revenue deficiency in the attrition year by $206,690, if the Company's

proposed overall rate of return adjusted for income taxes, or $195,753 at my recommendation to keep the equity return at 9.9%.

EQUITY RETURN

Q DO YOU BELIEVE THE COMPANY'S REQUESTED RETURN ON EQUITY OF 10.7% IS REASONABLE?

A No The Company's return on common equity substantially overstates the current market cost of capital for a low risk regulated water utility investment like TAWC. As set forth below, a more reasonable return on common equity for TAWC is 9 9%. Further, a 9 9% common equity return is the same return on equity authorized in TAWC's last proceeding, a ruling earlier this year TAWC has not provided any evidence that its cost of capital has increased since its last rate order. Importantly, capital market costs have declined or held constant since TAWC's last rate order, dated June 25, 2004. Therefore, there is no justification for increasing TAWC's return on equity in this proceeding compared to its last rate case.

Q PLEASE DESCRIBE WHY CAPITAL MARKETS COSTS ARE THE SAME TODAY OR LOWER THAN THEY WERE AT THE TIME OF TAWC'S LAST RATE HEARING.

A This is demonstrated by flat to declining bond interest rates and water utility dividend yields experienced in the market over the last three quarters As shown on my Exhibit MPG-1, Schedule 1, for the water utilities followed by the published version of The Value Line Investment Survey had flat to declining dividend yields since the second quarter of 2004 This indicates water utilities' cost of capital has not increased since TAWC's last rate proceeding

Also, as shown on my Exhibit MPG-1, Schedule 2, utility bond interest rates have declined since the second quarter of 2004 Here again, this indicates that TAWC's cost of capital has not increased. Accordingly, TAWC's proposal to increase its authorized return on equity from 9.9% up to 10 7% is not supported by the clear trend in level to declining capital market costs for low risk water utility companies

Q WHAT IS THE IMPACT ON TAWC'S REVENUE REQUIREMENT IF THE RETURN ON EQUITY IS SET AT 9.9% OR THE SAME AS WHAT THE TRA FOUND APPROPRIATE IN JULY, 2004?

A Reflecting a 9 9% return one equity and TAWC's proposed capital structure will lower the Company's claimed revenue deficiency by $516,000

Q HAVE YOU ALSO PERFORMED AN ANALYSIS TO MEASURE TAWC'S CURRENT MARKET-REQUIRED RETURN ON COMMON EQUITY?

A Yes

Q HOW DID YOU ESTIMATE TAWC'S CURRENT MARKET COST OF COMMON EQUITY?

A I have used two models based on financial theory to estimate TAWC's cost of common equity These models are. (1) the constant growth discounted cash flow (DCF) model, and (2) a capital asset pricing model (CAPM) I have applied these models to a group of publicly traded water utilities that I have determined represent similar investment risk as TAWC

Q HOW DID YOU DEVELOP A DCF ANALYSIS AND CAPM ESTIMATES FOR TAWC?

A I relied on a group of water utilities followed by The Value Line Investment Survey. These companies are shown on my attached Exhibit MPG-1, Schedule 3, I believe this group is a reasonable risk proxy for TAWC.

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 investors' required rate of return (ROR) or cost of capital This model is expressed mathematically as follows.

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

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 "constant growth" annual 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 HAVE YOU RELIED ON IN YOUR CONSTANT GROWTH DCF MODEL?

A I relied on the average of the weekly high and low stock prices over a 13-week period ending December 13, 2004 An average stock price is less susceptible to market price variations than a spot price Further, 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 short enough to contain data that reasonably reflects current market expectations, but it is not too short to be susceptible to market price variations that may not be reflective of the security's long-term value Therefore, in my judgment, a 13-week average stock price is a reasonable balance between the need to reflect current market expectations and to capture sufficient data to smooth out aberrant market movements

Q WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?

A I used the most recently paid quarterly dividend, as reported by Reuters in yahoofinance com on December, 2004. 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 DCF MODEL?

A For purposes of determining the market required return on common equity, one must attempt to estimate what the consensus of investors believes the dividend or earnings growth rate will be, and not what an individual investor or analyst may use to form individual investment decisions.

Security analyst growth estimates have been shown to be more accurate predictors of future returns than growth rates derived from historical data [3] Because they are more reliable estimates, and assuming the market, in general, makes rational investment decisions, analysts' growth projections are the most likely growth estimates built into stock prices

For my 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 published concerns growth rate estimates; Zack's, Reuters and Thompson Financial All consensus analyst projections used were available on December 2004, as reported on-line. Each consensus growth rate projection is based on a survey of security analysts The consensus estimate is a simple arithmetic average or mean of surveyed analysts' earnings growth forecasts. A simple average of the growth forecast gives equal weight to all surveyed analysts' projections It is problematic as to whether any particular analyst's forecast is most representative of general market expectations To avoid using only one particular forecast, I used a simple average, or arithmetic mean, of consensus analyst forecasts to arrive at a proxy for market consensus expectations. The growth rates I used in my DCF analysis are shown on my Exhibit MPG-1, Schedule 4

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

A The results of my DCF analyses are shown on Exhibit MPG-1, Schedule 5. As shown on Exhibit MPG-1, Schedule 5, the average DCF cost of common equity for the comparable group is 10 13%

[3] See, for example, David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," The Journal of Portfolio Management, Spring 1989

Consequently, I find that the growth rate used in my constant growth DCF model creates an upward bias in my DCF estimate. This bias may have resulted in overstating the DCF return by a full percentage point

Q PLEASE DESCRIBE THE CAPM.

A The CAPM method of analysis is based upon the theory that the market required ROR for a security is equal to the risk-free ROR, 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 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 nonsystematic 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 nondiversifiable risks The beta is a measure of the systematic or nondiversifiable 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 I used Blue Chip Financial Forecasts' projected long-term Treasury bond yield of 5 8% (Blue Chip Financial Forecast, December 2004 at 2).

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 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, include risk premiums related to unanticipated future inflation and interest rates Therefore, 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 one, 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 I relied on the group average beta estimate for the comparable group reported by Value Line Group average beta is more reliable than a single company beta and will, therefore, produce a more reliable CAPM estimate A group average beta has stronger statistical parameters that better describe the systematic risk of the group, than does an individual company beta For this reason, a group average beta will produce a more reliable return estimate

As shown on Exhibit MPG-1, Schedule 6, the group average beta estimate is 0 62

Q HOW DID YOU DERIVE YOUR MARKET PREMIUM ESTIMATE?

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

The forward-looking estimate was derived by estimating the expected return on the market (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

The Ibbotson and Associates' Stocks, Bonds, Bills and Inflation 2004 Year Book publication estimates the historical arithmetic average real market return over the period 1926-2003 as 9 2% A current five-year consensus analyst inflation projection, as measured by the Consumer Price Index, is 2 5% (Blue Chip Financial Forecasts, July 1, 2004 at 2). Using these estimates, the expected market return is 11.7% The market

premium then is the difference between the 11 9% expected market return, and my 5 8% risk-free rate estimate, or 6 1%

The historical estimate of the market risk premium was also estimated by Ibbotson and Associates in the Stock, Bonds, Bills and Inflation 2004 Year Book Over the period 1926 through 2002, Ibbotson's study estimated that the arithmetic average of the achieved total return on the S&P 500 was 12 2%, and the total return on long-term Treasury bonds was 5 8%. The indicated equity risk premium is 6 6% (12 4% - 5.8% = 6.6%) The market premium estimate used in my analysis was the average of 6 6% and 6 1% market risk premiums estimated above, or an average market risk premium estimate of 6.4%

Q WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A As shown in Exhibit MPG-1, Schedule 7, based on the prospective market risk premium estimate of 6 1%, beta estimate of 0 64, and risk free rate of 5 8%, my CAPM estimated return on equity for TAWC is 9 7%.

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

A Based on my analyses, I estimate an appropriate return on equity for TAWC to be 9.9%

TABLE 3

Return on Common Equity Summary

Description	Result
Constant Growth DCF	10.1%
CAPM	9 7%

My recommended return on equity OF 9 9% is based on the mid-point of my estimated return on equity range for TAWC of 10 1% to 9 7% The high end of my estimated range is based on my DCF analysis, and the low end of my estimated range is based on my CAPM analysis.

Q DO YOU HAVE ANY COMMENTS CONCERNING TAWC WITNESS DR. JAMES VANDER WEIDE'S METHODOLOGY SUPPORTING A 10.7% RETURN ON EQUITY?

A Yes Dr. Vander Weide's return on equity estimates are overstated for several reasons First, the growth rate in his DCF analysis averages 7.0%. This growth rate is not sustainable indefinitely because it substantially exceeds the nominal growth rate of the overall U S economy of 5 6%[4] His DCF model requires a growth rate that is sustainable indefinitely By overstating its sustainable growth rate, Dr. Vander Weide's DCF return is substantially overstated

Second, his risk premium analyses are not based on companies that are risk comparable to TAWC Therefore, the return on equity estimates based on Dr Vander Weide's methodology overstates a fair return for TAWC Consequently, Dr. Vander Weide's estimated equity return for TAWC should be rejected.

[4] Blue Chip Financial Forecasts, December 1, 2004

COST ALLOCATION AND RATE DESIGN

Q HOW IS THE COMPANY PROPOSING TO RECOVER THE REVENUE DEFICIENCY THROUGH CHANGED RATES IN THIS PROCEEDING?

A The Company is proposing an across-the-board increase to recover its revenue deficiency, and to reallocate public fire hydrant service to existing customers

Q DO YOU BELIEVE THIS COST ALLOCATION OF THE REVENUE DEFICIENCY IS REASONABLE?

A No The major cost drivers of the Company's revenue increase in this proceeding are related to capital investments for storage facilities, meters and service drops Indeed, as shown on my Exhibit MPG-1, Schedule 8, over 60% of the Company's capital additions are attributable to customer service assets Further, as shown on this same schedule, the revenue requirement attributable to these customer service related capital expenditures is $1 2 million, which is over 60% of the Company's claimed $1 97 million revenue deficiency in this proceeding

Q HOW DOES THE COMPANY NORMALLY RECOVER METER AND SERVICE DROP EXPENSE, AND STORAGE FACILITY COSTS?

A In the Company's last rate proceeding it recovered most of these items through an allocation of peak hour demand, or an allocation based on the number of customers Consequently, these costs would have normally been recovered through increased customer charges and increased volume charges in the first volume rate block.

Q IS THE COMPANY'S PROPOSAL FOR AN ACROSS-THE-BOARD INCREASE CONSISTENT WITH THE COST ALLOCATION STUDY TAWC USED IN ITS LAST CASE?

A No By an across-the-board increase, high volume customers are paying a disproportionately large share of the Company's costs for replacing meters, service drops and storage facilities Therefore, the Company's proposed increase to rates is inconsistent with its own cost of service model and the rate design advocated in its last rate proceeding.

Q HOW DO YOU PROPOSE TO RECOVER THE COMPANY'S REVENUE DEFICIENCY, IF ANY EXISTS, IN THIS PROCEEDING?

A It would be appropriate to construct a reasonable cost of service analysis, such as what the Company performed in its last case, to allocate costs and set rates However, since such a study has not been performed in this case, I recommend rates be adjusted as follows

- At least 50% of the revenue deficiency should be recovered through increased customer charges.
- 50% (or less depending upon the item above) of the revenue deficiency should be recovered by increased volume charges
- The allocation of public fire hydrant costs could be allocated on total revenue, as TAWC proposes, to the extent my other recommendation are accepted

Q HAVE YOU DEVELOPED RATES THAT WILL ACCOMPLISH YOUR PROPOSED ALTERNATIVE COST ALLOCATION AND RATE DESIGN FOR THIS PROCEEDING?

A Yes Using the principles advocated above, and assigning 50% of the revenue deficiency to customer charges and volume charges, my proposed customer and

volumetric rates, based on my estimated revenue deficiency of $872,000, are shown on my Exhibit MPG-1, Schedule 9.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

Qualifications of Michael Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Michael P Gorman. My business mailing address is P O Box 412000, 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000.

Q PLEASE STATE YOUR OCCUPATION.

A I am a consultant in the field of public utility regulation 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 Continuing, I 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, Chicago, Illinois, Corpus Christi, Texas; and Plano, 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 regulatory commissions in Arizona, Delaware, Georgia, Illinois, Indiana, Iowa, Michigan, Missouri, New Mexico, New Jersey, Oklahoma, Tennessee, Texas, Utah, Vermont, 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 Association for Investment Management and Research (AIMR) 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 AIMR's Financial Analyst Society

TENNESSEE-AMERICAN WATER COMPANY

Dividend Yield

Line	Water Company	Value Line Div. Yield 4/30/2004 (1)	Value Line Div. Yield 7/30/2004 (2)	Value Line Div. Yield 10/29/2004 (3)
1	American States Water Co.	3.70%	4.00%	3.70%
2	Aqua America, Inc	2.40%	2.50%	2.40%
3	California Water Service Group	3.80%	4.20%	4 00%
4	**Average**	**3.30%**	**3.57%**	**3.37%**

Source:
Value Line Investment Analyzer 3.0.

TENNESSEE-AMERICAN WATER COMPANY

Utility and Treasury Bond Yields

Line	Water Company	4/30/2004 (1)	7/30/2004 (2)	10/29/2004 (3)
1	Utility "A" Bond Yield	6.46%	6.27%	5.89%
2	Utility "Baa" Bond Yield	6.58%	6.62%	6.10%
3	Treasury Bond Yield	5.31%	5.24%	4.79%

Source:
Bond yields and key indicators: http://www.moodys.com/cust/displaySummary.asp

TENNESSEE-AMERICAN WATER COMPANY

Comparable Group - Water

Line	Water Company	INDEX-Ticker	% Water Revenue[1] (5)	Bond Ratings S&P[1] (1)	Bond Ratings Moody's[1] (2)	Business Position Rating[2] (3)	2003 Common Equity Ratios C.A Turner[1] (4)	2003 Common Equity Ratios Value Line[3] (5)
1	American States Water Co.	(NYSE - AWR)	88%	A-	A2		50%	48.0%
2	Aqua America, Inc	(NYSE - WTR)	92%	AA-	NR		43%	48.6%
3	Artesian Resources Corp.	(NDQ - ARTNA)	96%	NR	NR		36%	52.7%
4	California Water Service Group	(NYSE - CWT)	97%	NR	A2	3	51%	47.0%
5	Connecticut Water Service, Inc.	(NDQ - CTWS)	92%	AA+	NR	2	53%	
6	Middlesex Water Company	(NDQ - MSEX)	87%	A+	NR	3	46%	
7	Pennichuck Corporation	(ASE - PNNW)	90%	NR	NR		48%	
8	SJW Corporation	(NDQ - SJW)	95%	NR	NR		55%	
9	Southwest Water Company	(NDQ - SWWC)	36%	NR	NR		63%	
10	York Water Company	(NDQ - YORW)	88%	NR	NR	2	50%	
11	**AVERAGE**		**86%**	**AA-**	**A2**	**3**	**50%**	**49%**

Sources:

[1] C. A. Turner Utility Report, December 1, 2004

[2] Standard & Poor's Utilities & Prospectives; September 13, 2004.

[3] Value Line Investment Analyzer 3 0.

TENNESSEE-AMERICAN WATER COMPANY

Growth Rate Estimates

Line	Water Company	INDEX-Ticker	Zacks Estimated Growth[1] (1)	Number of Estimates (2)	Reuters Estimated Growth[2] (3)	Number of Estimates (4)	Thomson Financial Growth[3] (5)	Number of Estimates (6)	AVG of Growth Rates (5)
1	American States Water Co.	(NYSE - AWR)	N/A	N/A	3.00%	2	3.00%	1	3.00%
2	Aqua America, Inc	(NYSE - WTR)	9.30%	4	8.50%	6	9.60%	5	9.13%
3	Artesian Resources Corp.	(NDQ - ARTNA)	8.50%	2	8.50%	2	8.50%	2	8.50%
4	California Water Service Group	(NYSE - CWT)	8.70%	4	6.00%	3	6.00%	3	6.90%
5	Connecticut Water Service, Inc.[4]	(NDQ - CTWS)							
6	Middlesex Water Company	(NDQ - MSEX)	6.00%	1	4.50%	2	6.00%	1	5.50%
7	Pennichuck Corporation[4]	(ASE - PNNW)							
8	SJW Corporation[4]	(NDQ - SJW)							
9	Southwest Water Company	(NDQ - SWWC)	8.30%	3	8.33%	3	10.00%	4	8.88%
10	York Water Company	(NDQ - YORW)	7.00%	1	6.00%	2	7.00%	1	6.67%
11	**AVERAGE**		**7.97%**	**3**	**6.40%**	**3**	**7.16%**	**2**	**6.94%**

Sources:

[1] www.zacksadvisors com, Detailed Research.

[2] www.investor.reuters.com, Earnings Estimates.

[3] http://ec.thomsonfn.com, Earnings Estimates.

[4] Companies excluded from the Growth Rate Estimates due to unavailable data.

TENNESSEE-AMERICAN WATER COMPANY

Constant Growth DCF Model

Line	Water Company	INDEX-Ticker	13-Week AVG Stock Price[1] (1)	AVG (%) Growth (2)	Annual Dividend[2] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	American States Water Co.	(NYSE - AWR)	24.81	3.00%	0.88	3.67%	6.67%
2	Aqua America, Inc	(NYSE - WTR)	22.55	9.13%	0.52	2.52%	11.65%
3	Artesian Resources Corp.	(NDQ - ARTNA)	27.92	8.50%	0.84	3.26%	11.76%
4	California Water Service Group	(NYSE - CWT)	31 06	6.90%	1.13	3.90%	10.80%
5	Connecticut Water Service, Inc.[3]	(NDQ - CTWS)	26.13	N/A	0.84	N/A	N/A
6	Middlesex Water Company	(NDQ - MSEX)	18.52	5.50%	0.66	3.76%	9 26%
7	Pennichuck Corporation[3]	(ASE - PNNW)	25.06	N/A	0.84	N/A	N/A
8	SJW Corporation[3]	(NDQ - SJW)	35.34	N/A	1.02	N/A	N/A
9	Southwest Water Company	(NDQ - SWWC)	12.74	8.88%	0.21	1 81%	10 69%
10	York Water Company	(NDQ - YORW)	17.96	6.67%	0.58	3.45%	10.11%
11	**AVERAGE**		**24.21**	**6.94%**	**0.75**	**3.20%**	**10.13%**

Sources:
[1] http://finance.yahoo.com, Historical Prices.
[2] Value Line Investment Analyzer 3.0.
[3] Companies excluded from the Constant Growth DCF Model due to unavailable data.

TENNESSEE-AMERICAN WATER COMPANY

Comparable Group Beta

Line	Water Company	INDEX-Ticker	Value Line Beta (1)
1	American States Water Co.	(NYSE - AWR)	0.70
2	Aqua America, Inc	(NYSE - WTR)	0.75
3	Artesian Resources Corp.	(NDQ - ARTNA)	0.55
4	California Water Service Group	(NYSE - CWT)	0.70
5	Connecticut Water Service, Inc.	(NDQ - CTWS)	0.65
6	Middlesex Water Company	(NDQ - MSEX)	0.60
7	Pennichuck Corporation	(ASE - PNNW)	0.50
8	SJW Corporation	(NDQ - SJW)	0.55
9	Southwest Water Company	(NDQ - SWWC)	0.65
10	York Water Company	(NDQ - YORW)	0.55
11	**AVERAGE**		**0.62**

Sources:
Value Line Investment Analyzer 3.0.

TENNESSEE-AMERICAN WATER COMPANY

CAPM Return Estimate

Line	Description	Historical Premium
1	Risk Free Rate[1]	5 8%
2	Risk Premium[2]	6.6%
3	Beta[3]	0.62
4	CAPM	9.9%
		Prospective Premium
5	Risk Free Rate[1]	5.8%
6	Risk Premium[2]	6.1%
7	Beta[3]	0.62
8	CAPM	9.6%
9	**CAPM AVERAGE**	**9.7%**

Sources:
[1] Blue Chip Financial Forcasts; December 1,2004, at pp. 2.
[2] SBBI, 2004 at pp. 33 & 118.
[3] Value Line Investment Analyzer 3.0.

TENNESSEE-AMERICAN WATER COMPANY

NET ADDITIONS TO UTILITY PLANT IN SERVICE
(SMALL PIPES AND METERS)

Line	Acct #	Account Description	4/1/2004 to 12/31/2004 Additions	1/1/2005 to 12/31/2005 Additions	4/1/2004 to 12/31/2004 Retirements	1/1/2005 to 12/31/2005 Retirements	Net Additions to Utility Plant in Service 8/1/02 - 9/30/03
1	331 40	T&D Mains not Classified	$ 2,043,435	$ 872,752	$ 62,300	$ 13,100	$ 2,840,787
2	333 40	Services	$ -	$ 438,083	$ -	$ 14,500	$ 423,583
3	334 41	Meters	$ 1,040,074	$ 762,777	$ -	$ 40,000	$ 1,762,851
4	334 42	Meters-Metal Case/Old Style	$ 558,517	$ -	$ 6,500	$ -	$ 552,017
5	334 43	Meters-Metal Case/New Style	$ 56,000	$ -	$ 3,500	$ -	$ 52,500
6	334 44	Hydrants	$ 214,000	$ 115,370	$ 11,000	$ 9,500	$ 308,870
7		Total Small Pipes & Meters	$ 3,912,026	$ 2,188,982	$ 83,300	$ 77,100	$ 5,940,608
8		Total Utility Plant in Service	$ 5,912,716	$ 4,181,932	$ 129,558	$ 107,100	$ 9,857,990
9		Small Pipes & Meters / Total Service					60%

Source
Exhibit No. 1, Schedule 2, Page 3 of 3

TENNESSEE-AMERICAN WATER COMPANY

ATTRITION YEAR FORECASTED PLANT INVESTMENT
SMALL PIPES & METERS

Line	Description		Amount	Source
1	Rate Base	$	5,198,770	Page 5
2	Pre-Tax Rate of Return		11 358%	Page 4
3	Operating Income plus Taxes	$	590,472	Line 1 * Line 2
4	Depreciation Expense	$	611,631	Page 3
5	Revenue Requirement	$	1,202,103	Line 3 + Line 4

TENNESSEE-AMERICAN WATER COMPANY

ATTRITION YEAR DEPRECIATION EXPENSE
(SMALL PIPES AND METERS)

Line	Acct #	Account Description	Depreciable Property at Mid-Point of Attrition Year	Depreciation Rate	Attrition Year Depreciation Expense
1	331 40	T&D Mains not Classified	$ 4,832,607	1.41%	$ 68,140
2	333 40	Services	$ 15,257,306	2 28%	$ 347,867
3	334 41	Meters	$ 4,234,630	0 98%	$ 41,499
4	334 42	Meters-Metal Case/Old Style	$ 558,517	2 45%	$ 13,684
5	334 43	Meters-Metal Case/New Style	$ 127,387	0 98%	$ 1,248
6	334 44	Hydrants	$ 6,298,341	2 21%	$ 139,193
7		Total Small Pipes & Meters	$ 31,308,788		$ 611,631

Source:
Exhibit No. 2, Schedule 4, Page 2 of 2

TENNESSEE-AMERICAN WATER COMPANY

COMPANY CAPITAL STRUCTURE

Line	Description	Capital Structure	Embedded Cost	Weighted Cost	Pre-Tax Weighted Cost
1	Long-Term Debt	48 88%	6 26%	3 060%	3 060%
2	Short-term Debt	5.34%	2 40%	0.128%	0.128%
3	Preferred Equity	1.59%	5.00%	0.080%	0.135%
	Common Equity				
4	Common Stock	21.05%	10.70%	2 252%	3.827%
5	Retained Earnings	23 15%	10.70%	2 477%	4 208%
6	Total Company	100.01%		7 997%	11 358%
7	Composite Tax Rate	1.69890763			

Source
Exhibit No. 3, Schedule 1, Page 1 of 1

TENNESSEE-AMERICAN WATER COMPANY

RATE BASE CALCULATION
(SMALL PIPES AND METERS)

Line	Description	Calendar Year 2005	Source
1	Projected Capital Expenditures	$ 5,940,608	Page 1
2	Accumulated Depreciation	$ (86,416)	Page 6
3	Embedded Accumulated Depreciation	$ (655,422)	Page 7
3	Net Plant	$ 5,198,770	Sum Line 1-3
4	Deferred Taxes [1]	$ -	
5	Rate Base	$ 5,198,770	Sum Line 3-4

Note
[1] Deferred taxes assumed to be negligible

TENNESSEE-AMERICAN WATER COMPANY

NET ADDITIONS ACCUMULATED DEPRECIATION CALCULATION (SMALL PIPES AND METERS)

Line	Acct. #	Account Description	Depreciation Rate (1)	Net Additions 4/1/2004 to 12/31/2004 [1] (2)	Depreciation Expense (3) [3]	Net Additions 1/1/2005 to 12/31/2005 [2] (4)	Deprerciation Expense (5) [4]	Accumulated Depreciation (6)
1	331 40	T&D Mains not Classified	1 41%	$ 1,981,135	$ 34,918	$ 859,652	$ 6,061	$ 40,978
2	333 40	Services	2.28%	$ -	$ -	$ 423,583	$ 4,829	$ 4,829
3	334 41	Meters	0 98%	$ 1,040,074	$ 12,741	$ 722,777	$ 3,542	$ 16,283
4	334 42	Meters-Metal Case/Old Style	2.45%	$ 552,017	$ 16,906	$ -	$ -	$ 16,906
5	334 43	Meters-Metal Case/New Style	0.98%	$ 52,500	$ 643	$ -	$ -	$ 643
6	334 44	Hydrants	2.21%	$ 203,000	$ 5,608	$ 105,870	$ 1,170	$ 6,778
7		**Total Small Pipes & Meters**		**$ 3,828,726**	**$ 70,815**	**$ 2,111,882**	**$ 15,601**	**$ 86,416**

Notes
[1] Depreciation adjsutment factor is 15/12
[2] Depreciation adjsutment factor is 6/12
[3] Formula = (Column 1 * Column 2) * (15/12)
[4] Formula = (Column 1 * Column 4) * (6/12)

TENNESSEE-AMERICAN WATER COMPANY

EMBEDDED ACCUMULATED DEPRECIATION CALCULATION
(SMALL PIPES AND METERS)

Line	Acct #	Account Description	Depreciable Property at 3/31/2004 (1)	Depreciation Rate (2)	Depreciation Expense Embedded 3/31/2004 (3)	Adjustment Factor (4)	Adjusted Embedded Depreciation Expense (5)
1	331 40	T&D Mains not Classified	$ 1,991,820	1.41%	$ 28,085	1.25	$ 35,106
2	333 40	Services	$ 14,819,223	2.28%	$ 337,878	1 25	$ 422,348
3	334 41	Meters	$ 2,431,779	0 98%	$ 23,831	1 25	$ 29,789
4	334 42	Meters-Metal Case/Old Style	$ -	2.45%	$ -	1 25	$ -
5	334 43	Meters-Metal Case/New Style	$ 130,726	0.98%	$ 1,281	1 25	$ 1,601
6	334 44	Hydrants	$ 6,029,971	2.21%	$ 133,262	1.25	$ 166,578
7		**Total Small Pipes & Meters**			**$ 524,338**		**$ 655,422**

Source
Exhibit No. 2, Schedule 4, Page 2 of 2

TENNESSEE-AMERICAN WATER COMPANY

Proof of Revenue/Rate Design

Line	Rate Classes	Billing Determinants cf (1)	Present Revenue (2)	Company Proposed Revenue (3)	Company Proposed Increase Amount (4)	Company Proposed Increase Percent (5)	CMA Adjusted Revenue (6)	CMA Adjusted Increase Amount (7)	CMA Adjusted Increase Percent (8)
	Summary								
1	Residential	4,712,914	$ 13,302,695	$ 14,523,430	$ 1,220,735	9.18%	$ 14,129,114	$ 826,419	6.21%
2	Commercial	4,086,798	9,464,968	10,331,999	867,032	9.16%	9,967,009	502,041	5.30%
3	Industrial	2,942,770	3,399,372	3,709,975	310,604	9.14%	3,557,636	158,264	4.66%
4	Other Public Authority	1,455,635	2,500,772	2,729,678	228,907	9.15%	2,626,718	125,947	5.04%
5	Sales for Resale	1,178,392	920,715	1,004,862	84,147	9.14%	962,963	42,248	4.59%
6	Private Fire		1,354,353	1,478,415	124,062	9.16%	1,464,307	109,954	8.12%
7	Public Fire		897,285	-	(897,285)	-100.00%	-	(897,285)	-100.00%
8	Total	14,376,509	$ 31,840,159	$ 33,778,360	$ 1,938,201	6.09%	$ 32,707,747	$ 867,587	2.72%
9	Total Excl Public Fire	14,376,509	$ 30,942,874	$ 33,778,360	$ 2,835,486	9.16%	$ 32,707,747	$ 1,764,872	5.70%

TENNESSEE-AMERICAN WATER COMPANY

Summary of Rates

Line	Description	Present Rates (1)	Company Proposed Rates (2)	Company Proposed Increase (3)	CMA Adjusted Rates (4)	CMA Adjusted Increase (5)
	Chattanooga					
	Customer, per Month:					
1	5/8" Meter	$ 8.92	$ 9.74	9.19%	$ 9.64	8.07%
2	3/4" Meter	14.97	16.34	9.15%	16.19	8.15%
3	1" Meter	24.92	27.20	9 15%	26 94	8.11%
4	1.5 " Meter	49.87	54 44	9.16%	53.92	8 12%
5	2" Meter	79.77	87.08	9.16%	86.25	8.12%
6	3" Meter	149.58	163.28	9.16%	161.72	8.12%
7	4" Meter	249.30	272 14	9.16%	269.54	8.12%
8	6" Meter	498 60	544.27	9.16%	539.08	8.12%
9	8" Meter	797 76	870 83	9.16%	862.53	8.12%
	Volumetric per cf·					
10	First 400 cf	$ 0.166	$ 0 181	9 04%	$ 0.173	4.22%
11	Next 6,100 cf	2.628	2.869	9.17%	2.744	4.41%
12	Next 43,500 cf	1.651	1.802	9.15%	1.724	4.42%
13	Next 450,000 cf	1.234	1.347	9.16%	1.288	4.38%
14	Next 1,000,000 cf	0.944	1 030	9.11%	0.986	4.45%
15	Over 1,500,000 cf	0.560	0 611	9.11%	0.585	4.46%
16	Fort Oglethorpe	0.766	0.836	9.14%	0.800	4 44%
	Lookout Mountain					
	Customer, per Month:					
17	5/8" Meter	$ 10.00	$ 10 92	9.20%	$ 10.81	8.10%
18	3/4" Meter	14 97	16 34	9.15%	16.19	8.15%
19	1" Meter	24 92	27 20	9.15%	26.94	8.11%
20	1.5 " Meter	49.87	54.44	9.16%	53.92	8.12%
21	2" Meter	79.77	87 08	9 16%	86.25	8.12%
22	3" Meter	149.58	163.28	9.16%	161.72	8.12%
23	4" Meter	249 30	272.14	9.16%	269.54	8.12%
24	6" Meter	498.60	544.27	9.16%	539.08	8.12%
25	8" Meter	797.76	870 83	9.16%	862.53	8.12%
	Volumetric per cf:					
26	First 400 cf	$ 0.616	$ 0 672	9.09%	$ 0.643	4.38%
27	Next 6,100 cf	3.385	3.695	9 16%	3.534	4.40%
28	Next 43,500 cf	2.408	2.629	9.18%	2.514	4.40%
29	Next 450,000 cf	1.684	1.838	9.14%	1.758	4.39%
30	Next 1,000,000 cf	1 394	1 522	9 18%	1.455	4.38%
31	Over 1,500,000 cf	1.010	1.103	9 21%	1.054	4.36%

TENNESSEE-AMERICAN WATER COMPANY

Summary of Rates

Line	Description	Present Rates (1)	Company Proposed Rates (2)	Company Proposed Increase (3)	CMA Adjusted Rates (4)	CMA Adjusted Increase (5)
	Lakeview					
	Customer, per Month:					
1	5/8" Meter	$ 10.00	$ 10 92	9.20%	$ 10.81	8.10%
2	3/4" Meter	14 97	16 34	9.15%	16.19	8.15%
3	1" Meter	24 92	27.20	9.15%	26.94	8.11%
4	1.5 " Meter	49.87	54 44	9 16%	53.92	8.12%
5	2" Meter	79.77	87 08	9.16%	86.25	8.12%
6	3" Meter	149 58	163 28	9.16%	161.72	8.12%
7	4" Meter	249.30	272.14	9.16%	269.54	8.12%
8	6" Meter	498.60	544.27	9.16%	539.08	8.12%
9	8" Meter	797.76	870 83	9.16%	862.53	8.12%
	Volumetric per cf:					
10	First 400 cf	$ 0.304	$ 0.332	9.21%	$ 0.317	4.28%
11	Next 6,100 cf	2.896	3 161	9.15%	3.024	4.42%
12	Next 43,500 cf	1.919	2.095	9.17%	2.004	4.43%
13	Next 450,000 cf	1.372	1 498	9.18%	1.432	4.37%
14	Next 1,000,000 cf	1.082	1.181	9.15%	1.130	4.44%
15	Over 1,500,000 cf	0.698	0.762	9.17%	0.729	4.44%
	Private Fire Service					
16	Customer, per Month:					
17	1" Meter	$ 23.22	$ 25.35	9.17%	$ 25.11	8.14%
18	1.5 " Meter	52.38	57.18	9.16%	56.63	8.11%
19	2" Meter	93.15	101.68	9 16%	100.71	8.12%
20	2.5" Meter	142 05	155 06	9.16%	153.58	8.12%
21	3" Meter	209 40	228.58	9.16%	226.40	8.12%
22	4" Meter	419.31	457.72	9.16%	453.35	8.12%
23	6" Meter	837.97	914 73	9.16%	906.00	8.12%
24	8" Meter	1,677.36	1,831.01	9.16%	1,813.54	8.12%
25	10" Meter	2,516.24	2,746 73	9.16%	2,720.52	8.12%
26	12" Meter	3,355 24	3,662 58	9 16%	3,627 63	8.12%