BRADLEY ARANT BOULT CUMMINGS LLP

January 5, 2011

Mary Freeman, Chairman
Tennessee Regulatory Authority
c/o Sharla Dillon, Docket Clerk
460 James Robertson Parkway
Nashville, TN 37243

filed electronically in docket office on 01/05/11

Re: In re Petition of Tennessee American Water Company for a General Rate Increase
TRA Docket No. 10-00189

Dear Chairman Freeman:

Enclosed are the original and five (5) copies of the Direct Testimony and Exhibits of Michael Gorman on behalf of Chattanooga Regional Manufacturers Association.

If you have any questions, please do not hesitate to contact me.

Very truly yours,

Henry Walker

Enclosure

cc: Counsel for All Parties
David C. Higney, Esq. (via email)
Timothy L. Spires (via email)

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BEFORE THE

TENNESSEE REGULATORY AUTHORITY

PETITION OF TENNESSEE AMERICAN WATER COMPANY FOR A GENERAL RATE INCREASE	)	DOCKET NO. 10-00189

Direct Testimony and Exhibits of

Michael Gorman

On behalf of the

Chattanooga Regional Manufacturers Association ("CRMA")

Project 9382
January 5, 2011

BRUBAKER & ASSOCIATES, INC.
CHESTERFIELD, MO 63017

BEFORE THE

TENNESSEE REGULATORY AUTHORITY

PETITION OF TENNESSEE AMERICAN WATER COMPANY FOR A GENERAL RATE INCREASE	)))))	DOCKET NO. 10-00189

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BEFORE THE

TENNESSEE REGULATORY AUTHORITY

PETITION OF TENNESSEE AMERICAN WATER COMPANY FOR A GENERAL RATE INCREASE	DOCKET NO. 10-00189

Direct Testimony of Michael Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

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

Q WHAT IS YOUR OCCUPATION?

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

Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A I have been involved in public utility regulation and utility economic analysis for approximately 25 years, with several years' experience on the Staff of the Illinois Commerce Commission including the position of Director of the Financial Analysis Department. I previously have testified as an expert before the Tennessee Regulatory Authority ("TRA" or "Authority"). 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 Regional Manufacturers Association ("CRMA"). CRMA is a 108-year-old trade association in Chattanooga consisting of approximately 250 manufacturers and businesses supporting and servicing the area's regional manufacturing sector. CRMA has substantial and vital interests in the outcome of the Authority's action in this docket and, among other things, is intervening in order to protect such interests on behalf of its members and those similarly situated.

In the present docket, Tennessee-American Water Company ("TAWC" or "Company") seeks approval by the Authority to again increase certain rates and charges. TAWC's current petition seeks a 27.66% increase in revenue (almost $10 million annually) which will adversely affect ratepayers including but not limited to CRMA, its members and others similarly situated. The Authority entered an Order in 2009 rejecting the nearly 21% revenue increase ($7.645 million annually) TAWC sought and allowed only a slight increase in rates, which TAWC has appealed. TAWC's current request seeking to increase rates is not fair, not reasonable, and not in the best interests of CRMA or its members and other ratepayers, and should be rejected by the Authority.

Q PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

A My findings and recommendations are summarized as follows:

1. TAWC's claimed $9.98 million revenue deficiency is significantly overstated and excessive.

2. TAWC's claimed revenue deficiency should be reduced by $0.32 million to reflect a lost and unaccounted for water cost that is more reasonable and reflective of normal industry costs (Exhibit MPG-1).

3. TAWC's claimed revenue deficiency should be reduced by $1.05 million to reflect a more accurate estimate of normal sales levels during the test year (Exhibit MPG-2).

4. TAWC's claimed working capital allowance which includes an allowance for cash working capital ("CWC") should be reduced by $2 million. This adjustment will reduce TAWC's revenue requirement by $240,364 (Exhibit MPG-4).

5. The Authority should not approve $2.70 million of TAWC's claimed revenue deficiency unless the utility provides adequate justification for significant cost increases to several components. The components which I believe TAWC has not supported include the following items:

   a. Substantial increase in the overall rate of return.

   b. Substantial increase in allocated Service Company management expenses.

6. TAWC's class cost of service study contains two inappropriate factors which substantially over-allocate costs to TAWC's high volume water users. TAWC's class cost of service study should be adjusted to reflect the more appropriate allocation of purchased power expense and large transmission mains.

7. My proposed adjustments correcting these deficiencies are shown on Exhibit MPG-5, page 2 of 2. On that exhibit, I compare TAWC's class cost of service study and my proposed adjustments to its class cost of service study. As shown on Exhibit MPG-5, corrections to TAWC's class cost of service study result in a lower allocation of cost to large volume industrial users. This adjusted class cost of service study should be considered in the development of rates.

8. TAWC's proposed rate design actually moves large industrial customers further away from cost of service. This is true whether the Authority considers TAWC's class cost of service study, or my adjusted class cost of service study (Exhibit MPG-5). Therefore, TAWC's proposed adjustments to rates should be rejected.

9. My proposed rate design will move all customer classes closer to cost of service in this proceeding. I propose the following in designing rate changes in this proceeding:

   a. No customer class should receive more than 120% of the system average increase. This will mitigate any rate increase to any particular rate class.

   b. No customer class will receive a rate decrease. This will further mitigate increases to certain customers that are further away from cost of service.

   c. Because of TAWC's substantial investments in meters and service drops, I recommend that meter charges be increased by 120% of the system average revenue deficiency. (For example, TAWC is proposing a 27.7% system average rate increase; therefore, the maximum class increase would be 33.1%).

d. I recommend the first and second volumetric blocks be increased by 120% of the system average increase.

e. I recommend all subsequent volumetric blocks be increased at a rate lower than the system average increase.

I. REVENUE REQUIREMENT ADJUSTMENTS

Lost or Unaccounted for Water

Q WHAT AMOUNT OF LOST OR UNACCOUNTED FOR WATER IS INCLUDED IN TAWC'S COST OF SERVICE?

A The Company is proposing a three-year average of lost or unaccounted for water of 22.69%. I believe this lost water factor is excessive. I, therefore, am proposing that the Authority confirm the lost water factor adopted in TAWC's last case of 15%. Adjusting the lost water factor reduces water production to meet sales and lowers the test period variable production and pumping cost.

Q WHY DO YOU BELIEVE A 22.69% LOST WATER FACTOR IS EXCESSIVE?

A American Water Works Association, "Survey of State Agency Water Loss Reporting Practices" indicates that a reasonable lost water factor is 15% or less.[1] In this document, several states responded to a survey which asked for standards for lost and unaccounted for water. Only one state which responded allowed a lost and unaccounted for water factor greater than 22.69%, as proposed by TAWC. This lost and unaccounted for water factor was for a small water system. Most respondents specified an unaccounted water factor of 10% to 15%.

[1]AWWA: Benchmarking Performance Indicators for Water and Waste Water Utilities: Survey Data and Analysis Report, January 2002.

Q DID THE AUTHORITY ADDRESS THIS ISSUE IN TAWC'S LAST RATE CASE, AND, IF SO, WHAT WERE ITS FINDINGS?

A Yes. The Authority did address the lost water issue in the last rate case. Specifically, the Authority stated the following:

> Recognizing the importance of conserving water, which is one of the state's most valuable natural resources, the panel established a baseline efficiency standard. Based on the evidence presented, the panel limited the unaccounted-for water percentage to fifteen percent.[2]

The adjustment I am proposing in this rate case is consistent with the Authority's ruling in TAWC's previous rate case.

Q HAS TAWC INCLUDED THE COST OF CAPITAL PROJECTS IN THIS CASE WHICH SHOULD HELP IMPROVE ITS LOST WATER FACTOR AND RELATED COSTS?

A Yes. TAWC has reflected over $5.1 million of large transmission mains (greater than 10") replacement. Further, TAWC has reflected over $4.2 million capital costs for replacing small water distribution mains. (Mr. Miller's Exhibit No. 1, Schedule 2, page 3).

The cost of replacing those transmission mains is included in this filing. Updating TAWC's main infrastructure should help minimize lost water, and bring its lost water factor down to a more reasonable level. Therefore, use of a lost water factor of 15% represents a relatively high lost water factor compared to industry normal conditions, and continues to be a very conservative estimate for estimating TAWC's revenue requirement in this proceeding.

[2]Tennessee American Water Company, Tennessee Regulatory Authority, Docket No. 08-00039, January 13, 2009 Order at 15.

Q ARE YOU AWARE OF OTHER REGULATORY COMMISSIONS' STAFF WITNESSES THAT ADDRESSED UNACCOUNTED FOR WATER FACTORS FOR AFFILIATES OF TAWC?

A Yes, I am aware that in a Missouri-American Water Company rate case, the Staff of the Missouri Public Service Commission presented a similar type adjustment. Ms. Roberta Grissum prepared testimony on the issue and recommended a 15% lost water factor be used to annualize chemicals expense and fuel and purchased power expense. In her surrebuttal testimony, Ms. Grissum includes a quote from the American Water Works Association, which states the following:

> Many drinking water utilities around the world respond to leaks only after they have received a report of water erupting from a street or a complaint from a customer about a damp basement. Utilities that employ this type of reactive leakage response most likely have excessive leakage that will never be reliably contained. Controlling leakage effectively relies upon a proactive leakage management program that includes a means to identify hidden leaks, itemized repair functions and upgrade piping infrastructure before its useful life ends. Effective technologies have been developed in recent years including nightflow analysis to quantify leakage amounts, leak noise correlators and loggers to pinpoint leaks and pressure management to reduce leakage systematically under the right conditions. Many effective strategies now exist to allow water utilities to identify, measure, reduce or eliminate leaks in a manner that is consistent with their cost of doing business. (Missouri Public Service Commission, Missouri-American Water Company, Case No. WR-2007-0216, Surrebuttal Testimony of Roberta A. Grissum, at 5).

The above description highlights that the American Water Works Association recognizes that lost water is an operational condition that must be monitored and increasingly can be managed. Importantly, TAWC does not appear to be adequately addressing and managing its lost water costs.

Q HOW DID YOU ESTIMATE THE REVENUE IMPACT OF REDUCING THE LOST AND UNACCOUNTED FOR WATER TO 15% FROM THE COMPANY'S PROPOSED 22.69%?

A This is developed on my Exhibit MPG-1. As shown on this exhibit, based on the Company's pro forma adjustment, I estimated a modified amount of water volume in the Company's test year cost of service. I then estimated the amount of chemicals expense and fuel and purchased power expense associated with this lower amount of volume delivered to retail customers. The amount of chemicals expense and fuel and purchased power expense on a volumetric basis was estimated from the Company's cost included in its workpapers. Using these factors, I estimated the amount of chemicals expense and fuel and purchased power expense necessary to supply this reduced level of water. The adjustment then reflects the amount of chemicals expense and fuel and purchased power expense at the Company's proposed deliverable volumes reflecting its abnormally high loss factor, versus the amount of chemicals expense and fuel and purchased power expense needed to deliver the sales volume with reduced unaccounted for water losses. This adjustment lowers the Company's claimed revenue deficiency by $323,651.

Normal Sales Revenue

Q DID TAWC ACCURATELY ESTIMATE SALES REVENUES AT CURRENT RATES?

A No. TAWC underestimated revenues at current rates by overestimating reductions in sales due to conservation. More reasonable sales projections will increase TAWC revenues at current rates by $1,217,115, and chemicals expense and fuel and purchased power expense by $50,811 and $119,170, respectively. These increased

sales would result in a further net reduction to TAWC's claimed revenue deficiency of $1,047,133, as shown on Exhibit MPG-2.

Q HOW DO YOU BELIEVE TAWC UNDERSTATED SALES AND REVENUE AT CURRENT RATES?

A TAWC witness Dr. Edward Spitznagel, Jr. estimated pro forma sales and reflected expected conservation of water for the residential and commercial classes. Dr. Spitznagel's sales projections were based on an estimate of the average daily usage of water for residential and commercial customers. The daily water usage estimates used by Dr. Spitznagel for residential and commercial classes are unreasonably low.

Q WHAT WERE THE DAILY USAGE PROJECTIONS OF WATER USAGE BY DR. SPITZNAGEL?

A Dr. Spitznagel estimated that residential customers would use 135.93 gallons of water per day and that commercial customers would use 989.64 gallons per day. These projections are simply too low.

Q WHY DO YOU BELIEVE DR. SPITZNAGEL'S DAILY USAGE ESTIMATES UNDERSTATE TAWC'S ACTUAL RECENT HISTORICAL SALES LEVELS?

A This conclusion is clearly evident by a comparison of Dr. Spitznagel's daily usage estimates used in the development of revenue in this case, to the actual historical daily usage shown in his own workpapers.

For residential customers, Dr. Spitznagel used an average daily volume estimate of 135.93 gallons, as shown on my Exhibit MPG-3, page 1. For commercial

customers, he used an average daily volume estimate of 989.64 gallons (Exhibit MPG-3, page 2). The Company's actual data shows that these daily volume estimates are understated. (Exhibit MPG-3, pages 1 and 2).

The ten, five and three-year averages of water usage for the TAWC residential class using the Company's workpapers were 149.4, 144.2 and 143.7 gallons per day, respectively. The 2009 actual usage (136.88 gallons/customer) is also higher than that projected by Dr. Spitznagel at 135.93 gallons/customer. (Exhibit MPG-3, page 3)

I recommend that revenues at current rates be based on a five-year average Chattanooga residential customer usage of 144.2 gallons of water a day, or 5.85 cubic feet of water a month. The Company's data shows some decline in water usage but does not support the significant usage decline included in Dr. Spitznagel's projection.

A normal residential consumption estimate of 144.2 gallons per day more reasonably projects actual usage for a residential customer based on historical usage patterns, but still reflects continued water conservation gains. In order to project the residential usage for Lookout Mountain and Lakeview, I calculated the percentage change between my residential usage estimate and Dr. Spitznagel's for the Chattanooga district and applied that percentage change to volumes that Dr. Spitznagel estimated for Lookout Mountain and Lakeview.

The commercial class also exhibited fluctuations in the usage between one year and another. Dr. Spitznagel's projection of 989.64 gallons per day is not reasonable relative to the Company's historical data. The commercial class ten, five and three-year averages using Dr. Spitznagel's data were 1,053.0, 1,033.6 and 1,020.7 gallons per day, respectively.

I recommend the Authority adopt the five-year average 1,033.6 gallons per day volume as an estimate for the commercial class. This conservative daily volume, 1,033.6 gallons per day, has been exceeded every year except three times in the last 16 years. The 1,033.6 gallons per day volume estimate is more reasonable and consistent with actual sales volume to TAWC's commercial customers over the last 10 years than the daily volume estimate of 989.64 gallons used by Dr. Spitznagel. Over the last 16 years with the exception of 2009, the actual commercial usage substantially exceeded the estimate proposed by Dr. Spitznagel.

Q IS IT SIGNIFICANT THAT DR. SPITZNAGEL'S TEST YEAR PROJECTIONS ARE LOWER THAN 2009 ACTUAL RESIDENTIAL SALES LEVELS?

A Yes. 2009 sales levels were abnormally low due to a depressed area economy, and abnormally wet weather in TAWC's service area. According to the Palmer Drought Severity Index, on an annual basis 2009 was the 11th wettest year in history dating back to 1895. Using the same database and analyzing the months of May to September, 2009 was the 23rd wettest year since 1895.

Q HAVE YOU PERFORMED ANY OTHER HISTORICAL ANALYSES OF ACTUAL WATER USAGE FOR THE RESIDENTIAL AND COMMERCIAL CLASSES?

A Yes. I have calculated rolling three and five-year averages of actual water usage beginning with water usage in 1994 through 2009. The results of these calculations are presented on Exhibit MPG-3, page 3. As can be seen from the analysis, the average usage per customer has gradually declined over the years, but has not reached the levels projected by Dr. Spitznagel. This analysis also shows that

five-year averages I have proposed are conservative as compared to historical averages.

Q HOW DID YOU USE THESE NORMALIZED FIVE-YEAR AND THREE-YEAR AVERAGE SALES LEVELS IN ORDER TO DEVELOP A NORMAL SALES LEVEL FORECAST?

A As shown on the attached Exhibit MPG-3, page 3, it is reasonably consistent that five-year sales levels produce reasonable normalized sales level expectations for TAWC. Based on a review of this historical data, five-year trending analyses appear to capture all factors that impact TAWC's sales on a normalized basis. These sales factors would include weather, rainfall, economic conditions, and other factors which impact TAWC's annual sales levels.

The sales level I propose to use for each customer class is shown on line 28 of Exhibit MPG-3, page 3.

Q HOW WILL THE ADJUSTMENT TO TAWC'S PROJECTED SALES IMPACT ITS CLAIMED REVENUE DEFICIENCY?

A The adjustment to the actual sales level will increase revenue at current rates for the additional volume sales, but will also increase variable costs including chemicals expense and fuel and purchased power expense. The net effect of these increased revenues and increased expenses will increase operating income at current rates and lower the claimed revenue deficiency.

Q HOW DID YOU ADJUST CHEMICALS EXPENSE AND FUEL AND PURCHASED POWER EXPENSE FOR THIS INCREASED SALES VOLUME?

A This estimate was made on my Exhibit MPG-2. This exhibit reflects an increase to chemicals expense and fuel and purchased power expense associated with the conservatively higher sales estimate.

Q DID THE AUTHORITY ADOPT DR. SPITZNAGEL'S METHODOLOGY FOR FORECASTING SALES IN TAWC'S LAST RATE CASE?

A No. In the Report and Order from the last rate case, the Authority made the following statement: "In this docket, the panel did not adopt the Company's entire revenue forecast or the Company's WNA model."

Q FROM YOUR REVIEW OF THE COMPANY'S REVENUE WORKPAPERS, DID DR. SPITZNAGEL PROPOSE A DIFFERENT METHODOLOGY FOR THIS CASE?

A No. It does not appear that Dr. Spitznagel has made any substantial changes to his methodology from that proposed in the last rate case.

Q PLEASE DESCRIBE THE IMPACT ON TAWC'S CLAIMED REVENUE DEFICIENCY BY ADJUSTING THE SALES LEVEL USED TO ESTIMATE TAWC'S REVENUES AT CURRENT RATES.

A I propose to increase the customer classification sales level relative to that reflected in TAWC's filing. I make this recommendation because Dr. Spitznagel has substantially understated TAWC's customer classification sales. In relying on Dr. Spitznagel's recommended sales estimate, the Company has overstated its claimed revenue deficiency. Adjusting sales levels increases revenue at current

rates, but will also increase variable expenses to support additional sales. Hence, my adjustment to the cost of service for my adjusted sales levels includes an increase in revenues and an increase of certain variable operating expenses such as chemicals and fuel and purchased power to support this higher level of sales.

On Exhibit MPG-2, I develop the additional revenue and expenses, and increased net operating income produced through the sales level adjustment. As shown on this exhibit, revising TAWC's normalized sales level will increase its operating income and reduce the Company's claimed revenue deficiency by $1.05 million per year.

Working Capital Adjustment

Q ARE YOU PROPOSING ADJUSTMENTS TO TAWC'S PROPOSED WORKING CAPITAL ALLOWANCE?

A Yes. TAWC is proposing a working capital allowance of $1,011,258. As shown on my Exhibit MPG-4, I recommend this working capital allowance be reduced by $2,040,445, which will directly reduce TAWC rate base. This will reduce TAWC's claimed revenue deficiency by $240,364.

Q HOW DID TAWC DEVELOP ITS PROPOSED WORKING CAPITAL ALLOWANCE?

A TAWC included various specific items including prepaid taxes, materials and supplies, deferred regulatory expenses, unamortized debt expenses, other deferred debits, and a lead-lag study component to derive a CWC requirement. Based on the results of this study, TAWC estimated a total working capital requirement of $2.57 million. TAWC deducted from this total working capital requirement incidental

collections of $1.56 million for a net working capital requirement component of rate base of approximately $1.0 million (Mr. Miller's Exhibit No. 1, Schedule 3, page 1).

Q PLEASE DESCRIBE YOUR PROPOSED ADJUSTMENTS TO TAWC'S WORKING CAPITAL REQUIREMENT.

A I used TAWC's working capital methodology as provided in Mr. Miller's Exhibit No. 1, Schedule 3. I made several adjustments to the proposed working capital including the following.

First, I removed the unamortized debt expense because these costs are already reflected in the development of TAWC's embedded debt interest rate (Mr. Miller's Exhibit No. 3, Schedule 2, page 1). Including the embedded cost of debt in a working capital allowance and in the embedded debt interest rate provides TAWC double-recovery of these debt issuance expenses.

Second, I am proposing several adjustments to the Company's lead-lag study. First, I am proposing to eliminate the non-cash items included in the Company's lead-lag study. Second, I am also proposing a different expense lag for management fees. Finally, I am proposing a different revenue and expense lag for gross receipts taxes.

The combined effect of all of these adjustments reduces the Company's working capital from a positive allowance of an additional $1,011,258 to a negative allowance of $1,029,187, as shown on my Exhibit MPG-4.

Q PLEASE DESCRIBE WHY YOU PROPOSED TO REMOVE AN UNAMORTIZED DEBT EXPENSE ALLOWANCE FROM TAWC PROPOSED WORKING CAPITAL.

A I propose to remove the Unamortized Debt Expense balance ($460,845) from the working capital allowance because including this expense in working capital allowance will allow TAWC to double-recover this expense. TAWC is also including this expense in its embedded cost of debt interest rate by reflecting this unamortized debt expense as a reduction in the net bond proceeds and as an amortization cost included with the annual embedded debt cost (interest expense and issuance cost amortized). This methodology alone provides for full recovery of and a return on this unamortized debt expense.

By also including this unamortized debt expense in TAWC working capital allowance, TAWC will be provided double-recovery of this expense (first in debt interest rate, and second in a working capital component of rate base).

Q DID TAWC INCLUDE A LEAD-LAG STUDY BALANCE IN ITS WORKING CAPITAL ALLOWANCE?

A Yes. This lead-lag study calculates the amount of CWC needed to support utility operations. CWC is the amount of cash needed on hand for a utility between the time it incurs operating expenses to provide service, until it receives payment for the services provided.

TAWC's CWC requirement is based on a lead-lag study. A lead-lag study analyzes the cash inflows and outflows of payments the Company receives from its customers for the service it provides and the disbursements it makes to vendors to provide that service. These cash flows are measured in number of days. A lead-lag analysis compares the number of days the Company is allowed to take, or actually

takes, to make payment after receiving service from a vendor, with the number of days it takes the Company to receive payment for the service provided to customers.

Q HOW ARE THE RESULTS FROM A LEAD-LAG STUDY INTERPRETED?

A A negative CWC requirement indicates that ratepayers provided the working capital in the aggregate during the test year. This means that ratepayers provided the necessary cash, on average, before the Company must pay for expenses incurred to provide that service. A positive CWC requirement indicates, in the aggregate, that shareholders provided the cash necessary during the year. This means that the Company must pay, on average, for the expenses incurred in providing service before ratepayers pay for that service.

Q DID YOU UPDATE TAWC'S CWC ALLOWANCE USING THE SAME FORMAT IT PROVIDED ON MR. MILLER'S EXHIBIT NO. 1, SCHEDULE 3?

A No, not specifically. I provided a more detailed assessment of the lead-lag study by showing the actual impact of each of the line item expenses included in the determination of the CWC allowance. My methodology produces the same result as TAWC's analysis as shown on my Exhibit MPG-5, page 1, before my proposed adjustment. Although, I propose several adjustments to this lead-lag study in order to estimate a more reasonable CWC allowance.

Q PLEASE DESCRIBE YOUR ADJUSTMENTS TO TAWC'S LEAD-LAG STUDY.

A I am proposing that the CWC balance of $663,000 be reduced to a negative $916,500 balance. I made several adjustments to arrive at this balance. I have included two exhibits attached to this testimony to better illustrate this adjustment. On Exhibit

MPG-5, page 1, I replicated TAWC's lead-lag study, which depicts the amount of CWC allowance the Company is requesting to be included in rate base. This exhibit illustrates all factors of the lead-lag study on one exhibit.

On Exhibit MPG-5, page 2, I present my adjusted lead-lag study. This adjusted lead-lag study starts with TAWC's study and modifies it for the three adjustments described below. This is the lead-lag study I recommend be used to estimate a CWC rate base component.

Q PLEASE DESCRIBE YOUR ADJUSTMENTS TO TAWC'S LEAD-LAG STUDY.

A As shown on Exhibit MPG-5, page 2, I made three adjustments to TAWC's lead-lag study. First, I assigned the expense lag equal to the revenue lag for the following items: Depreciation and Amortization, Deferred Taxes, Net Earnings, Amortizations and Uncollectibles. Second, I am proposing a different expense lag for American Water Works ("AWWS") management fees. Finally, I am proposing a different revenue and expense lag for gross receipts taxes.

Q PLEASE DESCRIBE YOUR FIRST LEAD-LAG STUDY ADJUSTMENT TO SET EXPENSE AND REVENUE LAG EQUAL ON CERTAIN ITEMS.

A I set the expense lag equal to the revenue lag for the following line items: Depreciation and Amortization, Deferred Taxes, Net Earnings, Amortizations and Uncollectibles. These items should not increase TAWC's CWC requirements, because they are not cash expenses. Only cash expenses create a CWC requirement.

Q DID TAWC'S LEAD-LAG STUDY RECOGNIZE THAT THESE ITEMS ARE NOT CASH EXPENSES?

A Yes. TAWC assigned a zero expense lag to these categories to develop TAWC's overall expense lag. Assigning a zero lag to these expenses does reduce the overall expense lag, but the Company's methodology would continue to assign a CWC requirement to support a non-cash expense.

For example, as shown on my Exhibit MPG-5, page 1, based on TAWC's lead-lag study, Depreciation and Amortization, line 19, requires a $581,666 CWC requirement. By eliminating only the expense component, the study is still allowing an improper lead-lag component for the revenue lag. The net result is an improper CWC allowance for a non-cash expense.

Q PLEASE DESCRIBE THE SECOND ADJUSTMENT YOU MADE TO TAWC'S LEAD-LAG STUDY.

A I am proposing to change the expense lag for AWWS charges from a negative 11.97 days to a positive 25.24 days. AWWS charges are the management fees that TAWC pays to American Water Works Service Company.[3] A negative 11.97 days contends that these charges need to be prepaid by TAWC to American Water Works.

Q WHAT IS THE BASIS FOR THE 25.24 DAY LAG YOU ARE PROPOSING?

A I analyzed the AWWS Service Company charges which comprise TAWC's test year expenses charged to TAWC by AWWS. A majority of the AWWS expenses were either labor related or payment of ongoing operating expenses. I applied the expense lags identified by TAWC in its lead-lag study to the AWWS expenses of a similar

[3]Mr. Miller's Exhibit No. 1, Schedule 3, page 3, line 8.

nature. For example, AWWS labor expenses were assigned the labor expense lag of 17.08 days. Ongoing operating expenses for AWWS were assigned an expense lag of 34.05 days. As shown on Exhibit MPG-6, assigning each expense item with the corresponding expense lag estimated by TAWC, produces an overall expense lag of 25.24 days for AWWS Service Company fees.

Q WHY DID YOU REMOVE THE PREPAYMENT EFFECT OF THE AWWS CHARGES IN THE LEAD-LAG STUDY?

A I do not believe it is just and reasonable for the charges from the parent company to be prepaid. AWWS services should be priced at or below competitive market rates. Based on my understanding of other utilities' services and competitive procurement on behalf on many clients, I believe it to be unusual for a supplier to require prepayment of service by an investment grade creditworthy counter-party at arms-length. As such, it is at odds with standard commercial practices for AWWS to require prepayments of services by its affiliate TAWC. Since these costs should be comparable to competitive market prices, I recommend they be adjusted until TAWC is able to prove why it is necessary and prudent for TAWC to prepay AWWS and that the service, prices, terms and conditions imposed on TAWC by its parent are competitive with non-affiliated third-party supplier charges.

I believe the proposed expense lag of 25.24 days is a more reasonable lag, since it reflects the time TAWC has until it must pay for similar services.

Q PLEASE DESCRIBE THE ADJUSTMENTS YOU MADE REGARDING TAWC'S GROSS RECEIPTS EXPENSE COMPONENT OF ITS LEAD-LAG STUDY.

A I am proposing a new revenue lag and expense lag for the gross receipts expenses.

Q PLEASE DESCRIBE THE EXPENSE LAG YOU PROPOSE.

A I am proposing an expense lag of 230.24 days. I reviewed the Company's workpaper[4] regarding the expense lag and believe there was a mistake in the calculation. The Company workpaper listed a service period of a negative day for gross receipts taxes. The actual service period for this expense is one year. I recalculated the expense lag using the one-year service period and determined the proper expense lag to be 230.24 days.

Q WHAT INFORMATION DID YOU RELY ON TO DETERMINE THAT THE SERVICE PERIOD SHOULD BE ONE YEAR?

A I researched the service period for the gross receipts taxes as delineated by the Tennessee Code. I discovered these taxes are paid based on an annual payment schedule. I have included that part of the Tennessee Code below which describes the annual service period:

> **67-4-306. Period covered by tax — Refund. —**
>
> **(a)** The taxes levied by sections providing for administration under this part are declared to be imposed for the privilege of engaging in business for the year beginning on July 1, even though such tax is made payable on the following August 1, and even though such tax is measured by gross receipts for the preceding fiscal or calendar year.

Q WHAT REVENUE LAG ARE YOU PROPOSING FOR GROSS RECEIPTS TAXES?

A I am proposing a zero revenue lag for gross receipts taxes.

Q WHAT IS THE BASIS FOR YOUR ZERO REVENUE LAG RECOMMENDATION?

A I reviewed the Tennessee Code and found the following description of gross receipts:

[4]Company response to TRA data request no. 1, question 13: Ms. Sheila Miller's Lead-Lag Study Workpapers, page 32 of 35.

> (3) (A) "Gross receipts," for the purpose of taxes administered under this part, means total receipts before anything is deducted, but does not include receipts from incidental business, when such incidental business, if separately carried on, would not be subject to a tax measured by gross receipts under the provisions of parts 2-6 of this chapter;
>
> (B) "Gross receipts" does not include state and local sales and other taxes collected from customers and remitted to the respective taxing authorities by utilities; and ... (Emphasis added).

Per the above code, TAWC must have received the revenue from ratepayers before TAWC is obligated to pay the gross receipts taxes. If TAWC has not collected revenue from its customers, it has no obligation to pay gross receipts taxes. By having the revenue in TAWC's possession a zero revenue lag is appropriate.

Other Revenue Requirement Issues

Q DID YOU REVIEW THE INCREASE IN CERTAIN MAJOR COST OF SERVICE ITEMS TAWC INCLUDED IN THIS CASE RELATIVE TO ITS LAST RATE CASE BEFORE THE AUTHORITY?

A Yes. Major items were increased substantially in this case relative to the last case as shown in Table 1 below.

TABLE 1

Cost of Service Increases

Description	Amount (Millions)
Rate of Return	$1.4
Service Company Fees	$1.7
Total	$3.1

In TAWC's last rate case, it was awarded a rate of return of 10.2% using a double leveraged capital structure. In this case, TAWC is requesting a significantly higher return on equity of 11.5%, on a TAWC stand-alone capital structure. Further, in TAWC's last rate case, the Authority approved Service Company fees allocated to TAWC of $3.5 million. In this case, TAWC is proposing Service Company fees allocated to TAWC of $5.2 million. In both instances, TAWC's proposed cost of service for rate for return and Service Company fees represents a significant component of its claimed revenue deficiency in this proceeding.

Q DID TAWC REQUEST A MUCH HIGHER RATE OF RETURN IN THIS CASE RELATIVE TO WHAT THE AUTHORITY APPROVED IN ITS LAST RATE CASE?

A Yes. TAWC requested an increased rate of return to reflect its stand-alone capital structure, and a return on equity of 11.5%. In its last rate case, TAWC's overall rate of return was based on a double leveraged capital structure and a return on equity of 10.2%.

Q IS THERE A LONG-STANDING PRACTICE OF USING A DOUBLE LEVERAGED CAPITAL STRUCTURE IN SETTING TAWC'S OVERALL RATE OF RETURN IN TENNESSEE?

A Yes, that is my understanding. Therefore, TAWC's proposal to shift from this approach is a material change in its proposed cost of service relative to that approved in prior rate cases.

Q IS TAWC'S PROPOSED RETURN ON EQUITY OF 11.5% RELATIVE TO THE 10.2% THAT WAS AWARDED IN THE LAST RATE CASE REASONABLE?

A No. As shown on my Exhibit MPG-7, authorized returns on equity for electric and gas utilities, and utility bond yields rated "A" and "Baa" have exhibited flat to declining capital cost since TAWC's 2008 rate case filing. As shown on that exhibit, current capital market costs are actually lower today than they were during TAWC's last rate case. Therefore, this data clearly shows that TAWC's cost of capital has not increased and a substantial increase in its authorized return on equity is not consistent with changes to its cost of service. I recommend TAWC's requested increase in its authorized return on equity be denied.

Q DO YOU BELIEVE THAT TAWC'S INCREASE IN ITS SERVICE COMPANY MANAGEMENT FEES HAS BEEN SUPPORTED IN ITS FILING?

A No. TAWC witness Patrick Baryenbruch provides testimony supporting his belief that the Service Company fees are at the lower of cost or market. However, and very importantly, no TAWC witness in this case has supported a substantial increase in the Service Company fees cost relative to the last case. As such, since it is a cost-based service, the increase in cost should be fully justified. I recommend that the Authority not approve the increase in Service Company fees until or unless TAWC fully justifies this expense. In this instance, TAWC has not supported its increase in Service Company fees, and therefore the increase is not known and measurable and should be rejected as unsupported.

II. CLASS COST OF SERVICE STUDY ("CCOSS")

Q DID TAWC OFFER A CCOSS IN THIS PROCEEDING?

A Yes. TAWC witness Paul Herbert offered a CCOSS. The results of Mr. Herbert's CCOSS are summarized in Exhibit MPG-8.

Q DO YOU BELIEVE MR. HERBERT'S CCOSS REASONABLY ALLOCATES TAWC'S COSTS BETWEEN CLASSES?

A No. I believe Mr. Herbert's CCOSS is flawed for principally two reasons:

1. He allocates purchased power of $2,175,321 on a pure volumetric basis. This is unreasonable because TAWC incurs purchased power costs based on its peak demands for power and its average energy usage. Purchased power costs should be allocated in a manner that coincides with how purchased power expense is incurred, that is on both a demand basis and a base volumetric usage basis.

2. He allocated large mains on the basis of only max day extra capacity and base volumes. This is in significant contrast to his proposed allocation of small distribution mains based on max hour extra capacity and base volumes. Max hour capacity is more appropriate than a max day capacity because the mains are sized to meet not only daily demands but are also sized large enough to deliver the highest hourly demands of TAWC customers. Mr. Herbert's flawed method of allocating transmission mains only on max day demands does not accurately allocate the incremental cost larger mains incurred to meet customers' peak hour demands.

Q WHY IS APPROPRIATE TO ALLOCATE PURCHASED POWER COST USING A COMPONENT FOR EXTRA CAPACITY?

A TAWC's purchased power expense reflects both a demand component and an energy component. The demand component reflects a charge tied to the highest hourly peak demand its system places on its electric provider on a monthly basis. The demand component of TAWC's total purchased power bill represents approximately 35% of its annual charges. Since the demand component applies to

the highest hourly demand in the month, a portion of purchased power expense should be allocated to the extra capacity function. Simply allocating it across all volumes, ignores the reality that purchased power cost is incurred on the basis of peak demands as it relates to demand components, and average pumping demands as it relates to the kWh or energy consumption of purchased power.

Q WHY DO YOU BELIEVE THAT LARGE TRANSMISSION MAINS ARE IN PART SIZED TO MEET PEAK HOURLY DEMANDS OF TAWC'S CUSTOMERS?

A I reached this conclusion based on several reasons. First, on simply a factual basis, TAWC is able to move water from its production and storage facilities to customers during the highest peak hour demand of the year. As such, the pipes are sized large enough to move water from supply source to customer meter. This is significant because peak hour demands are almost 190%[5] higher than the average hour demands, and 130%[6] higher than the peak day demand. As such, a component of the cost of transmission mains was incurred to increase the size of the main to allow TAWC to supply customer's demand during the peak hour demand. Therefore, a portion of large mains' costs should be allocated to the peak hour extra capacity factor, in the same manner as TAWC witness Herbert proposed in his allocation of small distribution mains costs.

[5]Direct testimony of Paul R. Herbert at 9.
[6]*Id.*

Q DOES THE AMERICAN WATER WORKS ASSOCIATION ("AWWA") SUPPORT YOUR CONTENTION WITH RESPECT TO PURCHASED POWER AND LARGE PIPE EXTRA CAPACITY ALLOCATION RECOMMENDATIONS?

A Yes. AWWA Manual M-1, *Principles of Water Rates, Fees and Charges*, on page 54 states the following: "[P]ower costs should be allocated to extra capacity to the degree that it varies with demand pumping requirements. Also, AWWA states that "Treated water transmission and distribution mains are allocated 45 percent to base, 25 percent to maximum-day extra capacity, and 30 percent to the maximum-hour extra capacity cost components, recognizing that mains provide maximum-day and maximum-hour service to all customers." (*Id.*).

Q HOW DO YOU PROPOSE TO CORRECT MR. HERBERT'S CCOSS?

A I propose two adjustments. First, I recommend that Mr. Herbert's proposed allocation of purchased power costs on Factor 1 be rejected. I recommend Factor 6 instead be used to allocate purchased power costs. This factor will allocate purchased power costs on base (65.4%), maximum hour demands (4.5%), maximum day demands (27.3%), and fire (2.7%). Factor 6 better apportions purchased power costs based on TAWC's actual demands for pumping that correspond to its extra capacity costs.

I also recommend modifying large customer mains allocation as proposed by Mr. Herbert. He proposes to allocate large mains using Factor 3. I propose large mains be allocated using Factor 6. The primary difference between Factor 3 and Factor 6, is that Factor 6 allocates a portion of the mains' costs to the peak hour demands and not just on volumes and max day demands, where Factor 3 allocates a portion of the mains' costs on volumes and max day demands and does not allocate

any cost to peak hour demands. Therefore, I believe Factor 6 is more appropriate than Factor 3 because it includes a component (4.5%) for peak hour demands.

Q WHAT IS THE IMPACT ON MR. HERBERT'S CCOSS BY MODIFYING THE ALLOCATION OF PURCHASED POWER COSTS AND LARGE MAIN COSTS AS YOU DESCRIBED ABOVE?

A A revised CCOSS to reflect these changes is shown on my Exhibit MPG-9. The revised CCOSS information should be used in order to more accurately adjust rates to produce additional revenues should the Authority find a revenue deficiency exists.

III. PROPOSED RATE DESIGN

Q DID TAWC PROPOSE ADJUSTMENTS TO ITS RATE DESIGN TO RECOVER ITS CLAIMED REVENUE DEFICIENCY?

A Yes. TAWC's proposed meter rates and volumetric rates are shown on my Exhibit MPG-10, page 1 of 2. As shown on this exhibit, TAWC is proposing various percent changes in the volumetric rate schedules and customer meter rates relative to the various service areas.

Q DO YOU BELIEVE THAT TAWC'S PROPOSED ADJUSTMENTS TO RATES ARE CONSISTENT WITH ITS OWN CCOSS?

A No. Even TAWC's CCOSS, which over-allocates costs to large volume users, supports the finding that large volume users should get nothing more than a system average increase. However, as shown on Exhibit MPG-10, page 1, lines 23-24, Mr. Herbert's proposed volumetric rate increase would increase the tail block volumetric charges of 37.87% within the City of Chattanooga which is more than

135% (37.87% ÷ 27.7%) of the system average increase (27.7%) claimed by TAWC. This substantial above average increase in its volumetric rate is in contradiction to Mr. Herbert's own CCOSS findings. Therefore, Mr. Herbert's proposed rate design should be rejected, because it will move TAWC customer classes further away from cost of service relative to his own CCOSS.

Q WILL MR. HERBERT'S PROPOSED RATES MOVE TAWC'S CUSTOMER CLASSES CLOSER TO COST OF SERVICE?

A No. As shown on my Exhibit MPG-11, page 2, Mr. Herbert's proposed rates will essentially produce a system average increase across all rate classes. As a result, residential class customers will continue to receive over a $3.6 million subsidy, and commercial classes will provide subsidy payments of $2.1 million. As such, this proposed rate design essentially will not move customer rates closer to cost of service.

Q DO YOU HAVE A RECOMMENDED RATE ADJUSTMENT TO REFLECT TAWC'S CCOSS?

A Yes. I am proposing adjustments to rates to move all TAWC customers' rates closer to class cost of service. Toward this objective, I propose to use my CCOSS that is largely based on Mr. Herbert's CCOSS, with an adjustment to two allocation factors of purchased power and large main costs, as described above. Using this as a general road map for proper rate adjustments, I propose the following in designing rate changes in this proceeding:

1. No customer class should receive more than 120% of the system average increase. This will mitigate any rate increase to any particular rate class.

2. No customer class will receive a rate decrease. This will further mitigate increases to certain customers that are further away from cost of service.

3. Because of TAWC's substantial investments in meters and service drops, I recommend that meter charges be increased by 120% of the system average revenue deficiency. (For example, TAWC is proposing a 27.7% system average rate increase; therefore, the maximum class increase would be 33.1%).

4. I recommend the first and second volumetric blocks be increased by 120% of the system average increase.

5. I recommend all subsequent volumetric blocks be increased at a rate lower than the system average increase.

My proposed rates are shown on Exhibit MPG-10, page 2.

Q WILL YOUR PROPOSED RATE DESIGN MOVE CUSTOMER CLASSES CLOSER TO COST OF SERVICE?

A Yes. This is illustrated in my Exhibit MPG-11. As shown on page 1 of Exhibit MPG-11, the amount of residential subsidy is reduced from $3.6 million under Mr. Herbert's rate design proposal (Exhibit MPG-11, page 1), to $2.9 million under my rate design proposal (Exhibit MPG-12, page 1). Further, the amount of subsidization paid by commercial customers is reduced from $2.1 million in Mr. Herbert's rate design (*Id.*), down to $1.57 million under my rate design proposal (*Id.*). Importantly, under rate design proposal, industrial customers are placed essentially at cost of service.

These assessments were made using my CCOSS. However, similar findings are made at Exhibit MPG-12, page 2 reflecting Mr. Herbert's own CCOSS. The subsidy received by residential customers is decreased by over $800,000 relative to Mr. Herbert's proposal, and the subsidy paid by commercial customers is decreased by over $400,000. Again, industrial customers' rates would produce revenues very

close to that class's cost of service. This reduced subsidy shows the reasonableness of my rate design proposal relative to that proposed by Mr. Herbert.

Q HAVE YOU ESTIMATED THE RATE INCREASE THAT WOULD CORRESPOND WITH TAWC'S PROPOSED OVERALL REVENUE DEFICIENCY?

A Yes. This is shown on the attached Exhibit MPG-13. However, I do recommend adjustments to TAWC's claimed revenue deficiency, so I would recommend that TAWC's estimated system average increase of 27.7% be decreased as described above. Nevertheless, for illustrative purposes only, I am showing an appropriate rate spread that would correspond with TAWC's proposed revenue deficiency in this proceeding. The percent changes to each rate would decline upon the Authority's adoption of my proposed adjustments to TAWC's claimed revenue deficiency.

As shown on the attached Exhibit MPG-13, the effect of this proposed rate design will result in residential customers receiving 120% of the system average increase, or 33.1%. This rate design is supported by the CCOSS, both mine and TAWC's, showing that residential customers' rates are priced considerably below TAWC's actual cost of service. Commercial customers will receive a 24.2% increase, a rate increase also supported by the CCOSS. Industrial customers will receive a 22.2% increase, which is below the system average increase and also supported by the CCOSS.

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

Q PLEASE STATE YOUR OCCUPATION.

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

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

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

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

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

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

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

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

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

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

Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

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

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

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

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

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TRA Docket No. 10-00189
Exhibit MPG-1

Tennessee-American Water Company

Lost Water Adjustment Summary

Line	Description	Amount
	Included in Company Filing (22.69% Water Loss)	
1	CITICO Station Power Costs[1]	$ 1,366,888
2	Booster Station Power Costs[2]	1,141,858
3	Chemicals Cost[3]	1,069,369
4	Total	$ 3,578,115
	Adjusted to 15% Water Loss	
5	CITICO Station Power Costs[4]	$ 1,243,287
6	Booster Station Power Costs[5]	1,038,553
7	Chemicals Cost[6]	972,623
8	Total	$ 3,254,464
9	Adjustment to Company Revenue Requirement For Water Loss	$ (323,651)

Sources:

[1]Sheila Miller workpapers for Fuel and Power, Page 1. Provided by Company in response to TRA Data Request No. 1, Question 13.

[2]Sheila Miller workpapers for Fuel and Power, Page 2. Provided by Company in response to TRA Data Request No. 1, Question 13.

[3]Company response to TRA Data Request No. 1, Question 13, Sheila Miller's "Chemicals" workpaper, page 2 of 6.

[4]See Workpaper "Power Cost For CITICO Station - Lost Water Adjustment".

[5]See Workpaper "Power Cost For Booster Station - Lost Water Adjustment".

[6]See Workpaper "Chemicals Expense - Lost Water Adjustment".

Tennessee-American Water Company

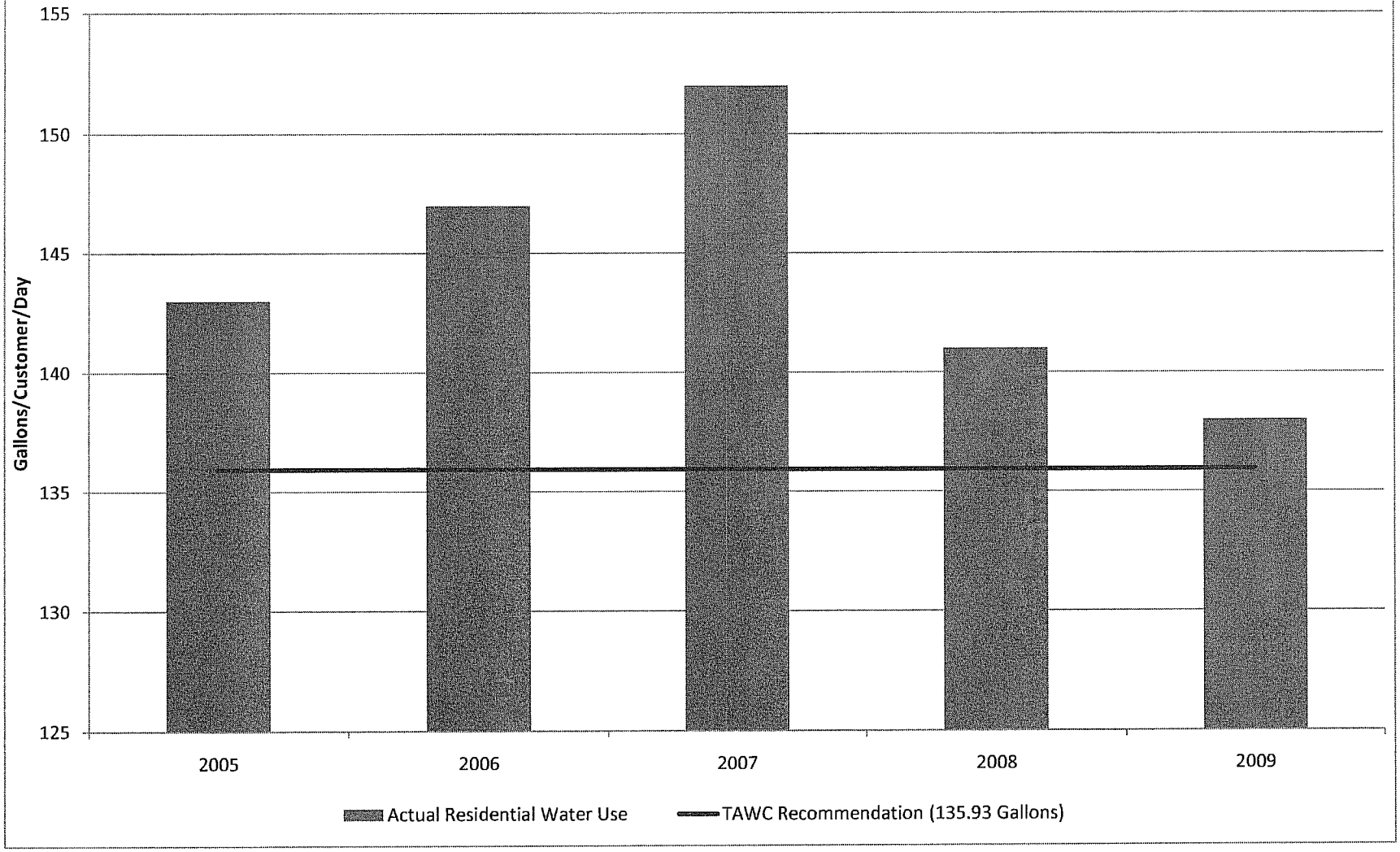
Usage Adjustment Summary

Line	Description	Amount
	Revenues	
1	Additional Residential Revenues[1]	$ 581,357
2	Additional Commercial Revenues[2]	635,758
3	Subtotal	$ 1,217,115
	Less:	
4	Additional CITICO Station Power Charges[3]	$ 64,915
5	Additional Booster Station Power Charges[4]	54,255
6	Additional Chemical Charges[5]	50,811
7	Net Adjustment to Company Revenues	$ 1,047,133

Sources:
[1]See workpaper "Residential Revenue Annualization".
[2]See workpaper "Commercial Revenue Annualization".
[3]See workpaper "Power Cost For CITICO Station - Usage Adjustment".
[4]See workpaper "Power Cost For Booster Station - Usage Adjustment".
[5]See workpaper "Chemicals Expense - Usage Adjustment".

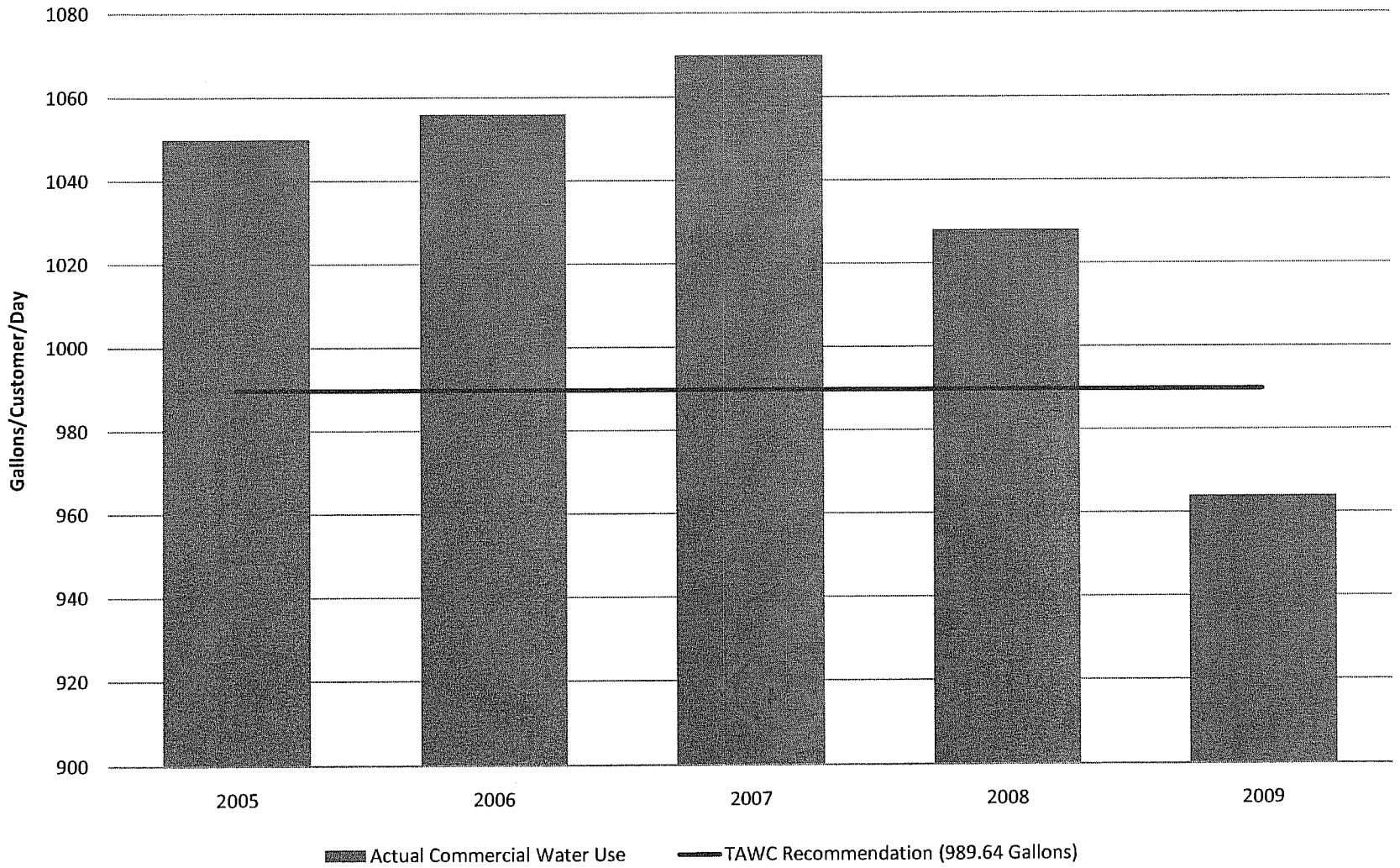
Tennessee-American Water Company

Residential Water Use



Tennessee-American Water Company

Commercial Water Use



Tennessee-American Water Company

Water Usage Analysis

Line	Description	2005 (1)	2006 (2)	2007 (3)	2008 (4)	2009 (5)
	Residential					
1	Annual Water Usage (Gallons)[1]	3,302,016,000	3,572,024,000	3,578,059,000	3,420,547,000	3,285,090,000
2	Annual Bills[1]	726,757	790,087	763,175	762,389	789,028
3	Avg. Usage per Bill	4,543.49	4,521.05	4,688.39	4,486.62	4,163.46
4	Daily Usage (Gallons/Customer)	149.38	148.64	154.14	147.51	136.88
5	Spitznagel Proposed Daily Usage - 2010 Case[2]					135.93
	Commercial					
6	Annual Water Usage (Gallons)[1]	3,168,765,000	3,296,177,000	3,226,205,000	3,133,691,000	2,918,227,000
7	Annual Bills[1]	96,064	102,716	98,271	97,444	97,941
8	Avg. Usage per Bill	32,985.98	32,090.20	32,829.68	32,158.89	29,795.76
9	Daily Usage (Gallons/Customer)	1,084.47	1,055.02	1,079.33	1,057.28	979.59
10	Spitznagel Proposed Daily Usage - 2010 Case[2]					989.64

Spitznagel Data

		Residential			Commercial		
Line	Year	Gallons/Day[3] (1)	Running 5-Year Average (2)	Running 3-Year Average (3)	Gallons/Day[3] (5)	Running 5-Year Average (6)	Running 3-Year Average (7)
11	1994	161			1148		
12	1995	163			1152		
13	1996	163		162.3	1149		1149.7
14	1997	160		162.0	1112		1137.7
15	1998	164	162.2	162.3	1134	1139.0	1131.7
16	1999	161	162.2	161.7	1128	1135.0	1124.7
17	2000	158	161.2	161.0	1118	1128.2	1126.7
18	2001	154	159.4	157.7	1059	1110.2	1101.7
19	2002	157	158.8	156.3	1055	1098.8	1077.3
20	2003	158	157.6	156.3	1033	1078.6	1049.0
21	2004	146	154.6	153.7	1097	1072.4	1061.7
22	2005	143	151.6	149.0	1050	1058.8	1060.0
23	2006	147	150.2	145.3	1056	1058.2	1067.7
24	2007	152	149.2	147.3	1070	1061.2	1058.7
25	2008	141	145.8	146.7	1028	1060.2	1051.3
26	2009	138	144.2	143.7	964	1033.6	1020.7
27	**10-Year Average**	149.4			1053.0		
28	**5-Year Average**	144.2			1033.6		
29	**3-Year Average**	143.7			1020.7		
30	**Test Year Proposed**	135.93			989.64		

Sources:
[1]Annual Report Filed with the Tennessee Regulatory Authority. Page W-8.
[2]Direct Testimony of Edward L. Spitznagel in Docket No. 10-00189, Page 6.
[3]TAWC Response to TRA Staff Data Request No. 1, Question 13.

TRA Docket No. 10-00189
Exhibit MPG-4

Tennessee-American Water Company

Summary of Working Capital

Line	Description	Company Proposed	CRMA Proposed	Difference
1	Prepaid Taxes	$ 284,235	$ 284,235	$ -
2	Materials & Supplies	254,110	254,110	-
3	Deferred Regulatory Expenses	630,897	630,897	-
4	Unamortized Debt Expense	460,845	-	460,845
5	Other Deferred Debits	280,983	280,983	-
6	Lead Lag Study	663,000	(916,600)	1,579,600
7	Subtotal	$ 2,574,070	$ 533,625	$ 2,040,445
8	Less:			
9	Incidental Collections	$ 1,562,812	$ 1,562,812	$ -
10	Total Working Capital Requirement	$ 1,011,258	$ (1,029,187)	$ 2,040,445
11	Company Pre-Tax Rate of Return			11.78%
12	Revenue Requirement Value of Difference			$ 240,364

Tennessee-American Water Company

Cash Working Capital Net Lag - Per TAWC

Line	Description	Amount[1] (1)	Revenue Lag[2] (2)	Expense Lag[1] (3)	Net Lag (4) = (2) - (3)	CWC Factor (5) = (4) / 365	CWC Allowance (6) = (1) * (5)
1	Payrolls Charged to Expense - Hourly	3,674,972	43.53	17.08	26.45	0.072455899	266,273
2	Payrolls Charged to Expense - Salary	1,858,687	43.53	17.08	26.45	0.072455899	134,673
3	Purchased Water	50,962	43.53	36.44	7.09	0.019414803	989
4	Fuel and Power	2,511,238	43.53	28.04	15.49	0.042428502	106,548
5	Chemicals	1,069,369	43.53	23.64	19.89	0.054483296	58,263
6	Waste Disposal	197,386	43.53	73.61	(30.08)	-0.082420813	(16,269)
7	AWWS Charges	5,226,034	43.53	(11.97)	55.50	0.15204494	794,592
8	Group Insurance	1,075,184	43.53	(13.63)	57.16	0.156592885	168,366
9	OPEB's	959,573	43.53	(1.63)	45.16	0.123716173	118,715
10	Pensions	1,645,113	43.53	(1.63)	45.16	0.123716173	203,527
11	Regulatory Expense	379,918	43.53	76.64	(33.11)	-0.090722183	(34,467)
12	Insurance Other than Group	485,904	43.53	(40.00)	83.53	0.228839461	111,194
13	Rents	8,706	43.53	(33.42)	76.95	0.210812063	1,835
14	Uncollectibles	198,122	43.53	-	43.53	0.11925042	23,626
15	Maintenance Expense	1,110,317	43.53	21.74	21.79	0.059688776	66,273
16	Amortizations	0	43.53	-	43.53	0.11925042	-
17	Other Operating Expenses	3,023,526	43.53	34.05	9.48	0.025962748	78,499
18	Total O & M Expenses	23,475,010					2,082,639
19	Depreciation and Amortization	4,877,687	43.53	-	43.53	0.11925042	581,666
20	Taxes, Other than Income						
21	Payroll	438,774	43.53	15.79	27.74	0.075990146	33,343
22	Property Tax	2,936,068	43.53	241.00	(197.47)	-0.541023553	(1,588,482)
23	Franchise Tax	377,690	43.53	37.50	6.03	0.016510694	6,236
24	Utility Tax	117,779	43.53	267.00	(223.47)	-0.61225643	(72,111)
25	Gross Receipts Tax	529,961	43.53	47.74	(4.21)	-0.011544101	(6,118)
26	FIT-Current	(458,997)	43.53	29.64	13.89	0.03804494	(17,463)
27	SIT-Current	(103,266)	43.53	29.64	13.89	0.03804494	(3,929)
28	Deferred Taxes	558,423	43.53	-	43.53	0.11925042	66,592
29	Interest Expense	4,090,419	43.53	85.08	(41.55)	-0.113845471	(465,676)
30	Preferred Dividends	69,010	43.53	45.63	(2.10)	-0.005763279	(398)
31	Net Earnings	387,897	43.53	-	43.53	0.11925042	46,257
32	**Net Operating Funds**	37,296,455					
33	**Total CWC Allowance**						**662,557**

Sources & Notes:
[1]Company Exhibit No. 1, Schedule 3, Page 3 of 6.
[2]Company Exhibit No. 1, Schedule 3, Page 4 of 6.

Tennessee-American Water Company

Cash Working Capital

Line	Description	Amount[1] (1)	Revenue Lag[2] (2)	Expense Lag[1] (3)	Net Lag (4) = (2) - (3)	CWC Factor (5) = (4) / 365	CWC Allowance (6) = (1) * (5)
1	Payrolls Charged to Expense - Hourly	3,674,972	43.53	17.08	26.45	0.072455899	266,273
2	Payrolls Charged to Expense - Salary	1,858,687	43.53	17.08	26.45	0.072455899	134,673
3	Purchased Water	50,962	43.53	36.44	7.09	0.019414803	989
4	Fuel and Power	2,511,238	43.53	28.04	15.49	0.042428502	106,548
5	Chemicals	1,069,369	43.53	23.64	19.89	0.054483296	58,263
6	Waste Disposal	197,386	43.53	73.61	(30.08)	-0.082420813	(16,269)
7	AWWS Charges	5,226,034	43.53	25.24 [3]	18.28	0.050086716	261,755
8	Group Insurance	1,075,184	43.53	(13.63)	57.16	0.156592885	168,366
9	OPEB's	959,573	43.53	(1.63)	45.16	0.123716173	118,715
10	Pensions	1,645,113	43.53	(1.63)	45.16	0.123716173	203,527
11	Regulatory Expense	379,918	43.53	76.64	(33.11)	-0.090722183	(34,467)
12	Insurance Other than Group	485,904	43.53	(40.00)	83.53	0.228839461	111,194
13	Rents	8,706	43.53	(33.42)	76.95	0.210812063	1,835
14	Uncollectibles	198,122	43.53	43.53	0.00	0	-
15	Maintenance Expense	1,110,317	43.53	21.74	21.79	0.059688776	66,273
16	Amortizations	0	43.53	43.53	0.00	0	-
17	Other Operating Expenses	3,023,526	43.53	34.05	9.48	0.025962748	78,499
18	Total O & M Expenses	23,475,010					1,526,175
19	Depreciation and Amortization	4,877,687	43.53	43.53	0.00	0	-
20	Taxes, Other than Income						
21	Payroll	438,774	43.53	15.79	27.74	0.075990146	33,343
22	Property Tax	2,936,068	43.53	241.00	(197.47)	-0.541023553	(1,588,482)
23	Franchise Tax	377,690	43.53	37.50	6.03	0.016510694	6,236
24	Utility Tax	117,779	43.53	267.00	(223.47)	-0.61225643	(72,111)
25	Gross Receipts Tax	529,961	0.00 [4]	230.24 [5]	(230.24)	-0.630794219	(334,296)
26	FIT-Current	(458,997)	43.53	29.64	13.89	0.03804494	(17,463)
27	SIT-Current	(103,266)	43.53	29.64	13.89	0.03804494	(3,929)
28	Deferred Taxes	558,423	43.53	43.53	0.00	0	-
29	Interest Expense	4,090,419	43.53	85.08	(41.55)	-0.113845471	(465,676)
30	Preferred Dividends	69,010	43.53	45.63	(2.10)	-0.005763279	(398)
31	Net Earnings	387,897	43.53	43.53	0.00	0	-
32	**Net Operating Funds**	37,296,455					
33	**Total CWC Allowance**						**(916,600)**

Sources & Notes:

[1]Company Exhibit No. 1, Schedule 3, Page 3 of 6.

[2]Company Exhibit No. 1, Schedule 3, Page 4 of 6.

[3]See Worksheet "Management Fee Expense Lag Calculation".

[4]See Tennessee Code §67-4-301, (3) (A): " 'Gross receipts,' for the purpose of taxes administered under this part, means total receipts before anything is deducted...." Therefore the revenue lag should be 0.

[5]See worksheet "Correction of Gross Receipts Expense Lag Calculation".

Tennesee-American Water Company

Management Fee Expense Lag Calculation

Line	Plain Object Description	Expense Total [1] (1)	Expense Type (2)	Expense Lag [2] (3)	Dollar Days (4) = (1) * (3)
1	Labor	1,929,503	Payroll	17.08	32,955,911
2	Labor Non Scheduled Overtime	9,816	Payroll	17.08	167,657
3	Labor Overtime	48,318	Payroll	17.08	825,271
4	Incentive Plan-Off-Annual	214,538	Payroll	17.08	3,664,309
5	Group Ins Maintenance	11,055	Group Insurance	(13.63)	(150,680)
6	Defined Contr Supp Exec Retirement Plan Exp	36	Pension	(1.63)	(59)
7	401 K Restoration Exp	20	Payroll	17.08	342
8	Other Welfare Maintenance	37,429	OPEBs	(1.63)	(61,009)
9	Employee Awards	4,188	Payroll	17.08	71,531
10	Employee Physical Exam	500	Other	34.05	17,025
11	Tuition Aid	7,355	Other	34.05	250,438
12	Training	15,506	Other	34.05	527,979
13	401k	36,529	Payroll	17.08	623,915
14	Defined Contribution Plan	40,318	Pension	(1.63)	(65,718)
15	Employee Stock Purchase Plan	3,607	Other	34.05	122,818
16	Materials & Supplies Operations	100	Other	34.05	3,405
17	Contract Services-Engineering	14,280	Other	34.05	486,234
18	Contract Services-Accounting	3,520	Other	34.05	119,856
19	Contract Services-Legal	11,642	Other	34.05	396,410
20	Contract Services-Litigation	-	Other	34.05	-
21	Benefit Overhead	978,790	Other	34.05	33,327,800
22	General Overhead	1,119,663	Other	34.05	38,124,525
23	ContractS ervices-Other	237,472	Other	34.05	8,085,922
24	Contract Services -Temp Employee	25,128	Other	34.05	855,608
25	Contract Services-Lab Testing	(10,345)	Other	34.05	(352,247)
26	Rents-Real Property	19,746	Rent	(33.42)	(659,911)
27	Rents-Real Property Intercompany	17,316	Rent	(33.42)	(578,701)
28	Rents-Equipment	690	Rent	(33.42)	(23,060)
29	Transportation IT-Admin	3,766	Other	34.05	128,232
30	Transportation Lease Cost	181	Other	34.05	6,163
31	Transportation Lease Fuel	152	Other	34.05	5,176
32	Transportation Lease Maintenance	4	Maintenance	21.74	87
33	Uncollectible Accounts	518	Uncollectible	43.53	22,547
34	Miscellaneous	(8,053)	Other	34.05	(274,205)
35	Misc. General Office	3,048	Other	34.05	103,784
36	Advertising	3,599	Other	34.05	122,546
37	Bank Service Charges	84	Other	34.05	2,860
38	Brochures & Handouts	605	Other	34.05	20,600
39	Charitable Contributions Deduct	2,792	Other	34.05	95,068
40	Charitable Contributions Nondeductible	40	Other	34.05	1,362
41	Community Relations	1,098	Other	34.05	37,387
42	Co Dues/Membership Deduct	886	Other	34.05	30,168
43	Co Dues Deduct AWWA	16	Other	34.05	545
44	Condemnation Costs	69	Other	34.05	2,349
45	Credit Line Fees	1	Other	34.05	34
46	Dues/Membership Deductible	7,592	Other	34.05	258,508
47	Dues/Membership Nondeductible	3	Other	34.05	102
48	Electricity	7,464	Fuel & Power	28.04	209,291
49	Employee Expense P/R JE	62,021	Other	34.05	2,111,815
50	Employee Exp Conf/Registration	6,043	Other	34.05	205,764
51	Meals Deduct	7,397	Other	34.05	251,868
52	Meals Nondeduct	7,180	Other	34.05	244,479
53	Forms	460	Other	34.05	15,663
54	Grounds Keeping	146	Other	34.05	4,971
55	Heat - Oil/Gas	443	Fuel & Power	28.04	12,422
56	Janitorial	427	Other	34.05	14,539
57	Lab supplies	4,301	Other	34.05	146,449
58	Merger Transactional Cost	1	Other	34.05	34
59	Office & Admin Supplies	25,602	Other	34.05	871,748
60	Overnight Shipping	1,129	Other	34.05	38,442
61	Penalties Nondeductible	(189)	Other	34.05	(6,435)
62	Postage	202	Other	34.05	6,878
63	Relocation Expenses	18,596	Other	34.05	633,194
64	Research & Development Exp	10	Other	34.05	341
65	Security Service	203	Other	34.05	6,912
66	Software Licenses & Support	18,654	Other	34.05	635,169
67	Telephone	12,810	Other	34.05	436,181
68	Cell Phone	7,837	Other	34.05	266,850
69	Data Lines	1,356	Other	34.05	46,172
70	Trade Shows	3,393	Other	34.05	115,532
71	Trash Removal	105	Other	34.05	3,575
72	Pcard Undistributed	16	Other	34.05	545
73	Purchased Card	-	Other	34.05	-
74	Materials & Supplies Maintenance	586	Maintenance	21.74	12,740
75	Misc. Maintenance	12,202	Maintenance	21.74	265,271
76	Comp Equip Hardware	560	Other	34.05	19,068
77	HVAC Equipment	595	Other	34.05	20,260
78	Office Equipment	125	Other	34.05	4,256
79	FICA	(108)	Tax-Payroll	15.79	(1,705)
80	SUTA	14	Tax-Payroll	15.79	221
81	Other Taxes & Licenses	36	Other	34.05	1,226
82	SIT-Prior Year Adjustment	(133)	Tax-State	29.64	(3,942)
83	Blank	134	Other	34.05	4,563
84	Gains Other Non-OR	16,957	Other	34.05	577,386
85	Non-Op Employee Exp Deduct	8	Other	34.05	272
86	Interest Cap Lease-Outside	60	Other	34.05	2,043
87	Interest Cap Lease-AW02	-	Other	34.05	-
88	Other Interest Expense	(45)	Interest	85.08	(3,829)
89	Total	5,009,719		25.24 [3]	126,469,113

Sources:

[1] Company response to TRA Data Request No. 1, Question 13. Management Fees Workpaper, Pages 11 & 12.

[2] Uses expense lags for Company Exhibit No. 1, Schedule 3, Page 3.

[3] Calculated by dividing the total dollar days in Column (4) by the total expenses in Column (1)

Tennessee-American Water Company

Comparison of Authorized Returns, Utility Bond Yields, and 30-Year Treasury Bond Yields

Line	Description	Electric ROE[1] (1)	Gas ROE[1] (3)	"A" Rated Utility Bond Yield[2] (4)	"Baa" Rated Utility Bond Yield[2] (5)	30-Yr. Treasury Bond Yield[3] (6)
1	Q1 2008	10.45%	10.38%	6.15%	6.54%	4.41%
2	Q2 2008	10.57%	10.17%	6.31%	6.84%	4.58%
3	Q3 2008	10.47%	10.49%	6.42%	7.03%	4.45%
4	Q4 2008	10.33%	10.34%	7.23%	8.56%	3.68%
5	**Q1-Q4 2008**	**10.46%**	**10.37%**	**6.53%**	**7.25%**	**4.28%**
6	Q1 2009	10.29%	10.24%	6.37%	7.88%	3.45%
7	Q2 2009	10.55%	10.11%	6.39%	7.70%	4.17%
8	Q3 2009	10.46%	9.88%	5.74%	6.45%	4.32%
9	Q4 2009	10.54%	10.27%	5.65%	6.19%	4.33%
10	**Q1-Q4 2009**	**10.48%**	**10.19%**	**6.04%**	**7.06%**	**4.08%**
11	Q1 2010	10.66%	10.24%	5.83%	6.21%	4.62%
12	Q2 2010	10.08%	9.99%	5.59%	6.11%	4.37%
13	Q3 2010	10.27%	9.93%	5.09%	5.69%	3.85%
14	**Q1-Q3 2010**	**10.36%**	**10.07%**	**5.50%**	**6.00%**	**4.28%**

Sources:

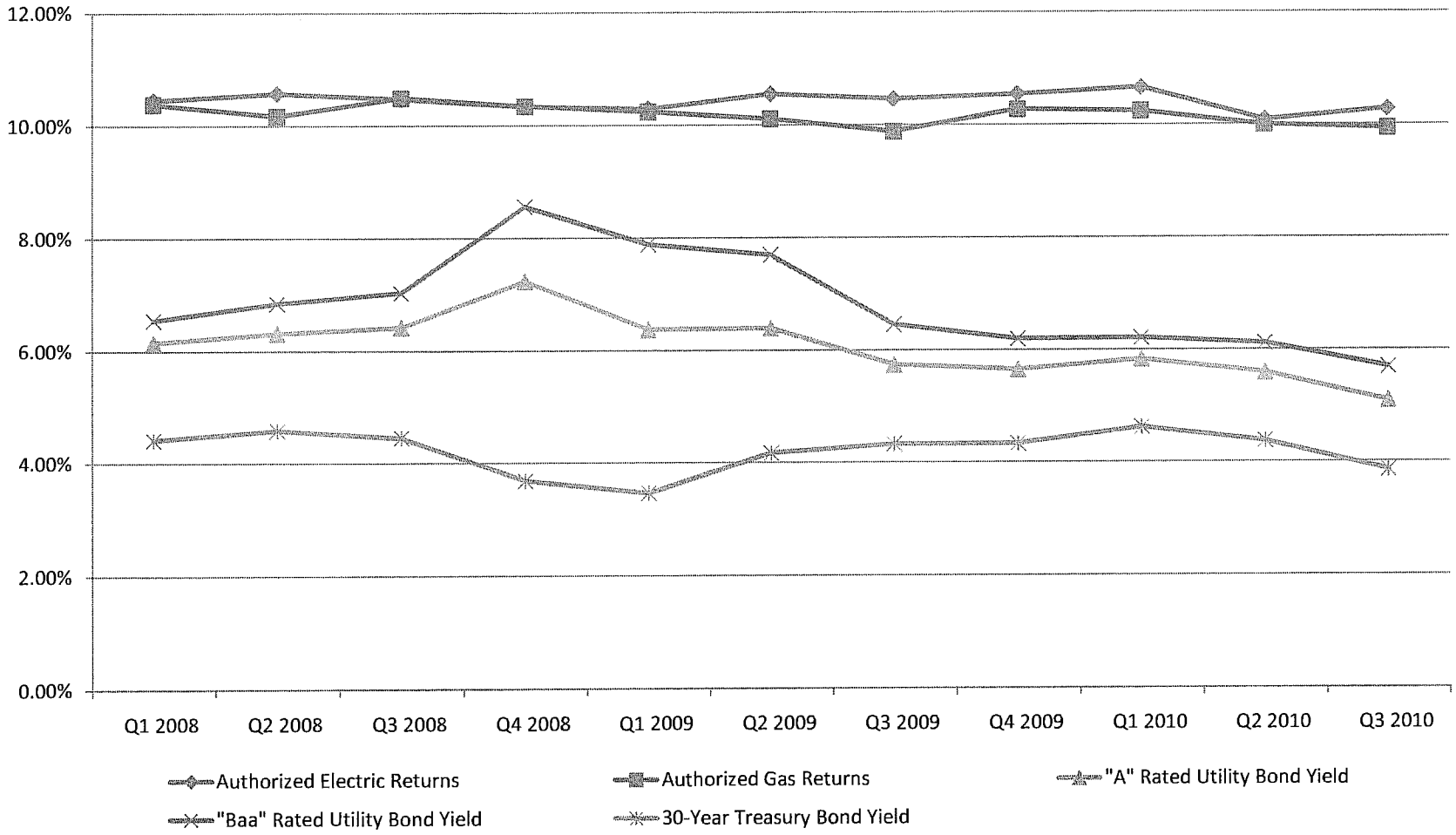
[1] *Regulatory Research Associates*, "Major Rate Case Decisions - January to September 2010," October 4, 2010.

[2] Mergent Bond Record.

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

Tennessee-American Water Company

Comparison of Authorized Returns, Utility Bond Yields, and 30-Year Treasury Bond Yields



TRA Docket No. 10-00189
Exhibit MPG-8

TENNESSEE-AMERICAN WATER COMPANY

TAWC Proposed Class Cost of Service

Line	Customer Classification	Pro Forma Cost of Service Per TAWC (1)	Revenues at Present Rates (2)	Increase Needed to Cost of Service (3)	Percent Increase over Present Rates (4)
1	Residential	$23,097,581	$15,243,199	$7,854,382	51.5%
2	Commercial	12,684,935	11,534,347	1,150,588	10.0%
3	Industrial	4,299,889	3,401,964	897,925	26.4%
4	Other Public Authority	3,065,740	2,556,253	509,487	19.9%
5	Other Water Utilities	1,827,375	1,308,493	518,882	39.7%
6	Private Fire Protection	700,988	1,735,066	(1,034,078)	-59.6%
7	Total	$45,676,508	$35,779,322	$9,897,186	27.7%

TRA Docket No. 10-00189
Exhibit MPG-9

TENNESSEE-AMERICAN WATER COMPANY

CRMA Corrected Class Cost of Service

Line	Customer Classification	Pro Forma Cost of Service Per CRMA (1)	Revenues at Present Rates (2)	Increase Needed to Cost of Service (3)	Percent Increase over Present Rates (4)
1	Residential	$23,206,057	$15,243,199	$7,962,858	52.2%
2	Commercial	12,751,315	11,534,347	1,216,968	10.6%
3	Industrial	4,170,037	3,401,964	768,073	22.6%
4	Other Public Authority	3,082,302	2,556,253	526,049	20.6%
5	Other Water Utilities	1,747,279	1,308,493	438,786	33.5%
6	Private Fire Protection	718,087	1,735,066	(1,016,979)	-58.6%
7	Total	$45,675,077	$35,779,322	$9,895,755	27.7%

TENNESSEE-AMERICAN WATER COMPANY

Comparison of Present and TAWC Proposed Rates

Line		Present Rates			TAWC Proposed Rates					Percent Increase		
		Chattanooga	Lookout Mountain	Lakeview	Chattanooga	Lookout Mountain	Lakeview	Lone Oak	Suck Creek	Chattanooga	Lookout Mountain	Lakeview
	Res, Ind, OPA, SFR:											
1	5/8 -inch meter	10.88	12.21	12.21	13.84	13.84	13.84	28.04	19.13	27.21%	13.35%	13.35%
2	3/4 -inch meter	18.28	18.28	18.28	23.25	23.25	23.25	23.25	23.25	27.19%	27.19%	27.19%
3	1 -inch meter	30.41	30.41	30.41	38.68	38.68	38.68	38.68	38.68	27.20%	27.20%	27.20%
4	1 1/2 -inch meter	60.85	60.85	60.85	77.40	77.40	77.40	77.40	77.40	27.20%	27.20%	27.20%
5	2 -inch meter	97.35	97.35	97.35	123.83	123.83	123.83	123.83	123.83	27.20%	27.20%	27.20%
6	3 -inch meter	182.53	182.53	182.53	232.18	232.18	232.18	232.18	232.18	27.20%	27.20%	27.20%
7	4 -inch meter	304.23	304.23	304.23	386.98	386.98	386.98	386.98	386.98	27.20%	27.20%	27.20%
8	6 -inch meter	608.47	608.47	608.47	773.97	773.97	773.97	773.97	773.97	27.20%	27.20%	27.20%
9	8 -inch meter	973.53	973.53	973.53	1,238.33	1,238.33	1,238.33	1,238.33	1,238.33	27.20%	27.20%	27.20%
	Commercial:											
10	5/8 -inch meter	10.81	12.14	12.14	13.84	13.84	13.84	28.04	19.13	28.03%	14.00%	14.00%
11	3/4 -inch meter	18.16	18.16	18.16	23.25	23.25	23.25	23.25	23.25	28.03%	28.03%	28.03%
12	1 -inch meter	30.22	30.22	30.22	38.68	38.68	38.68	38.68	38.68	27.99%	27.99%	27.99%
13	1 1/2 -inch meter	60.47	60.47	60.47	77.40	77.40	77.40	77.40	77.40	28.00%	28.00%	28.00%
14	2 -inch meter	96.74	96.74	96.74	123.83	123.83	123.83	123.83	123.83	28.00%	28.00%	28.00%
15	3 -inch meter	181.4	181.4	181.4	232.18	232.18	232.18	232.18	232.18	27.99%	27.99%	27.99%
16	4 -inch meter	302.34	302.34	302.34	386.98	386.98	386.98	386.98	386.98	27.99%	27.99%	27.99%
17	6 -inch meter	604.69	604.69	604.69	773.97	773.97	773.97	773.97	773.97	27.99%	27.99%	27.99%
18	8 -inch meter	967.50	967.50	967.50	1,238.33	1,238.33	1,238.33	1,238.33	1,238.33	27.99%	27.99%	27.99%
	Volumetric-res, ind, OPA, SFR											
19	First 400 Cubic Feet	0.202	0.753	0.372	0.283	1.180	1.180	1.180	1.180	40.10%	56.65%	217.10%
20	Next 6,100 Cubic Feet	3.207	4.131	3.534	4.120	5.017	5.017	5.017	5.017	28.47%	21.44%	41.95%
21	Next 43,500 Cubic Feet	2.015	2.939	2.342	2.530	3.427	3.427	3.427	3.427	25.56%	16.59%	46.31%
22	Next 450,000 Cubic Feet	1.506	2.055	1.674	1.892	2.789	2.789	2.789	2.789	25.63%	35.70%	66.58%
23	Next 1,000,000 Cubic Feet	1.151	1.701	1.320	1.445	2.342	2.342	2.342	2.342	25.54%	37.66%	77.39%
24	All Over 1,500,000 Cubic Feet	0.684	1.233	0.852	0.943	1.840	1.840	1.840	1.840	37.87%	49.20%	115.92%
25	Ft. Oglethorpe; Catoosa;	0.9353			1.194					27.66%		
26	Signal Mountain	0.8977			1.146					27.66%		
27	Walden's Ridge	1.0572			1.350					27.70%		
	Volumetric-commercial											
28	First 400 Cubic Feet	0.201	0.748	0.369	0.283	1.180	1.180	1.180	1.180	40.80%	57.70%	219.68%
29	Next 6,100 Cubic Feet	3.187	4.105	3.512	4.120	5.017	5.017	5.017	5.017	29.28%	22.21%	42.84%
30	Next 43,500 Cubic Feet	2.003	2.921	2.328	2.530	3.427	3.427	3.427	3.427	26.31%	17.31%	47.19%
31	Next 450,000 Cubic Feet	1.497	2.042	1.664	1.892	2.789	2.789	2.789	2.789	26.39%	36.56%	67.58%
32	Next 1,000,000 Cubic Feet	1.144	1.691	1.312	1.445	2.342	2.342	2.342	2.342	26.31%	38.47%	78.48%
33	All Over 1,500,000 Cubic Feet	0.679	1.225	0.846	0.943	1.840	1.840	1.840	1.840	38.88%	50.17%	117.45%
	Private Fire Service											
34	1 - Inch Service	28.34			36.18					27.65%		
35	1 1/2 - Inch Service	63.92			81.60					27.65%		
36	2 - Inch Service	113.68			145.12					27.65%		
37	2 1/2 - Inch Service	173.35			221.29					27.65%		
38	3 - Inch Service	255.53			326.19					27.65%		
39	4 - Inch Service	511.71			653.21					27.65%		
40	6 - Inch Service	1,022.61			1,305.38					27.65%		
41	8 - Inch Service	2,046.95			2,612.98					27.65%		
42	10 - Inch Service	3,070.65			3,919.75					27.65%		
43	12 - Inch Service	4,094.54			5,226.77					27.65%		

			Present				Proposed	
	Suck Creek		Residential	CCF	commercial:		Residential:	commercial:
44	First 1500 gal	2	23.85	meter charge	23.70	First 400 CF	1.180	1.180
45	Next 8000 gal	10.67	4.59	3.444	4.56	Next 6,100 CF	5.017	5.017
46	All over 9500 gal	>12.67	3.44	2.583	3.42	Next 43,500 CF	3.427	3.427
	Lone Oak							
47	First 2000 gal	2.67	32.76	meter charge	32.56	First 400 CF	1.180	1.180
48	All over 2000 gal	>2.67	5.48	4.120	5.46	Next 6,100 CF	5.017	5.017
49						Next 43,500 CF	3.427	3.427

Source:
TAWC Exhibit No.4, Schedule 3.

TENNESSEE-AMERICAN WATER COMPANY

Comparison of Present and CRMA Proposed Rates

Line		Present Rates			CRMA Proposed Rates					Percent Increase		
		Chattanooga	Lookout Mountain	Lakeview	Chattanooga	Lookout Mountain	Lakeview	Lone Oak	Suck Creek	Chattanooga	Lookout Mountain	Lakeview
	Res, Ind, OPA, SFR:											
1	5/8 - inch meter	10.88	12.21	12.21	14.50	16.27	16.27	28.75	19.84	33.24%	33.24%	33.24%
2	3/4 - inch meter	18.28	18.28	18.28	24.36	24.36	24.36	24.36	24.36	33.24%	33.24%	33.24%
3	1 - inch meter	30.41	30.41	30.41	40.52	40.52	40.52	40.52	40.52	33.24%	33.24%	33.24%
4	1 1/2 - inch meter	60.85	60.85	60.85	81.08	81.08	81.08	81.08	81.08	33.24%	33.24%	33.24%
5	2 - inch meter	97.35	97.35	97.35	129.71	129.71	129.71	129.71	129.71	33.24%	33.24%	33.24%
6	3 - inch meter	182.53	182.53	182.53	243.20	243.20	243.20	243.20	243.20	33.24%	33.24%	33.24%
7	4 - inch meter	304.23	304.23	304.23	405.36	405.36	405.36	405.36	405.36	33.24%	33.24%	33.24%
8	6 - inch meter	608.47	608.47	608.47	810.73	810.73	810.73	810.73	810.73	33.24%	33.24%	33.24%
9	8 - inch meter	973.53	973.53	973.53	1,297.13	1,297.13	1,297.13	1,297.13	1,297.13	33.24%	33.24%	33.24%
	Commercial:											
10	5/8 - inch meter	10.81	12.14	12.14	14.40	16.18	16.18	28.75	19.84	33.24%	33.24%	33.24%
11	3/4 - inch meter	18.16	18.16	18.16	24.20	24.20	24.20	24.36	24.36	33.24%	33.24%	33.24%
12	1 - inch meter	30.22	30.22	30.22	40.27	40.27	40.27	40.52	40.52	33.24%	33.24%	33.24%
13	1 1/2 - inch meter	60.47	60.47	60.47	80.57	80.57	80.57	81.08	81.08	33.24%	33.24%	33.24%
14	2 - inch meter	96.74	96.74	96.74	128.90	128.90	128.90	129.71	129.71	33.24%	33.24%	33.24%
15	3 - inch meter	181.4	181.4	181.4	241.70	241.70	241.70	243.20	243.20	33.24%	33.24%	33.24%
16	4 - inch meter	302.34	302.34	302.34	402.84	402.84	402.84	405.36	405.36	33.24%	33.24%	33.24%
17	6 - inch meter	604.69	604.69	604.69	805.69	805.69	805.69	810.73	810.73	33.24%	33.24%	33.24%
18	8 - inch meter	967.50	967.50	967.50	1,289.10	1,289.10	1,289.10	1,297.13	1,297.13	33.24%	33.24%	33.24%
	Volumetric-res, ind, OPA, SFR											
19	First 400 Cubic Feet	0.202	0.753	0.372	0.27	1.00	0.50	0.496	0.496	33.24%	33.24%	33.24%
20	Next 6,100 Cubic Feet	3.207	4.131	3.534	4.27	5.50	4.71	4.709	4.709	33.24%	33.24%	33.24%
21	Next 43,500 Cubic Feet	2.015	2.939	2.342	2.43	3.55	2.83	2.829	2.829	20.81%	20.81%	20.81%
22	Next 450,000 Cubic Feet	1.506	2.055	1.674	1.82	2.48	2.02	2.022	2.022	20.81%	20.81%	20.81%
23	Next 1,000,000 Cubic Feet	1.151	1.701	1.320	1.39	2.05	1.59	1.595	1.595	20.81%	20.81%	20.81%
24	All Over 1,500,000 Cubic Feet	0.684	1.233	0.852	0.83	1.49	1.03	1.029	1.029	20.81%	20.81%	20.81%
25	Ft. Oglethorpe; Catoosa;	0.9353			1.13					20.81%		
26	Signal Mountain	0.8977			1.08					20.81%		
27	Walden's Ridge	1.0572			1.28					20.81%		
	Volumetric-commercial											
28	First 400 Cubic Feet	0.201	0.748	0.369	0.243	0.904	0.446	0.496	0.496	20.81%	20.81%	20.81%
29	Next 6,100 Cubic Feet	3.187	4.105	3.512	3.850	4.959	4.243	4.709	4.709	20.81%	20.81%	20.81%
30	Next 43,500 Cubic Feet	2.003	2.921	2.328	2.420	3.529	2.812	2.829	2.829	20.81%	20.81%	20.81%
31	Next 450,000 Cubic Feet	1.497	2.042	1.664	1.809	2.467	2.010	2.022	2.022	20.81%	20.81%	20.81%
32	Next 1,000,000 Cubic Feet	1.144	1.691	1.312	1.382	2.043	1.585	1.595	1.595	20.81%	20.81%	20.81%
33	All Over 1,500,000 Cubic Feet	0.679	1.225	0.846	0.820	1.480	1.022	1.029	1.029	20.81%	20.81%	20.81%
	Private Fire Service											
34	1 - Inch Service	28.34			34.24					20.81%		
35	1 1/2 - Inch Service	63.92			77.22					20.81%		
36	2 - Inch Service	113.68			137.34					20.81%		
37	2 1/2 - Inch Service	173.35			209.42					20.81%		
38	3 - Inch Service	255.53			308.71					20.81%		
39	4 - Inch Service	511.71			618.20					20.81%		
40	6 - Inch Service	1,022.61			1,235.42					20.81%		
41	8 - Inch Service	2,046.95			2,472.92					20.81%		
42	10 - Inch Service	3,070.65			3,709.65					20.81%		
43	12 - Inch Service	4,094.54			4,946.61					20.81%		

		Present					Proposed	
	Suck Creek		Residential	CCF	commercial:		Residential:	commercial:
44	First 1500 gal	2	23.85	meter charge	23.70	First 400 CF	1.003	0.446
45	Next 8000 gal	10.67	4.59	3.444	4.56	Next 6,100 CF	5.504	4.243
46	All over 9500 gal	>12.67	3.44	2.583	3.42	Next 43,500 CF	3.551	2.812
	Lone Oak							
47	First 2000 gal	2.67	32.76	meter charge	32.56	First 400 CF	1.003	0.446
48	All over 2000 gal	>2.67	5.48	4.120	5.46	Next 6,100 CF	5.504	4.243
49						Next 43,500 CF	3.551	2.812

TENNESSEE-AMERICAN WATER COMPANY

Calculation of Subsidies under TAWC Proposed Cost of Service and TAWC Proposed Rates

Line	Customer Classification	TAWC Proposed Cost of Service, as of December 31, 2011		Pro Forma Revenues Under TAWC Proposed Rates		Subsidy
		Amount	Percent of Total	Amount	Percent of Total	
		(1)	(2)	(3)	(4)	(5) = (1) - (3)
1	Residential	$23,097,581	50.6%	$19,464,079	42.6%	$3,633,502
2	Commercial	12,684,935	27.8%	14,748,735	32.3%	(2,063,800)
3	Industrial	4,299,889	9.4%	4,342,792	9.5%	(42,903)
4	Other Public Authority	3,065,740	6.7%	3,234,849	7.1%	(169,109)
5	Other Water Utilities	1,827,375	4.0%	1,670,526	3.7%	156,849
6	Private Fire Protection	700,988	1.5%	2,214,850	4.8%	(1,513,862)
7	Total Sales of Water	$45,676,508	100.0%	$45,675,831	100.0%	$677

Source:

Direct Testimony of Paul Herbert, Schedule A.

TENNESSEE-AMERICAN WATER COMPANY

TAWC Proposed Increase over Present Rates

Line	Customer Classification	Pro Forma Revenues Under Present Rates		Pro Forma Revenues Under TAWC Proposed Rates		Proposed Increase	
		Amount	Percent of Total	Amount	Percent of Total	Amount	Percent Increase
		(1)	(2)	(3)	(4)	(5)	(6)
1	Residential	$15,243,199	42.7%	$19,464,079	42.6%	$4,220,880	27.7%
2	Commercial	11,534,347	32.2%	14,748,735	32.3%	3,214,388	27.9%
3	Industrial	3,401,964	9.5%	4,342,792	9.5%	940,828	27.7%
4	Other Public Authority	2,556,253	7.1%	3,234,849	7.1%	678,596	26.5%
5	Other Water Utilities	1,308,493	3.7%	1,670,526	3.7%	362,033	27.7%
6	Private Fire Protection	1,735,066	4.8%	2,214,850	4.8%	479,784	27.7%
7	Total Sales of Water	$35,779,322	100.0%	$45,675,831	100.0%	$9,896,509	27.7%

Source:

Direct Testimony of Paul Herbert, Schedule A.

TENNESSEE-AMERICAN WATER COMPANY

Calculation of Subsidies under CRMA Corrected Cost of Service and CRMA Proposed Rates

Line	Customer Classification	CRMA Corrected Cost of Service, as of December 31, 2011		Pro Forma Revenues Under CRMA Proposed Rates		Subsidy
		Amount	Percent of Total	Amount	Percent of Total	
		(1)	(2)	(3)	(4)	(5) = (1) - (3)
1	Residential	$23,206,057	50.8%	$20,288,093	44.4%	$2,917,964
2	Commercial	12,751,315	27.9%	14,324,345	31.4%	(1,573,030)
3	Industrial	4,170,037	9.1%	4,155,718	9.1%	14,319
4	Other Public Authority	3,082,302	6.7%	3,228,949	7.1%	(146,647)
5	Other Water Utilities	1,747,279	3.8%	1,582,304	3.5%	164,975
6	Private Fire Protection	718,087	1.6%	2,096,132	4.6%	(1,378,045)
7	Total Sales of Water	$45,675,077	100.0%	$45,675,541	100.0%	($464)

TENNESSEE-AMERICAN WATER COMPANY

Calculation of Subsidies under TAWC Proposed Cost of Service and CRMA Proposed Rates

Customer Classification	TAWC Proposed Cost of Service, as of December 31, 2011		Pro Forma Revenues Under CRMA Proposed Rates		Subsidy
	Amount	Percent of Total	Amount	Percent of Total	
	(1)	(2)	(3)	(4)	(5) = (1) - (3)
Residential	$23,097,581	50.6%	$20,288,093	44.4%	$2,809,488
Commercial	12,684,935	27.8%	14,324,345	31.4%	(1,639,410)
Industrial	4,299,889	9.4%	4,155,718	9.1%	144,171
Other Public Authority	3,065,740	6.7%	3,228,949	7.1%	(163,209)
Other Water Utilities	1,827,375	4.0%	1,582,304	3.5%	245,071
Private Fire Protection	700,988	1.5%	2,096,132	4.6%	(1,395,144)
Total Sales of Water	$45,676,508	100.0%	$45,675,541	100.0%	$967

TENNESSEE-AMERICAN WATER COMPANY

CRMA Proposed Increase over Present Rates

Customer Classification	Pro Forma Revenues Under Present Rates		Pro Forma Revenues Under CRMA Proposed Rates		Proposed Increase	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent Increase
	(1)	(2)	(3)	(4)	(5)	(6)
Residential	$15,243,199	42.7%	$20,288,093	44.4%	$5,044,894	33.1%
Commercial	11,534,347	32.2%	14,324,345	31.4%	2,789,998	24.2%
Industrial	3,401,964	9.5%	4,155,718	9.1%	753,754	22.2%
Other Public Authority	2,556,253	7.1%	3,228,949	7.1%	672,696	26.3%
Other Water Utilities	1,308,493	3.7%	1,582,304	3.5%	273,811	20.9%
Private Fire Protection	1,735,066	4.8%	2,096,132	4.6%	361,066	20.8%
Total Sales of Water	$35,779,322	100.0%	$45,675,541	100.0%	$9,896,219	27.7%

BEFORE THE TENNESSEE REGULATORY AUTHORITY
NASHVILLE, TENNESSEE

IN RE:	*	
	*	
PETITION OF TENNESSEE AMERICAN WATER COMPANY FOR A GENERAL RATE INCREASE	*	**DOCKET NO. 10-00189**

TENNESSEE REGULATORY AUTHORITY

STATE OF MISSOURI

COUNTY OF SAINT LOUIS

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared, **Michael Gorman**, who, being by me first duly sworn deposed and said that:

He is appearing as a witness on behalf of the Chattanooga Regional Manufacturers Association ("CRMA") before the Tennessee Regulatory Authority and, if present before the Authority and duly sworn, his testimony would be as that set forth in the annexed consisting of 30 pages, plus the appendix, and schedules or Exhibits MPG-1 to MPG-13.

Michael Gorman
Brubaker & Associates, Inc.

SWORN TO AND SUBSCRIBED
BEFORE ME THIS 5TH DAY OF
JANUARY, 2011.

NOTARY PUBLIC
My Commission Expires: May 5, 2013

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