

**IN THE TENNESSEE REGULATORY AUTHORITY  
NASHVILLE, TENNESSEE**

**IN RE:** )  
 )  
**PETITION OF TENNESSEE** )  
**AMERICAN WATER COMPANY TO** )  
**CHANGE AND INCREASE CERTAIN** )  
**RATES AND CHARGES SO AS TO** )  
**PERMIT IT TO EARN A FAIR AND** )  
**ADEQUATE RATE OF RETURN ON** )  
**ITS PROPERTY USED AND USEFUL IN** )  
**FURNISHING WATER SERVICE TO** )  
**ITS CUSTOMERS** )

**DOCKET NO. 08-00039**

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**CONSUMER ADVOCATE AND PROTECTION DIVISION'S POST-HEARING BRIEF**

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Robert E. Cooper, Jr., Attorney General and Reporter for the State of Tennessee, by and through the Consumer Advocate and Protection Division of the Office of the Attorney General (“Consumer Advocate”), hereby respectfully submits its post-hearing brief in the above-styled matter.

**I.     INTRODUCTION**

On March 14, 2008, Tennessee American Water Company (“TAWC” or “Tennessee American”) filed a petition to increase customer rates by more than 20%.<sup>1</sup> TAWC’s rate increase proposal follows closely on the heels of last year’s rate increase of nearly 13% that the Authority

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<sup>1</sup> Buckner Direct at 69.

authorized in TRA Docket 06-00290.<sup>2</sup> Furthermore, if the Authority awards an increase in this docket, it will mark the fourth rate hike in five years for TAWC's customers.<sup>3</sup>

The people in Chattanooga already pay the highest water rates among Tennessee's major cities.<sup>4</sup> And after careful investigation and analysis of TAWC's rate increase proposal in this case, the Consumer Advocate concludes that there is no just or reasonable basis for requiring Chattanoogaans to pay even more for their water. Indeed, for the reasons explained more fully below, the Consumer Advocate maintains that TAWC's water rates should be reduced by \$1.5 million.<sup>5</sup> A financial overview of the Consumer Advocate's position is presented in the attached Exhibit 1.<sup>6</sup>

## **II. CRITERIA FOR ESTABLISHING PUBLIC UTILITY RATES**

Under Tennessee law, the Authority has the power to fix just and reasonable rates.<sup>7</sup> When any public utility seeks to increase an existing rate the utility has the burden of proof to show such an increase is just and reasonable.<sup>8</sup>

Just and reasonable rates should provide a utility with the opportunity to earn a rate of return on used and useful property commensurate with the returns on alternative investments with similar

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<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> Buckner Direct at 72.

<sup>5</sup> See attached Exhibit 1, Page 1 of 9, Line 8.

<sup>6</sup> The attached Exhibit 1 is the same financial overview the Consumer Advocate filed and served on August 15, 2008; it is attached here for easy reference and convenience.

<sup>7</sup> Tenn. Code Ann. § 65-5-101(a).

<sup>8</sup> Tenn. Code Ann. § 65-5-103(a).

risks.<sup>9</sup> As a general rule, public utility commissions such as the Authority examine investments by a utility to determine whether such investments were “prudent.”<sup>10</sup>

In prior cases, the TRA has stated that it considers petitions for a rate increase, filed pursuant to Tenn. Code Ann. § 65-5-203 (now § 65-5-103(a)), in light of the following criteria:

1. The investment or rate base upon which the utility should be permitted to earn a fair rate of return;
2. The proper level of revenues for the utility;
3. The proper level of expenses for the utility; and
4. The rate of return the utility should earn.<sup>11</sup>

The Authority has further stated that it “is obligated to balance the interests of the utilities subject to its jurisdiction with the interests of Tennessee consumers, *i.e.*, it is obligated to fix just and reasonable rates.”<sup>12</sup>

In determining rates, the Authority should also ensure that expenses and costs charged to consumers are not so high as to constitute, in effect, capital contributions to the utility:

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<sup>9</sup> *Bluefield Water Works & Improvement Co. v. West Virginia Public Service Commission*, 262 U.S. 679, 692-3 (1923); *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591 (1944).

<sup>10</sup> *Missouri ex rel. Southwestern Bell Telephone Co. v. Public Serv. Comm’n of Mo.*, 262 U.S. 276, 291 (1923); *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 309 (1989).

<sup>11</sup> *In Re: Petition Of Tennessee American Water Company To Change And Increase Certain Rates And Charges So As To Permit It To Earn A Fair And Adequate Rate Of Return On Its Property Used And Useful In Furnishing Water Service To Its Customers*, TRA Order, Docket 06-00290, at 20 (June 10, 2008).

<sup>12</sup> *Id.*; see also *Tennessee Cable Television Ass’n v. Tennessee Public Service Comm’n*, 844 S.W.2d 151, 159 (Tenn. Ct. App. 1992) (rates should take into consideration the interests of both the consumer and the utility).

But if the amounts charged to operating expenses and credited to the account for depreciation reserve are excessive, to that extent subscribers for the telephone service are required to provide, in effect, capital contributions, not to make good losses incurred by the utility in the service rendered and thus to keep its investment unimpaired, but to secure additional plant and equipment upon which the utility expects a return.<sup>13</sup>

Finally, Tennessee law prohibits any utility from making unjust discriminatory charges or unreasonable preferences in its charges.<sup>14</sup>

### **III. TEST PERIOD AND ATTRITION PERIOD**

Neither the Authority nor the intervening parties are confined by law or regulatory practice to accepting the test year proposed by the regulated utility seeking a rate increase. Tennessee courts have never required the Authority to use a specific test period methodology for setting rates; indeed the courts have stated repeatedly that the Authority has the discretion to choose its own test period.<sup>15</sup>

The only limit placed on a ratemaking body is the statutory requirement that rates be just and reasonable. Rates therefore need not be determined using definite rules or precise formulas.<sup>16</sup> Thus, the TRA is not bound by any specific means by which rates are set so long as the end result produces just and reasonable rates.

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<sup>13</sup> *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591, 607 n. 10 (1944).

<sup>14</sup> Tenn. Code Ann. § 65-4-122.

<sup>15</sup> *CF Industries v. T.P.S.C.* 599 S.W. 2d 536, 542 (Tenn.1980); *Powell Telephone v. T.P.S.C.*, 660 S.W.2d 44, 46 (Tenn.1983); *Tennessee Cable Tel. v. T.P.S.C.* 844 S.W. 2d 151, 159 (Tenn.Ct.App. 1992) (cert.denied); and *AARP v. T.P.S.C.*, 896 S.W. 2d 127, 133 (Tenn.Ct.App.1994) (cert.denied).

<sup>16</sup> *Tennessee Cable Tel. v. T.P.S.C.* 844 S.W. 2d 151, 159 (Tenn.Ct.App. 1992) (cert.denied).

In setting rates, the TRA has unfettered discretion to select the test year period.<sup>17</sup> A “test year” is a measure of a utility’s financial operations and investment over a specific twelve month period. It is the “raw material” for developing an attrition year measure of the utility’s financial operations and investment (that is, the utility’s Rate Base, Operations and Maintenance Expense, Depreciation Expense, and Taxes). Therefore, as pointed out by Mr. Buckner in his Direct Testimony, the selection of the test year is quite important:

The selection of the timing of the test year may be the most significant single factor in the rate-making process. The more outdated the test year levels of operations, the more critical is the need for significant restatement to produce representative levels of future conditions.<sup>18</sup>

Thus, it is essential that a test year contain and/or be updated with the most accurate and current information available. The test year is used to calculate and forecast the attrition year. An “attrition year,” also known as a forecast period, is the “finished product” and is the chief determinant in whether a revenue deficiency or surplus exists such that rates must be adjusted. The attrition year can also be viewed as the first year during which the TRA’s rate order will be applied. In this proceeding, both the Consumer Advocate and the company have forecasted the same attrition year period ending in August of 2009.

Tennessee American has proposed an historical test year period ending in November 2007. In this docket, as it commonly has done in others, the Consumer Advocate has applied a more up-to-date historic test year, ending in March 2008. The use of an up-to-date test year is essential to test

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<sup>17</sup> See Order, Docket 06-000187 (November 27, 2008), pp.5-6 for a clear example of the Authority’s conclusions as to its discretion in selecting a test year period. See also *Powell Telephone v. T.P.S.C.*, 660 S.W.2d 44, 46 (Tenn.1983) (citing *CF Industries v. T.P.S.C.*, 599 S.W. 2d 536, 542 (Tenn.1980)).

<sup>18</sup> Buckner Direct at 17 (citing *Accounting for Public Utilities*, Hahne and Aliff §7.03).

the veracity of the company's proposed rate increase. TAWC complains about the Consumer Advocate's use of a more up-to-date historical test year; however, what is lost amid TAWC's arguments is the fact that the goal of this proceeding is not to set a test year agreeable to all the parties, but rather for the Authority to determine for itself the revenue adjustment required for the attrition year.

The Consumer Advocate's methodology of applying a more recent test year has the advantage of providing more accurate and current information for the forecast of the attrition year. This Authority has commonly adopted the Consumer Advocate's approach, at least in part, in final decisions setting rates as a matter of accepted practice before the Authority. Indeed, the final decision of the TRA in TAWC's last rate case explicitly adopts portions of the Consumer Advocate's attrition period forecast, based upon the Consumer Advocate's historic test year which was more current than that of TAWC -- and in one instance the Authority specifically did so on the ground that the Consumer Advocate's forecast was "based on the most current information available."<sup>19</sup>

TAWC has alleged that the Consumer Advocate's test year is not properly normalized. Specifically, Tennessee American has claimed that Mr. Buckner's more current test year does not take into account known and measurable changes due to Mr. Buckner's application of an inflation factor to grow expenses for the attrition year. Tennessee American's criticism is at odds with

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<sup>19</sup> TRA Docket 06-00290, *Order* (June 10, 2008), p. 40.

application of a compound inflation factor in TAWC's own test year for growing expenses in much the same manner as Mr. Buckner did.<sup>20</sup>

Furthermore, TAWC has failed to properly normalize its own test period in some cases. For instance, as explained in Section V.A.1, *infra*, the expenses associated with employee vacancies (such as additional overtime, contract labor and employee recruiting costs) were not normalized even though TAWC forecasted salaries and wages for all 114 of its requested employee positions. Another example is TAWC's failure to normalize engineering costs from outside vendors such as Lamar Dunn, Arcadis, and CRW, even though TAWC has requested an engineer be added to its authorized employee positions. Moreover, TAWC used multiple test periods to compute salaries and wages, group insurance, pensions, chemicals, fuel and power, and construction work in progress. Again, the Tennessee American's use of multiple test year periods in this case is at odds with its criticisms of the Consumer Advocate in this case and prior dockets.

Accordingly, the Authority should accept the Consumer Advocate's use of a test year ended March 2008 for purposes of forecasting the attrition year ending August 2009.

#### **IV. ATTRITION YEAR REVENUE AT PRESENT RATES**

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<sup>20</sup> For example, Tennessee American grew its Bank Service test period amount of \$247,959 by its compound inflation rate of 3.94% (TN-TRA-02-Q001-CUSTOMER ACCOUNTING-SUMMARY) page 1 of 2; Telephone expense of \$86,915 was grown by TAWC's compound inflation rate (TN-TRA-02-Q001-GENERAL OFFICE EXPENSE-SUMMARY) page 1 of 1; TAWC's test period account 620000 balance of \$143,462 was grown by its compound inflation rate (TN-TRA-02-Q001-OTHER MAINTENANCE EXPENSE SUMMARY) page 1 of 1; T&D Lines, Misc. T&D, Auditing, Legal Services, Other Services Injuries and Damages, Other Welfare test year amounts totaling \$575,971 were grown by TAWC's compounded inflation rate (TN-TRA-02-Q001-MISCELLANEOUS EXPENSES - SUMMARY) pages 7-8 of 9.



TAWC is projecting attrition year revenue at present rates of \$37.1 million,<sup>21</sup> but the Consumer Advocate asserts that TAWC should collect \$39.5 million from its ratepayers over the same period, even if rates are not increased at all.<sup>22</sup> There are essentially two issues that divide TAWC and the Consumer Advocate in their forecasting of revenue at present rates for the attrition year: (1) the appropriate amount of volumes that TAWC will sell in the attrition year to its residential and commercial customers, and (2) the parties' different treatment of the Walden's Ridge special contract.

**A. THE AUTHORITY SHOULD REJECT TAWC'S REVENUE FORECAST IN FAVOR OF THE CONSUMER ADVOCATE'S MORE REASONABLE FORECAST.**

**1. TAWC's Revenue Forecast Is Based On A Flawed Methodology That Projected Unreasonably Low Volumes Of Usage For The Attrition Year.**

TAWC's forecast of revenue at present rates does not stand the test of reasonableness. In particular, the Authority should closely examine the weather normalization adjustment ("WNA") proposed by TAWC because it is unreliable and produces an unrealistic result that is out-of-step with actual customer growth and actual water consumption by Tennessee American's own customers in recent years.

**a. TAWC's revenue forecast, based on its WNA, produces an unrealistic result.**

TAWC's use of a flawed WNA model to project attrition year revenue has produced results that are inconsistent with economic reality and common sense. In this case, TAWC is projecting to sell less water to residential customers in the attrition year ending August 2009 than it actually

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<sup>21</sup> TAWC Exhibit No. 2, Schedule 2, p. 1 of 1 (dated 8/18/08).

<sup>22</sup> See attached Exhibit 1, Page 3 of 9, Line 1.

sold in 2004; and it is projecting to sell only about the same amount of water to commercial customers during the attrition year as it actually sold in 2004.<sup>23</sup> According to TAWC witness Spitznagel, 2004 was the fourth wettest year out of the 113-year period from 1895 through 2007.<sup>24</sup> Because 2004 was an extraordinarily wet year, the volumes sold by Tennessee American in 2004 could not be abnormally high due to dry weather conditions. In addition, Tennessee American had about 3,000 fewer customers in 2004 than it will have in the attrition year.<sup>25</sup> It defies economic reality for TAWC to forecast less residential and commercial water consumption in the coming year than it actually sold over four years previous during abnormally wet conditions and with thousands fewer customers. Moreover, the Consumer Advocate asserts that TAWC's application of the WNA to the attrition year in this case makes no sense in light of its application in prior cases. For instance, in last year's rate case, TAWC claimed that its WNA, which was then based on the very model that it recommends in this docket, had a negative revenue impact of only \$221,000.<sup>26</sup> After supposedly updating the model to include only a slightly different 30-year weather picture, TAWC now claims that the negative revenue impact of its WNA is \$1.36 million.<sup>27</sup> Before the Authority accepts a reduction of \$1.36 million in revenue that TAWC actually collected from customers, it should answer the question of how a WNA that is designed to normalize volumes based primarily

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<sup>23</sup> See attached Exhibit 2.

<sup>24</sup> Spitznagel Rebuttal at ELS Rebuttal Appendix A, p. 3.

<sup>25</sup> See attached Exhibit 2.

<sup>26</sup> Tr.Vol.18 at 1767.

<sup>27</sup> Tr.Vol.18 at 1767.

on 30 years of rolling weather data can have over six times the impact on revenue in this year's case than it did in last year's.

**b. TAWC's WNA model is based on the Palmer Drought Severity Index, a methodology that has been criticized by scientific peers.**

The sole basis for Dr. Spitznagel's calculations for a WNA for the Chattanooga area, and hence the sole basis for TAWC's downward revenue adjustment, is data from the Palmer Drought Severity Index ("PDSI"). It is worth noting that no other inputs from other weather related indexes are used in the calculation of "normal weather" or that any indexes not related to the Palmer Index family, such as the Standard Participation Index, were even tested by Dr. Spitznagel.<sup>28</sup> As will be shown below, the use of the PDSI is not supported by the evidence in this case. Accordingly, the TRA should reject the Spitznagel PDSI-based WNA and the downward revenue forecast which is based upon it.

Dr. Spitznagel's method of using a thirty year average of PDSI information in establishing the base element of "normal weather" in his regression model is not endorsed or accepted by the National Oceanic and Atmospheric Administration ("NOAA"), the source of his data.<sup>29</sup> The PDSI has been the subject of several academic criticisms.<sup>30</sup> The National Academy of Sciences has noted in a recent publication that the PDSI may have significant limitations in capturing the effects of dry weather on water use, specifically in the context of regression models measuring water usage such

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<sup>28</sup> Tr. Vol. 4 at 459-460.

<sup>29</sup> Tr. Vol. 4 at 475.

<sup>30</sup> For purposes of this brief, the Consumer Advocate has confined its presentation to those publications which were employed and discussed at the hearing on August 19, 2008, and subsequently incorporated into the record via the *Notice of Administrative Notice* by the Authority on August 29, 2008.

as that employed in this proceeding by Dr. Spitznagel.<sup>31</sup> Further, the PDSI has been found to be inconsistent on a national basis as a measure of dryness.<sup>32</sup>

The PDSI itself is not a simple collection or index of raw data, but rather a complex model based upon a series of assumptions and rules from which the final data is derived. According to Dr. Spitznagel, the algorithm of PDSI is difficult “to figure out exactly”.<sup>33</sup> The Consumer Advocate submits that this is because of the arbitrary rules applied in quantifying the multiple properties used to establish values in the PDSI.<sup>34</sup> As such the methodology used to normalize the values of the PDSI is based on very limited comparisons and is only weakly justified on a physical or statistical basis.<sup>35</sup>

The assumptions and rules employed have been subject to wide criticism from peers in the field of drought indexes. The method in which the PDSI assigns levels of drought severity classes is considered arbitrary.<sup>36</sup> The PDSI is not accurate in the conventional sense in determining when a drought begins or ends.<sup>37</sup> The PDSI does not relate to specific impacts of droughts.<sup>38</sup> The

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<sup>31</sup> Tr. Vol. 4 at 463-464; *Notice of Administrative Notice* (August 29, 2008) at Committee on USGC Water Resources Research, Water Science and Technology Board, Division on Earth and Life Studies, National Research Council, *Estimating Water Use in the United States* (2002), Chapter 6: Regression Models of Water Use, p. 104.

<sup>32</sup> *Id.*

<sup>33</sup> Tr. Vol. 4 at 460.

<sup>34</sup> *Notice of Administrative Notice* (August 29, 2008) at William M. Alley, *The Palmer Drought Severity Index: Limitations and Assumptions*, 23 *Journal of Climate and Applied Meteorology* 1100 (1984).

<sup>35</sup> *Id.*, 1109.

<sup>36</sup> *Id.*, 1105.

<sup>37</sup> *Id.*, 1102-1104.

<sup>38</sup> *Id.*, 1108.

economic consequences of the driest year in one area is assumed to be the same in all others while the complexity and influence of water usage is ignored.<sup>39</sup>

Another problem specifically identified by other scientists is how the PDSI considers “evapotranspiration.” Evapotranspiration is a term used to describe the sum of evaporation and plant transpiration as an element in the water cycle. In other words, it is the movement of water into the air through evaporation and loss of water through vapor passed from the leaves of plants. The PDSI addresses evapotranspiration in relation to soil moisture by dividing the soil into two layers to simulate soil moisture with the arbitrary assumption that the rate of evapotranspiration occurs at a potential rate for the entire month.<sup>40</sup>

As a water balance model, the PDSI assumes that both layers of soil are independent of seasonal or annual changes in vegetation cover and root development.<sup>41</sup> What is particularly relevant to this proceeding is that the PDSI was developed based on measurements taken in central Iowa and western Kansas.<sup>42</sup> Thus, the index does not have any built-in mechanism to consider the specific type of soil, soil layers, soil texture, and vegetation as well as the rate of evapotranspiration and climatic conditions in the Chattanooga area. In reality, the true relationship between actual and potential evapotranspiration will vary when considering these specific site characteristics which the PDSI does not address.<sup>43</sup>

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<sup>39</sup> *Id.*, 1102.

<sup>40</sup> *Id.*, 1105

<sup>41</sup> *Id.*, 1104

<sup>42</sup> *Id.*, 1102

<sup>43</sup> *Id.*, 1105

According to the National Academy of Sciences, the accuracy of weather adjustments depends upon the length of the time interval used in data averaging.<sup>44</sup> The best results are obtained by modeling time-series data on daily or weekly water use.<sup>45</sup> The use of monthly data in terms of the relationship between water-use and precipitation can be masked and produce a misleading correlation.<sup>46</sup> For example, a relatively dry month could end with substantially higher than normal precipitation concentrated in the last two days of the month. Water use during that month would be higher than normal because of the predominantly dry conditions, but heavy precipitation in the last days of the month would indicate a misleading correlation between water use and precipitation. When a similar hypothetical was discussed during cross-examination, Dr. Spitznagel assumed that the PSDI data would accurately account for such a situation in that the PDSI would account for “run-off” or water which the soil cannot absorb:

**Mr. McGehee:** In measuring PDSI for a month —

**Dr. Spitznagel:** Right.

**Mr. McGehee:** -- can't monthly data be masked or at least reveal a correlation where there's none? Say, for example, if it rains for 26 days -- or no, it doesn't rain for 26 days, dry for 26 days, and the last few days of the month it rains ten inches. The Palmer Drought Severity Index might show that it's a wetter month when actually most of the month had been dry.

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<sup>44</sup> Tr. Vol. 4 at 472-473; *Notice of Administrative Notice* (August 29, 2008) at Committee on USGC Water Resources Research, Water Science and Technology Board, Division on Earth and Life Studies, National Research Council, *Estimating Water Use in the United States* (2002), Chapter 6: Regression Models of Water Use, p. 103.

<sup>45</sup> *Id.*

<sup>46</sup> *Id.*

**Dr. Spitznagel:** No, it wouldn't because the calculation -- part of the calculation of the PDSI is the amount of water that comes all at once that can't be absorbed into the soil.<sup>47</sup>

However, among the scientific criticisms of the PDSI is how it attempts to measure runoff. Specifically, the PDSI assumes runoff does not occur until the soil moisture capacity of both the upper and lower layers of soil are filled or charged.<sup>48</sup> Thus, the rules of the PDSI dictate runoff would only occur if both layers of soil are saturated. Given the arbitrary and constant rate of evapotranspiration assigned by the PDSI throughout a month, any correlation to actual runoff, soil moisture, and evapotranspiration breaks down. Such flawed methodology may explain Mr. Charles King's observations of anomalies in the results of Dr. Spitznagel's approach, such as the finding that the month of August, which is typically the second hottest month of year, inexplicably ranks behind September in terms of water usage under Dr. Spitznagel's model.<sup>49</sup>

In terms of a standard to measure water usage, the PDSI is not so much a tool of measurement but rather of speculation. It is important to consider the results of the WNA, not only in this case but also the track record of Dr. Spitznagel's WNA methodology since 2003 when it was adopted. It is also particularly relevant to take into account the lack of efforts to test the veracity of predictions of lower water usage against actual water usage over the course of the specific years it has been in place in this state and in others.<sup>50</sup>

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<sup>47</sup> Tr Vol. 4 at 472-473, lines 19-25, 1-7 respectively.

<sup>48</sup> *Notice of Administrative Notice* (August 29, 2008) at William M. Alley, *The Palmer Drought Severity Index: Limitations and Assumptions*, 23 *Journal of Climate and Applied Meteorology* 1100 (1984), 1101.

<sup>49</sup> King Direct at 14-16.

<sup>50</sup> Tr. Vol. 4 at 501-507.

**2. The Consumer Advocate's Revenue Forecast For The Attrition Year Should Be Adopted Because It Reasonably Reflects: (1) The Varying Weather Conditions In Chattanooga Over Recent Years; (2) The Water Conservation Efforts of TAWC Customers Over Recent Years; And (3) Anticipated Customer Growth.**

The Consumer Advocate submits that its revenue forecast at present rates should be adopted in this case because it more reasonably reflects the amount TAWC should actually collect from its customers during the attrition year. As explained below, the Consumer Advocate's revenue forecast reflects, among other things, varying weather conditions, actual patterns of water conservation by consumers, as well as realistic projections of customer growth, all of which should drive the revenue analysis in this case.

Much has been said by TAWC about the dry weather conditions in Chattanooga during 2007, and TAWC has attempted to paint the Consumer Advocate's attrition year forecast as hinging on the repeat of those very dry conditions during the attrition year. Such is not the case. The Consumer Advocate's forecast is based primarily on examination of actual water consumption data from August 2003 through March 2008 -- a 56-month period. Moreover, the Consumer Advocate would note that its revenue forecast compares favorably with the water consumption analysis performed by Mr. Michael Gorman, witness for the Chattanooga Manufacturers Association ("CMA"), specifically Mr. Gorman's analysis of Tennessee American's water consumption data over the five years from 2003 through 2007. Based on the actual data obtained from TAWC for Chattanooga, as opposed to the esoteric assumptions of TAWC's WNA model, Mr. Gorman computed the average consumption of a Tennessee American residential customer during the period 2003 through 2007, as well as the average consumption of a Tennessee American commercial customer for this same



period.<sup>51</sup> Although TAWC argues that 30 years of data suggests that its per-customer water consumption is declining, Mr. Gorman testified that “the data clearly indicates that the downward trend that has been available over long periods of time is starting to subside. It’s evident from a review of data over the last five years.”<sup>52</sup> Mr. Gorman testified further that water usage by TAWC’s customers in the last five years was more level than in prior years.<sup>53</sup>

It is also important to note Mr. Gorman’s five-year averages reflect the actual consumption patterns of Tennessee American’s residential and commercial customers from 2003 through 2007, which quite obviously are based in reality on the actual weather conditions experienced during those years, as well as the actual water conservation efforts taken by consumers during those years. Examination of the weather data submitted by TAWC witness Spitznagel reveals the following for those same years: 2003 was the wettest year on record out of the 113 years from 1895 through 2007; 2004 was the 4th wettest year out of 113 years; 2005 was the 18th wettest year out of 113 years; 2006 was the 37th wettest year out of 113 years; and 2007 was the 4th driest year out of 113 years.<sup>54</sup> So the five-year averages of the actual amount of water consumed by Tennessee American’s residential and commercial customers are based on their actual usage from three extraordinarily wet years (2003 through 2005), one wet year (2006), and one extraordinarily dry year (2007), according to TAWC. It therefore cannot be said that Mr. Gorman’s averages are materially influenced by abnormally dry weather conditions.

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<sup>51</sup> Gorman Direct at 20; Gorman Direct at Exhibit MPG-7, p. 6 of 6.

<sup>52</sup> Tr.Vol.22 at 2182.

<sup>53</sup> Tr.Vol.22 at 2185.

<sup>54</sup> Spitznagel Rebuttal at ELS Rebuttal, Appendix A, pp. 1-3.

While the Consumer Advocate did not employ the five-year average methodology to forecast its attrition year volumes, the Consumer Advocate's attrition year forecast closely matches the five-year average of water consumed by Tennessee American's residential and commercial customers. In fact, the Consumer Advocate's attrition year volumes almost perfectly match Mr. Gorman's five-year average for residential customers (100.58% of the five-year residential average) and has a very high degree of correlation to Mr. Gorman's five-year average for commercial customers (102.59% of the five-year commercial average).<sup>55</sup> Accordingly, the end result of the Consumer Advocate's forecast is nearly the same as if this five-year averaging methodology had been used.

Moreover, other state jurisdictions normalize water consumption for weather and conservation by averaging the actual consumption over recent multi-year periods, as Mr. Gorman did in this case. Perhaps the best and most recently-released explanation of this type of methodology is by Connecticut's public utility commission, the Department of Utility Control:

For more than a decade, the Department has found it reasonable to apply a weather normalization adjustment as a way to "normalize" test year consumption for the residential, commercial and public authority customer classes. Its use has served as a means to set appropriate pro forma levels of consumption for those customer classes.

The methodology generally adopted by the Department takes the following steps. For each of the residential, commercial and public authority customer classes, total annual consumption is divided by the year-end customer count to arrive at the average consumption per customer for that year. This is done for each year of the most recent multi-year time period. Next, the average consumption per customer for each year are added up, and then divided by the number of years in the multi-year time period to determine the average consumption per customer for that time period. This represents the average consumption per customer for a "normal" year. Then, the average consumption per customer for the "normal" year is compared against the test year average to arrive at a weather normalization factor, using the following formula:  $F = (N / T) - 1$ , where: F represents the weather normalization factor; N represents the average consumption for the "normal" year; and T represents the

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<sup>55</sup> See attached Exhibit 3.

average consumption for the test year.

Test year consumption (adjusted for annualizations and customer growth) is then multiplied by the resulting weather normalization factor to calculate the consumption adjustment for weather normalization. When a company . . . has multiple consumption rate blocks, the Department has generally accepted that this consumption adjustment would occur at the first rate block rather than being spread proportionately.

[The Company] has suggested that the term “weather normalization” may be a misnomer. In the Company's view, such an adjustment not only statistically captures variations attributable to weather, but also other “variables that impact consumption amounts over time, including . . . conservation and changing customer base demographics.” The Department does not disagree. Indeed, the Department has previously recognized that the weather normalization adjustment also takes into account variables other than weather. As a recent instance, in the December 12, 2007 Decision for Docket No. 07-05-19, Application of Aquarion Water Company of Connecticut for Amended Water Service Rate Schedules (2007 Aquarion Decision), at pages 27-29, the Department chose to maintain use of its own methodology (rather than the one advocated by Aquarion Water Company of Connecticut's consultant) in part due to shared concerns with the OCC that variables other than conservation (including type of housing, household size, lifestyle and saturation of water-using appliances) must also be taken into account. The use of a weather normalization adjustment acknowledges that yearly variations in consumption levels do occur. While other variables are involved, the Department believes that these variations are largely due to weather-related use.

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Whenever possible, the Department attempts to obtain a six-year period of data. The fact that two recent rate cases have resulted in the use of a period less than five years should not be construed to mean that a six-year period is no longer the norm. Rather, it is merely an indication that, on a case-by-case basis, the resulting values have persuaded the Department to allow use of a shorter period. In the Decision dated November 28, 2006, in Docket No. 06-05-10, Application of Birmingham Utilities, Inc. to Increase Its Rates (2006 Birmingham Decision), at page 15, use of a three-year average was found reasonable for the residential class. In the 2007 Aquarion Decision, at page 31, use of a four-year average was allowed for the residential, commercial and public authority classes in all divisions, and the public authority class in the Northern Division was excluded.<sup>56</sup>

Unlike the methodology proposed by TAWC in this case -- which attempts to correlate water consumption to the level of assumed moisture through a series of complex regression analyses -- the

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<sup>56</sup> *In re: Application of the Torrington Water Company for Amendment of Rate Schedule*, Case 08-03-19, 2008 WL 3846518, Sec. II.D.2 (Conn. D.P.U.C. Aug. 13, 2008).

multi-year averaging approach to normalization of water consumption is comprehensible and straightforward in its application, and it reflects the actual water consumption patterns of the utility's own customers in light of weather conditions, conservation efforts, and other important factors, such as changing neighborhoods and demographics. As stated previously and as demonstrated in the attached exhibit, application of a five-year averaging methodology, similar to the one described above, would result in an attrition year revenue forecast that is comparable to the Consumer Advocate's forecast in this case.<sup>57</sup> Accordingly, despite the arguments of TAWC, the Consumer Advocate's attrition year forecast of revenue does not hinge on the repeat of the dry conditions experienced during 2007. Rather, the Consumer Advocate's forecast is supported by, and tracks very closely to, a five-year average of consumption by TAWC's customers computed from four years of wet conditions, with only one dry year.

In last year's rate case, TAWC understated its revenue forecast for the attrition year that ended February 2008 by more than \$1 million, even in light of a much smaller WNA amount than the one proposed in this case.<sup>58</sup> For the reasons stated above, the Consumer Advocate is convinced the proof establishes that TAWC's revenue forecast is significantly understated again this year. The Consumer Advocate, therefore, urges the Authority to reject TAWC's revenue forecast and adopt the Consumer Advocate's forecast.

**B. THE WALDEN'S RIDGE OPERATIONS SHOULD BE INCLUDED IN THE ATTRITION YEAR FORECAST IN THIS CASE.**

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<sup>57</sup> See attached Exhibit 3.

<sup>58</sup> Buckner Direct at 33; See attached Exhibit 4.

TAWC provides wholesale water service to four water utilities that resell the water to their own customers -- Catoosa County, Fort Oglethorpe, Signal Mountain, and Walden's Ridge.<sup>59</sup> All of these operations have been included in TAWC's attrition year forecast, except for Walden's Ridge.<sup>60</sup> For the reasons set forth below, the Consumer Advocate submits that Walden's Ridge should also be included in the attrition year forecast for ratemaking purposes. The Consumer Advocate, therefore, has included the revenues, expenses, and rate base amounts for providing wholesale water service to Walden's Ridge in its attrition year forecast in this case.<sup>61</sup>

TAWC witness Sheila Miller acknowledged, as she must, that this Authority has regulatory control over the rates that TAWC charges Walden's Ridge for wholesale water service.<sup>62</sup> TAWC, however, excluded its Walden's Ridge operations from this case because, according to TAWC's interpretation of its special contract with Walden's Ridge, TAWC is "not able to change their rate for three years from the date they took service. So they will not be eligible for a rate increase until

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<sup>59</sup> Tr. Vol.4 at 574.

<sup>60</sup> Tr. Vol.4 at 574.

<sup>61</sup> The Consumer Advocate would note that, as reflected in the attached Exhibit 5, TAWC has provided data responses that have resulted in three different calculations for the amount of operations and maintenance expense attributable to Walden's Ridge. Because the Consumer Advocate never excluded Walden's Ridge from its case, it does not need to adjust its operations and maintenance expense for forecasting purposes. However, if the Authority decides to include Walden's Ridge in this case but does not accept the Consumer Advocate's operations and maintenance expense for Walden's Ridge, then only the amount of Walden's Ridge expenses that TAWC originally reported as excluded from TAWC's test period should be added back for the Authority's test period and forecasting analyses. If an amount greater than the amount originally excluded from TAWC's test period for Walden's Ridge expenses is added back, then the test period would be overstated due to the double counting of some of the expenses attributable to Walden's Ridge.

<sup>62</sup> Tr. Vol.4 at 574-575.

approximately March 2009.”<sup>63</sup> The Consumer Advocate asserts that the mere existence of TAWC’s special contract with Walden’s Ridge is not a valid reason for excluding Walden’s Ridge from this case.

First, the Consumer Advocate asserts that the Authority has the power to change the rate that TAWC charges Walden’s Ridge for wholesale water service, the special contract between the parties notwithstanding. In other words, the Authority has regulatory power over the contract.<sup>64</sup> Indeed, the Authority has ordered rate designs in prior cases that included an adjustment to the rate set by special contract between the utility and its customer. In the 1996 Nashville Gas Company rate case, for example, the Authority ordered the following rate design:

After careful consideration of the testimony and exhibits of the parties, the Authority finds that the rate increase approved herein should be spread equally to all customers. It is the intent of the Authority to spread this increase to all ratepayers, including interruptible Sales customers, Transportation customers, and Special Contract customers, in order to minimize the overall impact of this rate change.<sup>65</sup>

The Court of Appeals affirmed the Authority’s rate design order.<sup>66</sup> And in this case, the special contract between TAWC and Walden’s Ridge specifically recognizes, as it must, the Authority’s power over the contract; Section 9 of the contract states: “Service provided hereunder will be pursuant to the rules and regulations of the TRA, as may be changed from time to time during the

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<sup>63</sup> Tr.Vol.4 at 574; TAWC Response to TRA Data Request No. 5, Question 3.

<sup>64</sup> See Tenn. Code Ann. § 65-4-104.

<sup>65</sup> *Consumer Advocate Div. v. Tennessee Reg. Auth.*, 1998 WL 684536, \*6 (Tenn. Ct. App. July 1, 1998) (quoting the Authority’s order) (emphasis supplied).

<sup>66</sup> *Id.*

term of this agreement.”<sup>67</sup> Thus, the Authority may change the rate that TAWC charges Walden’s Ridge in this case if the Authority chooses to do so.

Second, pursuant to the Walden’s Ridge special contract, the price that TAWC charges Walden’s Ridge for wholesale water service may be adjusted during the attrition year ending August 2009. The current pricing arrangement between TAWC and Walden’s Ridge expires in February 2009.<sup>68</sup> TAWC witness Sheila Miller acknowledged that the rate charged to Walden’s Ridge may be increased in March 2009 pursuant to the special contract.<sup>69</sup> Accordingly, the price that TAWC charges Walden’s Ridge for wholesale water service under the contract itself is due for adjustment in March 2009, which is well within the attrition year of this case. Furthermore, the price adjustment that is due in March 2009 is not reflected anywhere in the Consumer Advocate’s or TAWC’s attrition year forecasts, which, if reflected, would increase TAWC’s attrition year revenues. Therefore, the Authority has the ability to increase the price that TAWC charges Walden’s Ridge during the attrition year of this case even if the Authority chooses not to disturb the current pricing arrangement between TAWC and Walden’s Ridge.

Third, TAWC included its wholesale water service to Signal Mountain in its attrition year forecast even though, like Walden’s Ridge, Signal Mountain’s special contract contains a pricing arrangement that runs through a portion of the attrition year.<sup>70</sup> It is therefore inconsistent for TAWC to exclude Walden’s Ridge from this case for the same reason.

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<sup>67</sup> Tr.Vol.4 at 577.

<sup>68</sup> TAWC Response to TRA Data Request No. 5, Question 3.

<sup>69</sup> Tr.Vol.4 at 574.

<sup>70</sup> Tr.Vol.4 at 583.

Finally, the Consumer Advocate urges the Authority to consider at least two policy reasons for including Walden's Ridge in this case. First, TAWC witness Sheila Miller acknowledged the revenue received from Walden's Ridge does not cover the revenue requirement attributable to serving Walden's Ridge.<sup>71</sup> Depending on the TAWC response that is used to quantify the operation and maintenance expense attributable to Walden's Ridge, the Consumer Advocate calculates this revenue requirement deficiency to be between \$163 thousand and \$340 thousand for TAWC's test year ended November 2007.<sup>72</sup> The Consumer Advocate maintains that the customers of Tennessee American should not have to bear any of the financial burdens of providing wholesale water service to other water utilities. Second, the Consumer Advocate asserts that all of the regulated operations of a public utility should be included and examined in a general rate case such as this one. Allowing a public utility to keep some of its regulated operations from the Authority's review is troublesome because it does not allow the Authority to fully examine and control all of the utility's services that are provided to the public.<sup>73</sup> The Consumer Advocate, therefore, requests the Authority to include Walden's Ridge in this case.

## **V. ATTRITION YEAR REVENUE REQUIREMENT**

The Authority should determine TAWC's revenue requirement in this case by applying the following generally recognized ratemaking formula: Revenue Requirement = (Rate Base x Rate of Return) + Operation and Maintenance Expense + Depreciation + Taxes.<sup>74</sup> In applying this formula

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<sup>71</sup> Tr.Vol.4 at 574, 582-583.

<sup>72</sup> See attached Exhibit 5.

<sup>73</sup> For example, Walden's Ridge is one of TAWC's top five customers. TAWC Response to TRA Data Request No. 1, Question 19.

<sup>74</sup> Tr.Vol.4 at 559.



to the facts of this case, there are many aspects of each of its components that are undisputed. This section, however, addresses the material areas of dispute between TAWC and the Consumer Advocate that the Authority should closely examine before it decides the revenue requirement in this case.

**A. OPERATION AND MAINTENANCE EXPENSE**

TAWC is forecasting \$21.6 million in operation and maintenance expense for the attrition year; however, the Consumer Advocate asserts that \$19.8 million is the more reasonable figure that should be adopted by the Authority.<sup>75</sup> The Consumer Advocate understands expenses generally rise over time, and it also understands TAWC has experienced some increases in expenses since last year's rate case, with some expenses increasing at a higher rate than others, such as electricity, gasoline, and chemicals. But the Consumer Advocate maintains that total expenses must meet an overall test of reasonableness in light of prevailing business plans and economic conditions. In other words, not only does the methodology used to forecast each expense have to be reasonable, but these methodologies, when considered together, must also result in reasonable total expenses that jibe with the business and economic conditions of the day. The Consumer Advocate asserts the proof establishes TAWC's forecast of expenses in this case fails this overall test of reasonableness.

TAWC is a public utility whose costs are soaring in recent years. Indeed, TAWC's total operation and maintenance expense has outstripped inflation by more than 160% since 2004.<sup>76</sup> And again in this case, TAWC wants to add another 20% increase to the total operation and maintenance

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<sup>75</sup> See attached Exhibit 6.

<sup>76</sup> See attached Exhibit 7.

expense over the amount the Authority authorized in last year's rate case.<sup>77</sup> By contrast, the number of customers that TAWC will serve in the coming year is anticipated to grow by only one percent.<sup>78</sup>

The Consumer Advocate maintains, however, that TAWC's authorized expenses have kept pace with its business operations and the economy, especially in light of TAWC's recent series of rate cases. Accordingly, the Consumer Advocate's forecast of a 10% increase in expenses since last year's rate case is reasonable and should be adopted.<sup>79</sup> And while the Consumer Advocate is a little higher in some expense categories and a little lower in others, the Consumer Advocate urges the Authority to closely examine the significant expense items discussed below before it decides TAWC's new level of operation and maintenance expense.

**1. TAWC's Attrition Year Forecast For Salaries And Wages Should Be Reduced For Employee Vacancies And Certain Incentive Pay.**

It is undisputed that TAWC routinely has vacant employee positions; however, it wants to recover from ratepayers the salaries and wages associated with these vacant positions even though no one is actually on the payroll. This is an unreasonable position that should be denied.

TAWC witness Watson testified that, despite TAWC's "tremendous effort" to fill employee vacancies, such vacancies are a reality due to employee turnover.<sup>80</sup> Indeed, TAWC has never achieved its authorized level of employees at any time from September 2003 through March 2008.<sup>81</sup>

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<sup>77</sup> See attached Exhibit 6

<sup>78</sup> See attached Exhibit 8.

<sup>79</sup> See attached Exhibit 6.

<sup>80</sup> Tr.Vol.1 at 151.

<sup>81</sup> See attached Exhibit 9.

TAWC witness Watson testified further, however, that other expenses increase due to routine employee vacancies, such as overtime pay, contract labor, and employee recruitment costs.<sup>82</sup>

The Consumer Advocate understands TAWC may not be able to maintain its authorized level of employees at all times, and it also credits the testimony of Mr. Watson regarding the increase in other expenses due to employee vacancies. The Consumer Advocate nonetheless maintains TAWC should not be allowed to recover the salaries and wages for all of its authorized employee positions, as well as recover the other expenses associated with employee vacancies (i.e., the increased overtime, contract labor, and employee recruitment costs). Either the authorized level of employees must be reduced to reflect the actual number of employees that will be on the payroll or the expenses associated with employee vacancies must be normalized by removing them from the test year if it is assumed that TAWC will pay salaries and wages to all of its authorized employees positions for the entire attrition year. TAWC cannot have it both ways.

In this case, TAWC has forecasted salaries and wages for 114 employee positions during the attrition year, but it had only 109 employees on the payroll as of March 2008.<sup>83</sup> Furthermore, even though TAWC was authorized to have 111 employees in last year's rate case, it averaged only 108 employees during TAWC's test year ended November 2007.<sup>84</sup> TAWC witness Sheila Miller acknowledged employee vacancies had occurred during TAWC's test year.<sup>85</sup> These vacancies

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<sup>82</sup> Tr.Vol.1 at 94.

<sup>83</sup> Buckner Direct at 38-39, see attached Exhibit 10.

<sup>84</sup> *Id.*

<sup>85</sup> Tr.Vol.5 at 631.

occurred in both salaried and hourly positions.<sup>86</sup> Despite this proof of employee vacancies, TAWC witness Sheila Miller further acknowledged that TAWC did not remove any of the costs associated with employee vacancies from its forecast.<sup>87</sup> Accordingly, TAWC is forecasting salaries and wages for all of its requested 114 employee positions for the attrition year -- even though some of them are unfilled; and, it also failed to remove any of the costs associated with employee vacancies from its test year in order to forecast attrition year expenses. This is unfair to the ratepayers because it allows TAWC to recover more expenses than it will actually incur for salaries and wages and employee vacancies.

Aside from the double counting of costs associated with salaries and wages and employee vacancies, the Consumer Advocate has another concern about increasing TAWC's authorized employee positions from the 111 that was authorized in last year's case to the 114 that is requested this year. As stated at the outset of this discussion on operation and maintenance expense, TAWC's expenses have soared in recent years. At the conclusion of the proof in this case, the Consumer Advocate remains unconvinced that TAWC actually needs to increase these expenses even more for new employee positions. As already stated, TAWC maintained an average of only 108 employees during the test year ended November 2007.<sup>88</sup> TAWC witness Watson nonetheless testified that TAWC has "done a great job" with customer service, as confirmed by satisfying the customer service metrics that were established in the 2004 case at the request of the Consumer Advocate.<sup>89</sup>

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<sup>86</sup> See attached Exhibits 11 and 12 .

<sup>87</sup> Tr.Vol.5 at 633.

<sup>88</sup> See attached Exhibit 10.

<sup>89</sup> Tr.Vol.1 at 92.

Indeed, the Consumer Advocate has reviewed these metrics and has not raised any customer service issues in this case. So while the Consumer Advocate remains generally concerned about the quality of service that customers receive from their public utilities, it appears TAWC is maintaining acceptable customer service standards with its current staffing level. In light of the soaring cost structure of TAWC in recent years, as well as its request to increase expenses by another 20% in this docket, the Consumer Advocate is reluctant to recommend additional employee positions for service quality reasons, especially when the current level of service appears more than satisfactory.

For these reasons, the Consumer Advocate has forecasted 109 employee positions for the attrition year, which is one more employee than TAWC actually averaged during its test year ended November 2007.<sup>90</sup> The Consumer Advocate asserts that this approach reasonably reflects the average number of employees that TAWC will maintain on its payroll. Additionally, the Consumer Advocate has not adjusted its test year or attrition year forecast to reduce overtime hours, contract labor, and employee recruitment costs associated with vacant employee positions. Thus, the costs associated with employee vacancies remain in the Consumer Advocate's forecast. The Consumer Advocate therefore recommends the Authority adopt its salaries and wages forecast; however, if the Authority chooses not to do so, it should at the very least assure that the double counting of expenses for all authorized employee positions, as well as expenses associated with employee vacancies, is removed from the Authority's decision.

In addition to the salaries and wages issue, another payroll-related expense issue involves the incentive pay that TAWC awards its employees for meeting certain performance benchmarks. The Consumer Advocate disallowed some of this incentive pay in its forecast because ratepayers

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<sup>90</sup> See attached Exhibit 10.

do not receive any benefit from some of the plan's benchmarks. In particular, as Consumer Advocate witness Buckner testified, 30% of TAWC's incentive pay is awarded for meeting targeted financial operating results.<sup>91</sup> There is no mechanism under TAWC's incentive plan for ratepayers to share in these increased earnings.<sup>92</sup> Indeed, considering TAWC's soaring expenses, the best opportunity for meeting these financial targets is through increasing ratepayers' water bills. Thus, it is TAWC's shareholders and employees, not its ratepayers, that will receive the benefits of performing these financial benchmarks. For this reason, there is no reasonable basis for charging the financial portion of the incentive plan to ratepayers, as these plan benefits will inure entirely to TAWC's employees and shareholders, whereas the associated burdens will fall directly on ratepayers. Accordingly, the Consumer Advocate has reduced TAWC's incentive pay expense by 30%, which directly correlates to the incentives paid for achieving the plan's financial benchmarks. The Consumer Advocate's adjustment is consistent with the Authority's decision to disallow the financial portion of TAWC's incentive pay in last year's rate case.<sup>93</sup>

**2. TAWC's Attrition Year Management Fees Should Be Reduced To A Reasonable Level.**

The Consumer Advocate asserts the single largest factor contributing to TAWC's soaring cost structure in recent years is the large increase in management fees allocated to Tennessee by TAWC's affiliated service companies in other states, without the anticipated offset to local costs. To fully understand the impact of these fees on TAWC's costs, one must consider TAWC's reorganization that began in 2004, and was completed in 2005, that removed some of the functions

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<sup>91</sup> Buckner Direct at 44.

<sup>92</sup> Buckner Direct at 44-45.

<sup>93</sup> See TRA Order, 06-00290, at 24 (June 10, 2008).

performed locally by people in Chattanooga in favor of having these functions performed by affiliated service company personnel in Alton, Illinois; Charleston, West Virginia; and Voorhees, New Jersey.

When the reorganization occurred, TAWC witnesses, including Mr. Mike Miller, testified that it would result in cost efficiencies and improved service.<sup>94</sup> Indeed, TAWC witness Mike Miller testified again in this case that, based on his assumptions of the expenses that should have been incurred had there been no reorganization, the reorganization resulted in an estimated cost savings of \$26 thousand.<sup>95</sup> The Consumer Advocate disputes this testimony because, based on the actual expenses charged to TAWC rather than Mr. Miller's assumed expenses, it is clear that costs have actually risen sharply since the reorganization.<sup>96</sup>

Mr. Miller's analysis of management fees is presented in his Rebuttal Exhibit MAM-10. For purposes of his analysis, Mr. Miller stated that both labor and benefits, as well as management fees, must be considered together to determine the amount of cost savings attributable to the reorganization.<sup>97</sup> Mr. Miller used actual amounts of labor and benefits charged to TAWC for his per-employee labor and benefits analysis, which, according to Mr. Miller, captures the "cost increase that actually occurred."<sup>98</sup> However, instead of using the actual management fees charged to TAWC, Mr. Miller grew the 2003 management fees by his inflation factor to determine, in Mr. Miller's

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<sup>94</sup> Tr.Vol.13 at 1295.

<sup>95</sup> Tr.Vol.13 at 1315; Mike Miller Rebuttal at Rebuttal Exhibit MAM-10.

<sup>96</sup> See attached Exhibit 13.

<sup>97</sup> Tr.Vol.13 at 1296; Mike Miller Rebuttal at Rebuttal Exhibit MAM-10.

<sup>98</sup> Tr.Vol.13 at 1297; Mike Miller Rebuttal at Rebuttal Exhibit MAM-10.

opinion, what the management fees should have been if the reorganization had not occurred.<sup>99</sup> On cross-examination, Mr. Miller admitted that the management fees actually charged to TAWC for 2004 through 2007 were much greater than his management fee calculations.<sup>100</sup> Mr. Miller nonetheless used his assumptions rather than reality to compute a cost savings of \$26 thousand, small as that amount is, especially in light of the loss of Tennessee jobs and the reduction of TAWC's presence in the community.<sup>101</sup> The Consumer Advocate disagrees with Mr. Miller's analysis because it does not reflect actual events.

Rather than computing what management fees should have been, the Consumer Advocate examined the management fees that were actually charged to TAWC. Using this approach, it is clear that when the reorganization started in 2004, management fees actually increased by \$1.4 million, or 48%, from \$2.9 million to \$4.3 million; however, TAWC's labor and benefits were not reduced at all.<sup>102</sup> An analysis of expenses incurred from 2005 through 2007 shows that none of the promised cost savings has ever materialized since the reorganization occurred: labor and benefits have risen sharply from 2005 through 2007 (25% increase) and management fees have also continued to

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<sup>99</sup> Tr.Vol.13 at 1296; Mike Miller Rebuttal at Rebuttal Exhibit MAM-10.

<sup>100</sup> For the year ended November 2007, Mr. Miller computed management fees of \$2.89 million, whereas the actual fees charged to TAWC were \$4.79 million (Tr.Vol.13 at 1307); for 2006, Mr. Miller computed management fees of \$3.01 million, but the amount of fees actually charged to TAWC for 2006 was \$4.79 million (Tr.Vol.13 at 1305); Mr. Miller computed \$2.61 million in management fees for 2005, but the actual amount charged to TAWC for 2005 was \$4.26 million (Tr.Vol.13 at 1308); and in 2004, Mr. Miller's management fees were \$2.54 million instead of the actual fees charged of \$2.92 million, including the call center (Tr.Vol. 13 at 1314-1315).

<sup>101</sup> Mike Miller Rebuttal at Rebuttal Exhibit MAM-10.

<sup>102</sup> See attached Exhibit 13.



increase, but at a more modest rate (9% from 2005 through 2007).<sup>103</sup> Accordingly, the reorganization pumped an additional \$1.4 million of expenses into TAWC's cost structure in the form of management fees, without any corresponding decrease in TAWC's local expenses. So rather than creating cost savings of \$26 thousand, as proposed by Mr. Miller's assumptions, the reorganization has actually cost ratepayers more than \$1 million in additional charges each year. After the conclusion of the proof in this case, the Consumer Advocate does not believe TAWC has justified these additional costs.

It is easy to understand why the Authority was concerned enough about TAWC's management fees in last year's rate case to order a management audit of these fees. In this case, TAWC submitted its management audit as instructed by the Authority. And even though "[t]his audit should determine whether all costs allocated to TAWC were incurred as a result of prudent or imprudent management decisions by TAWC's parent and should address the reasonableness of the methodology used to allocate costs to TAWC,"<sup>104</sup> the Consumer Advocate maintains, for the reasons stated below, that TAWC's management audit failed to properly address the prudence or reasonableness of these fees.

In making a final decision in Docket 06-00290, Tennessee American's prior rate case, the TRA issued a directive in regards to the management fees.<sup>105</sup> On May 15, 2007, the TRA required

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<sup>103</sup> See attached Exhibit 14.

<sup>104</sup> TRA Order, 06-00290, at 27 (June 10, 2008).

<sup>105</sup> The TRA is not the only public service commission that has concerns with the amount of management fees paid by the rate-payers of the subsidiaries of American Water Works. The Illinois Commerce Commission, which regulated the Illinois-American Water Company, issued an order on July 30, 2008 in Docket 07-0507 requiring a management audit because the commission questions whether the company is doing everything possible to ensure lost costs for rate-payers. Docket 07-0507, Order (July 30, 2008) p. 30-31.

the company to provide a management audit to determine whether all costs allocated to Tennessee American were incurred as a result of imprudent management decisions and whether the methodology for allocating costs to TAWC was reasonable. This audit was to be conducted explicitly in compliance with Sarbanes-Oxley (“SOX”) requirements. When the company filed for a rate increase in March of this year, the Independent Cost Assessment Report (“ICAR”) was submitted to the Authority for consideration. The ICAR was produced by Mr. Joe Van Den Berg of Booz & Company on behalf of Tennessee American.

It is the Consumer Advocate’s position that the ICAR does not comply with the Authority’s decision in Docket 06-00290 as it is not the audit that was requested and does not meet the standards of SOX as required by the Authority.<sup>106</sup> The study submitted in this docket serves little more than to prop up the analysis Mr. Baryenbruch provided in Docket 06-00290.<sup>107</sup>

The explicit statement in the TRA’s decision that the audit should comply with the requirements of SOX put the management audit that was requested into the proper context. Rather than take heed of the SOX requirements, the company pursued what it considered to be a study that would comply the TRA’s directive. The term “management audit” does not have a single definition.<sup>108</sup> In fact, it appears the definition has become quite elastic. Mr. Van Den Berg indicated that he himself erred in responding to a discovery request by confusing the terms “management

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<sup>106</sup> The City of Chattanooga also argues that the management audit does not comply with the TRA’s decision in Docket 06-00290. The Consumer Advocate herein adopts the City’s positions on this issue.

<sup>107</sup> In Docket 06-00290, Mr. Baryenbruch conceded that he did not bore into the costs and process of allocation for management fees, but rather accepted the information the company provided him. April 18, 2007 Transcript, p 18.

<sup>108</sup> Van Den Berg Rebuttal at 1.

audit” and “financial audit” during the course of this case.<sup>109</sup> The term “management audit” has not been applied in the past when Booz & Company has conducted independent analyses of allocations for shared costs for electric utilities.<sup>110</sup> However, in this proceeding, such an analysis is now being presented for the first time as a “management audit”.

Despite the company’s protests to the contrary, Tennessee American, Booz & Company, or Mr. Van Den Berg could have contacted the TRA staff if clarification of the Authority’s order if it was unclear. Apparently, no attempt was made to contact the Authority on this issue. Rather than conducting a study or management audit as to the company’s understanding of what the TRA ordered, contacting the Authority would have been prudent had there been any question as to what was required of the company. Mr. Miller, whom is not licensed to practice law, considered contact with the staff during that time an ex parte communications.<sup>111</sup> If the company was fearful of ex parte communications, it need only have filed a letter in Docket 06-00290 requesting clarification. The legal fee for such a letter would have been a prudent and sound investment considering the \$285,000 cost of the study that was provided.

The value of the ICAR is, at most, nominal to this proceeding. The depth of the analysis of the benefits provided to Tennessee American via the service company appears to be limited to the judgement of the consultant, surveys and interviews of Tennessee American employees.<sup>112</sup> Furthermore, the comparison of a water utility to a series of electric utilities is a troubling aspect.

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<sup>109</sup> Tr. Vol. 8 at 881.

<sup>110</sup> Tr. Vol. 8 at 883-886.

<sup>111</sup> Tr. Vol. 14 at 1543.

<sup>112</sup> Tr. Vol. 8 at 902.

Electric utilities and water companies are an “apples to oranges” comparison. Electric utilities have larger operating costs in comparison to water utilities. For example, the Knoxville Utility Board (“KUB”) provides both water and electric services. The expenses for KUB’s electric division is twice the amount of the expenses of KUB’s water division.<sup>113</sup> In addition, many electric companies must compete for supply, especially during periods of peak use, on the electric market whereas Tennessee American’s supply of water is obtained free from the Tennessee River.

Because management fees have increased by nearly 50% since the reorganization without an offset in TAWC’s local expenses, and because the management audit failed to explain why such a huge increase in fees is prudent or reasonable, the Consumer Advocate asserts TAWC’s management fees should be reduced. If TAWC’s management fees are not trimmed in this case, ratepayers, who have already paid more than a million dollars a year in higher fees since TAWC’s reorganization in 2004, will continue to pay these exorbitant fees without any measurable benefits flowing to them. This is not fair to the ratepayers, especially in light of TAWC’s inaccurate allegations that the reorganization would result in cost savings and efficiencies. From the Consumer Advocate’s viewpoint, all the reorganization has done is to cause a permanent, million-dollar bump in TAWC’s cost structure.

Accordingly, the Consumer Advocate proposes a \$900 thousand downward adjustment in the attrition year management fees -- \$3.45 million as opposed to TAWC’s forecast of \$4.34 million.<sup>114</sup> The Consumer Advocate arrived at its forecast by growing the management fees that

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<sup>113</sup> Supplemental Responses and Objections of the CAPD to the Second Discovery Request of TAWC (August 8, 2008), Response 9.

<sup>114</sup> See attached Exhibit 1, Schedule 5, Line 6.

TAWC requested for 2005, when the reorganization was completed, by an annual growth factor composed of the annual inflation rate plus one-half of the annual customer growth rate for each year from 2006 through the attrition year ending August 2009.<sup>115</sup> Although TAWC cross-examined Mr. Buckner about the starting point of this analysis at the hearing, a review of the record, as well as Mr. Buckner's management fee workpapers, confirms that Mr. Buckner used as his starting point the management fees requested by TAWC itself for 2005, as opposed to a compromise figure reached in settlement.<sup>116</sup>

TAWC's 2005 management fee amount, increased for inflation and customer growth through August 2009, produces the Consumer Advocate's recommendation of \$3.45 million in management fees for the attrition year.<sup>117</sup> This forecasting methodology results in a reasonable level of management fees that is about \$900 thousand less than TAWC's request for the attrition year. Furthermore, this \$900 thousand reduction would help offset TAWC's \$1.4 million increase in the level of management fees caused by the reorganization. As argued above, this reduction in fees should be made in the interest of ratepayers because the million-dollar bump in TAWC's management fees has not been offset by cost savings at the local level and has not been shown to be either prudent or reasonable. Since there are no discernable ratepayer benefits from these

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<sup>115</sup> Buckner Direct at CAPD Workpaper E-Management Fees Growth; CAPD Workpaper E-Management Fees Summary (Index of Workpapers, pp. 189-190).

<sup>116</sup> Tr.Vol.18 at 1769; Buckner Direct at CAPD Workpaper E-Management Fees Summary, Footnote C (noting that the 2005 management fee amount of \$3,062,940 is from TAWC's Exhibit No. 2, Schedule 3, Page 1 of 1, Line 11, in TRA Docket No. 04-00288) (Index of Workpapers, p. 189).

<sup>117</sup> Buckner Direct at CAPD Workpaper E-Management Fees Summary (Index of Workpapers, p. 189).

additional charges, the Consumer Advocate urges the Authority to remove them from the ratepayers' bills.

**3. The Authority Should Reduce Regulatory Expenses To A Just And Reasonable Level.**

**a. TAWC's rate case expenses should be shared between the shareholders and ratepayers.**

TAWC's forecast of rate case expenses is unreasonable and should be rejected. In this case, TAWC requests to increase its rate case expenses from last year's case for a total recovery of more than \$1 million, and it states the cost of this year's case will exceed another \$1 million.<sup>118</sup> It is unfair to require ratepayers to pay more than \$2 million for back-to-back rate cases.

TAWC blames the parties for increasing the costs of its cases.<sup>119</sup> In particular, TAWC asserts that the Consumer Advocate's unusual volume of discovery requests and use of a test period that is different than TAWC's support its rate case expense forecast.<sup>120</sup> This argument is without any merit. Indeed, the Consumer Advocate has not treated this case, nor the one last year, any differently than it treats any other rate case filed by any other public utility; and none of them has requested rate case expenses that even approach \$1 million. For instance, in last year's rate case involving Atmos Energy Corporation, the Consumer Advocate asked 243 discovery questions;<sup>121</sup> in this case, by

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<sup>118</sup> Mike Miller Rebuttal at 84; Tr.Vol.14 at 1336.

<sup>119</sup> Mike Miller Rebuttal at 84-85; Tr.Vol.14 at 1336-1339.

<sup>120</sup> *Id.*

<sup>121</sup> See First and Second Discovery Requests of the Consumer Advocate and Protection Division to Atmos Energy Corporation filed in Docket 07-00105 on May 25, 2007, and July 11, 2007, respectively. The Authority took judicial notice of these filings in this case. See Tr.Vol.18 at 1771.

TAWC's own count, the Consumer Advocate has asked only 234 questions.<sup>122</sup> Furthermore, the Consumer Advocate used a different test period than the company used in last year's Atmos rate case, just as it has done in this case.<sup>123</sup> There is no denying that major rate cases like these are complex and require the analysis of voluminous data. So the Consumer Advocate does not believe that asking TAWC to answer 234 questions, including subparts, is unreasonable in light of all the contested issues in this matter, some of which are very technical and complex (such as the WNA, management audit, and depreciation study). Gathering the necessary data through these questions was necessary for the Consumer Advocate's participation in this docket, especially since none of the intervenors took any depositions in this case. But, as complex as these cases are, it should not cost over \$1 million to try them. And while TAWC wants its customers to pay over \$2 million for its back-to-back cases, the customers of Atmos Energy Corporation are currently paying only about 25% of this amount in their rates for a case of similar complexity.<sup>124</sup>

Additionally, the Consumer Advocate challenges some of the specific rate case costs of TAWC. For instance, TAWC spent \$100 thousand for a cost of capital witness to recommend a methodology that has never been adopted in any other jurisdiction in the United States, a methodology that, if adopted, would increase the rates that customers would have to pay.<sup>125</sup> This same witness testified in last year's case, as well.<sup>126</sup> The Consumer Advocate submits that there are

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<sup>122</sup> Tr.Vol.17 at 1724.

<sup>123</sup> Tr.Vol.18 at 1771.

<sup>124</sup> Tr.Vol.17 at 1727.

<sup>125</sup> Tr.Vol.14 at 1495; Tr.Vol.17 at 1723.

<sup>126</sup> *Id.*

no ratepayer benefits associated with such costs; accordingly, the Authority should find that ratepayers do not have to pay them.

Furthermore, there is little doubt that some of TAWC's rate case expenses were incurred for the benefit of its shareholders. The ratemaking process before the Authority, as well as other states, is an adversarial one in which the parties argue contested issues. This process produces a just and reasonable rates, but only after the Authority sorts through the company's arguments -- which, if accepted, would generally increase rates for the benefit of shareholders -- as well as the intervenors' arguments -- which, if accepted, would generally decrease rates for the benefit of ratepayers. The policy of sharing rate case expenses between shareholders and ratepayers is a sound ratemaking concept that has been recognized by New Jersey.<sup>127</sup> The Consumer Advocate urges the Authority to recognize this principle as well. This would not only serve to align rates more closely with ratepayer benefits, but sharing these costs would also encourage the parties to give more scrutiny to the merits of their own positions.<sup>128</sup> Additionally, as CMA witness Gorman testified, the sharing of rate case costs between ratepayers and shareholders would encourage the company to more aggressively manage these costs for reasonableness and prudence.<sup>129</sup>

Finally, the Authority may want to consider disallowing the rate case expenses altogether, given the particular circumstances of this case. There is no reason why ratepayers should have to

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<sup>127</sup> See *In re: Environmental Disposal Corp.*, 2000 WL 1471742, pp. 29-30 (N.J.B.U.P. June 7, 2000) (applying the New Jersey policy of sharing rate case expense equally between the shareholders and ratepayers).

<sup>128</sup> For instance, as soon as the Authority ordered a rate increase last year, which as a matter of law resulted in the application of just and reasonable rates, TAWC immediately began preparing a new rate increase petition. See Tr.Vol.14 at 1494.

<sup>129</sup> Tr.Vol.22 at 2231.



pay the costs of a rate case if it is determined that the petition is without merit; this is especially true in light of the Authority's recent decision to increase TAWC's rates. It cannot be said that such costs are reasonably or prudently incurred and, therefore, should be borne by ratepayers.

For these reasons, the Consumer Advocate submits that its rate case expense forecast should be adopted.

**b. The Consumer Advocate invites the Authority to consider whether rate case expenses should generally be recovered from ratepayers.**

The Consumer Advocate acknowledges the majority view in other jurisdictions regarding the treatment of rate case expenses. Further, the Consumer Advocate takes note of the historical treatment by the Tennessee Public Service Commission and the Tennessee Regulatory Authority of rate case expenses. However, time and circumstances have changed. These changes are related to the logical conclusion indicating that rate case filings predominantly benefit a utility's shareholders. AWWC, and its subsidiary TAWC, are for-profit corporate entities. The prime directive of a for-profit corporate entity is to return to shareholders as much income as possible, while handsomely rewarding the company's managers, officers and directors.

Contrary to anything represented in this docket, it is ultimately not the service to ratepayers that is important to AWWC, and its subsidiary TAWC. Service to ratepayers is the product AWWC and TAWC turns into profit. Of course, it is important that the quality of the product be good. The Consumer Advocate acknowledges that the service quality of TAWC is good. For a monopoly company it is the regulator that drives TAWC toward good quality service.<sup>130</sup> There is no

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<sup>130</sup> The role of the TRA is critical here. The Consumer Advocate appreciates TAWC's acknowledgment of the Consumer Advocate role in establishing requirements for service metric reporting.

competitive pressure affecting the utility's performance. For the same reason, it is the regulator that must control the rates TAWC charges to delivery service. In fact, service quality was good before the filing of this rate case.<sup>131</sup> The simple fact is that TAWC was not making enough profit before filing this rate case in the eyes of those who controlled the decision to file this case so closely following the conclusion of TRA Docket No. 06-00290. A telling sign is the list of issues that TAWC has paid an expert and attorneys to pursue. Each supports a revenue increase. However not all issues are contested by the Consumer Advocate (rate base, pensions, chemicals and fuel and power).<sup>132</sup> Of the issues contested by the Consumer Advocate, revenues, WNA, management fees, cost of capital and depreciation, all are designed to increase the profit ultimately flowing out of Chattanooga into AWWC.

The change in circumstances reflects the natural progression of a public utility intent on maximizing profits by frequent rate case filings, charging ratepayers the cost of these filings, inflating salaries, bonuses and management fees to the benefit of parent company managers, officials and directors and yes, inflating rate case expenses. Please do not accept TAWC claims that the intervenors have somehow forced TAWC into a litigate first mentality. As for the Consumer Advocate, it is simply trying to carry-out its duties and obligations pursuant to Tennessee Code Ann. § 65-4-118. Rather, this is an AWWC decision: first, to present a petition requiring the TRA Staff and the intervenors to seek additional information; and second, to resist at all costs the intervenors attempt to turn this proceeding into a more transparent review.

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<sup>131</sup> Tr. Vol. 17 at 1693-94.

<sup>132</sup> However, the Consumer Advocate does not concede that TAWC has properly supported its claim on the capital expenditures.

Instead, the Consumer Advocate requests that the TRA consider and accept the mandate of the Tennessee Supreme Court set out in *House v. Edmondson*, 245 S.W.3d 372 (Tenn. 2008). Tennessee courts adhere to the “American rule” regarding these fees, more fully stated in the *House* decision:<sup>133</sup>

“The American rule provides that a party in a civil action may not recover attorney’s fees absent a specific contractual or statutory provision providing for attorney’s fees as part of the prevailing party’s damages.”

Looking at the four (4) policy reasons supporting the “American rule” discussed by the Tennessee Supreme Court at page 377 of the *House* decision, it is easy to see the application each has to the present matter. First, since the outcome of litigation is uncertain the ratepayers should not be penalized for the efforts of the intervenors to defend against the rate hike sought in this docket. Second, the ratepayers, and their representatives, should not be “unjustly discouraged” from pursuing a course that maintains the ratepayers rights to pay just and reasonable rates for their water service. Third, requiring public utilities to pay for their own rate case expenses will encourage several positive outcomes: fewer rate case filings, better developed rate case petitions, settlement, less acrimony during the litigation of rate case filings, and an overall increase in judicial efficiency. Fourth, at the basic level, public utility filings would not have this issue to deal with in rate case proceedings and in proceedings before the court of appeals. In sum:

“... as a general principle, the American rule reflects the idea that public policy is best served by litigants bearing their own legal fees regardless of the outcome of the case.”<sup>134</sup>

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<sup>133</sup> *House v. Edmondson*, 245 S.W.3d 372, 377.

<sup>134</sup> *Id.*

The Consumer Advocate understands the TRA might be reluctant to review the precedent of previous decisions. However, it is important to note that different circumstances are apparent in this docket. It is an inescapable fact that TAWC began work on this rate case immediately after receiving a \$4 million increase in revenues.<sup>135</sup> Certainly, the difference in approach TAWC takes with respect to rate case filings than that of Atmos in TRA Docket No. 07-00105 deserves consideration. Of further concern is the fact that TAWC requests recovery of expenditures related to a management fee audit that did not meet the criteria set by the TRA in Docket No. 06-00290. It is not enough for TAWC to simply say the SEC does not require AWWC to be a SOX § 404 certified company. This is not the issue. TAWC was required by the TRA to produce an audit related to the affiliate management fees that was SOX compliant. TAWC failed to do so. TAWC also seeks recovery for a cost of capital witness that recommends to the TRA for the second time a methodology not accepted by any other state utility commission.

Under the *House* decision the TRA should not allow TAWC to recover its rate case expenses. Should the TRA choose not to follow the mandate in *House* the Consumer Advocate urges the TRA to evaluate the public policy concerns set out in *House* as adapted here for application to the instant docket. The best result will be reached only when each party of interest, including the TRA, AWWC, TAWC, RWE, other shareholders of AWWC, the Consumer Advocate, the City of Chattanooga, and CMA, pay their own rate case expenses.

**4. The Authority Should Disallow The Amortization Of The “Management Audit” Fee.**

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<sup>135</sup> Tr. Vol. 14 at 1494.

TAWC has requested that \$285 thousand for performance of the “management audit” be amortized to rates over five years.<sup>136</sup> As more fully explained in Section V.A.2., *supra*, the Consumer Advocate avers TAWC’s so-called management audit did not comply with the Authority’s Order in Docket 06-00290 to perform a management audit to determine whether the management fees were prudent and reasonably allocated to TAWC.<sup>137</sup> On cross-examination, TAWC witness Sheila Miller admitted that if the Authority were to determine that the audit did not comply with its order, then the cost of the audit should not be charged to ratepayers.<sup>138</sup> Furthermore, aside from the issue of the audit’s compliance with the TRA’s order, the Consumer Advocate maintains the Booz-Allen study that was performed and submitted in this case is of little or no use in determining the propriety of TAWC’s forecast of management fees for the attrition year ending August 2009. For these reasons, the Authority should disallow the amortization of the costs associated with the “management audit.”

**5. The Authority Should Reduce Chemicals, Fuel, And Power Expenses For TAWC’s Unaccounted-For Water Loss Above 15%.**

The Consumer Advocate maintains the Authority should not allow TAWC to recover for costs associated with treating and delivering lost and unaccounted-for water when the level of such lost and unaccounted-for water is more than 15%.<sup>139</sup> The Consumer Advocate’s position is based on an industry standard and is not meant to punish TAWC but is instead designed to serve as an incentive to TAWC to act as a good steward of the State’s natural resources. The amount removed

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<sup>136</sup> Sheila Miller Rebuttal at 4.

<sup>137</sup> TRA Order, 06-00290, at 27 (June 10, 2008).

<sup>138</sup> Tr.Vol.5 at 638.

<sup>139</sup> Buckner Direct at 52:13-18.

from TAWC's expenses for fuel, power, and chemicals related to lost and unaccounted-for water is \$195,041.<sup>140</sup> Given the recent rise in chemicals and fuel costs claimed by TAWC, it is especially important that these costs be figured correctly.

Under cross-examination, Mr. Watson, President of TAWC, acknowledged that there is a recognized industry standard of good practice of no more than 15% water loss.<sup>141</sup> Significantly, Director Kyle questioned Mr. Watson on this same topic of water loss in last year's rate case so this is not a new problem for TAWC.<sup>142</sup> Mr. Watson also admitted TAWC's water loss was above the 15% industry standard, although he argued that in at least one month the loss was less.<sup>143</sup>

Mr. Gorman, witness for the Chattanooga Manufacturers Association, also supported a 15% lost water factor.<sup>144</sup> In addition, Mr. Gorman testified that in a case before the Missouri Public Service Commission, a staff member, Ms. Roberta Grissum, had filed testimony asking the Missouri Commission to disallow costs for lost water above this 15% level.<sup>145</sup> This witness based her testimony in part on language from the American Water Works Association which noted that "[c]ontrolling leakage effectively relies upon a proactive leakage management program that includes

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<sup>140</sup> See attached Exhibit 15.

<sup>141</sup> Tr.Vol.1 at 143-145.

<sup>142</sup> *Id.*

<sup>143</sup> *Id.* at 147:14-21.

<sup>144</sup> Gorman Direct at 14:10-16.

<sup>145</sup> Gorman Direct at 15:16-21.

a means to identify hidden leaks, itemized repair functions, and upgrade piping infrastructure before its useful life ends.”<sup>146</sup> The case was settled before a final decision.<sup>147</sup>

In the present case, TAWC is seeking approval for capital investments to improve its system but the Consumer Advocate is not seeking to disallow any of these projects since the rate base for the Consumer Advocate and TAWC is roughly equivalent.<sup>148</sup> In addition, TAWC is asking the TRA to include a new employee, Ronald C. Schleifer, on the payroll as a “Non-Revenue Water Supervisor” to, at least in part, work to reduce water loss.<sup>149</sup> In light of the fact that TAWC is asking ratepayers to fund efforts to reduce leaks, it only makes sense to give TAWC a clear incentive to see to it that the money spent produces results; the 15% cap is such an incentive.

Not only is the 15% figure an industry standard, it has also been recognized by the state of Kentucky. The Kentucky Administrative Regulations, Title 807, provide as follows:

Unaccounted-for water loss. Except for purchased water rate adjustments for water districts and water associations, and rate adjustments pursuant to KRS 278.023(4), for rate making purposes a utility's unaccounted-for water loss shall not exceed fifteen (15) percent of total water produced and purchased, excluding water used by a utility in its own operations. Upon application by a utility in a rate case filing or by separate filing, or upon motion by the commission, an alternative level of reasonable unaccounted-for water loss may be established by the commission. A utility proposing an alternative level shall have the burden of demonstrating that the alternative level is more reasonable than the level prescribed in this section.<sup>150</sup>

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<sup>146</sup> *Id.* at 15:22-16:12.

<sup>147</sup> Tr.Vol.22 at 2206:4-13.

<sup>148</sup> Gorman Direct at 16:22-17:5; and Buckner Direct at 66:1-8.

<sup>149</sup> Buckner Direct at 41:14-42:13; and Gorman Direct at 16:16-21.

<sup>150</sup> Kentucky Administrative Regulations, Title 807, Chapter 5 (Utilities), Section 6(3).

An illustration of the Kentucky Commission's recent application of this regulation can be found in the case of *In re: Proposed Adjustment of Wholesale Water Rate of the City of Falmouth*, 2007 WL 1428760 (Ky P.S.C. May 11, 2007) (holding that the unaccounted-for water loss cap of 15% be applied because Falmouth did not demonstrate that its 30% unaccounted-for water loss was reasonable). Moreover, a recent TRA order involving a water company held that an appropriate unaccounted-for water percentage was 15%.<sup>151</sup>

For the foregoing reasons, the TRA should disallow \$195,041 of expenses for fuel, power, and chemicals related to treating lost and unaccounted-for water.

**6. The Authority Should Adopt The Consumer Advocate's Test Period And Growth Factor For Forecasting Miscellaneous And Other Expenses.**

The Consumer Advocate's attrition year forecast for miscellaneous and other expenses is lower than TAWC's forecast due to the Consumer Advocate's use of a more recent test year, as well as the application of a growth factor composed of the current inflation rate and anticipated customer growth rate.<sup>152</sup> As more fully discussed in Section III, *supra*, the Consumer Advocate submits that its test year ended March 2008 is superior to TAWC's test year ended November 2007 because it captures a more accurate picture of the current business and economic conditions affecting today's utility rates. Furthermore, application of a growth factor that recognizes today's inflationary increases on prices due to current economic conditions, as well as increases in expenses due to TAWC's expanding customer base, fully and appropriately accounts for expected growth in

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<sup>151</sup> See *In re: Petition of Aqua Utilities Company for Approval and Adjustment of Its Rates and Charges and Revised Tariff*, Final Order Approving Rate Increase and Rate Design, TRA Docket 06-00187, p. 9 (Nov. 15, 2007).

<sup>152</sup> See attached Exhibit 8.



miscellaneous and other expenses. And while this growth factor does not separate particular miscellaneous and other expenses for special consideration, it nonetheless recognizes that some expenses in these categories are increasing at a faster rate than others through application of a composite inflation and customer growth rate to recent test year expense levels.

The Consumer Advocate urges the Authority to carefully consider the parties' operation and expense forecasts, as well as their competing forecasting methodologies, and decide upon a total operation and maintenance expense that is just and reasonable for ratepayers. TAWC's costs have risen sharply in recent years, and the Consumer Advocate maintains that its forecast of another 10% increase in total expenses since last year's rate case provides for a reasonable amount of overall growth, especially for such a short period of time. The Authority therefore should not approve a total operation and maintenance expense amount that exceeds the Consumer Advocate's total expense forecast of \$19.8 million.

**B. DEPRECIATION EXPENSE**

**1. The Authority Should Adopt The Depreciation Rates Recommended By Consumer Advocate Witness Charles W. King.**

The controversy in this docket as it relates to the depreciation study submitted by the company is limited to the treatment and calculation of net salvage in depreciation rates. Mr. King, testifying on behalf of the Consumer Advocate, has two central points of contention with Mr. Spanos, the company witness on this issue. The first is that even if the Authority desired to continue the traditional method of calculating net salvage, Mr. Spanos did not adhere to the traditional method. In particular, the judgment Mr. Spanos employed has little basis in the company's record of historical retirement costs. The second issue concerns the inequity of the traditional method itself in that it produces inflated future costs that ratepayers must pay for now. Mr. King is proposing a

method that equitably captures period costs for increases in the removal costs of retired plant based on more recent historical data. The methodology proposed by Mr. King is gaining acceptance across the country.<sup>153</sup>

The traditional method employed to calculate net salvage is to compare the actual cost of removing the plant with the original cost of the plant. The comparison produces a ratio that has the effect of increasing the amount of plant or amount of cost that has to be recovered over the life of the plant. For example, if the comparison produces a 30% negative net salvage or a 30% cost of removal, one simply will gross up the total amount or cost of the plant that has to be recovered by 30%. In theory, this practice captures the original cost of the plant and the costs to remove the plant when it is retired. However, it produces inflated future costs that would be recovered from ratepayers now.

While Mr. Spanos suggests that his methodology is the traditional approach he in fact deviates from the traditional method in that his “judgement” is evidently not based upon multi-year comparisons of the company’s recorded history of removal costs with the value of plant retired. Thus, Mr. Spanos’ judgment has little support from the ratios of retirements to net removal costs. For example, Tennessee American’s data for the last eight years reveals that the ratio of net removal costs associated with retired services has been less than 10% since 1997 and less than 5% since 2000, yet Mr. Spanos recommends a net salvage ratio of minus 30% percent.<sup>154</sup> His judgment is not supported by the recent history of the account. Another example is the customer services account which consists of lines that run from the street to the homes of ratepayers. The retirement history

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<sup>153</sup> Tr. Vol. 15 at 1572-1573, 1619.

<sup>154</sup> King Direct at 9.

suggests a negative net salvage of 5%. However, Mr. Spanos applies a 30% ratio, in effect overstating the removal cost by 25%.<sup>155</sup>

Fundamentally, Mr. King disagrees with the traditional approach and the approach utilized by Mr. Spanos. The problem, according to Mr. King, is the valuation of the retirements.<sup>156</sup> The ratios for calculations under the traditional method brings together the “old dollar” original value of the plant with the “new dollar” value of the cost of removal. This has the effect of net salvage ratios comparing dollars of very different values. For example, the principal mass water accounts have very long service lives, 90 years in the case of mains and 70 years in the case of the services account. The original cost of a main is recorded the same now as the day it was installed, yet the value of dollars over time is eroded by inflation. Thus, the original cost of a main installed in 1920 reflects 1920 dollars. The original cost in 1920 dollars is then used as the denominator versus present dollar value of removal in the dominator and produces an unrealistically high ratio for net salvage.<sup>157</sup> As noted, the historical data of the value of retired plant is highly unstable. For example, the main retirements in 2003 totaled \$243,545. For 2004 the value was \$89,651 followed by \$65,225 in 2005. In 2006 it jumped to \$208,053.<sup>158</sup>

The proposal of the Consumer Advocate departs from the traditional method. Mr. King’s analysis examined the recent history of retirements and calculated the annual average of removal costs to derive the cost to remove a single unit in each account. He then multiplied the individual

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<sup>155</sup> Tr. Vol 15 at 1569.

<sup>156</sup> King Direct at 10-11.

<sup>157</sup> *Id.*

<sup>158</sup> *Id.*

cost by the number of units in service to arrive at an estimate of the total cost to remove all units in the account. This total cost, ratioed to the value of the plant in service, produces a net salvage ratio. By avoiding the use of retirement values, the set of net salvage ratios is rooted in solid and relatively stable numbers.

One cannot underestimate the consequences of net salvage on ratepayers. During his testimony before the authority, Mr. King provided a layman's example, based on government purchases of homes in order to expand national parks. The example illustrates how the application of Mr. Spanos' method overburdens current rate-payers by requiring recovery of predicted and distant future costs while lessening the burden on future generations of rate-payers.<sup>159</sup> The method by which Mr. Spanos calculates the cost of removal into the depreciation rates assesses the ratepayers of Tennessee American all inflation between the date the rates go into effect until the estimated date of removal. The Consumer Advocate would submit that it is not just and reasonable to require ratepayers to pay for all inflation between now and the time it is estimated an element of plant will be removed. If depreciation could be described simply as a "pay me now or pay me later"

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<sup>159</sup> Tr. Vol 15 at 1626-1628: "And I know of a couple families who have this very arrangement with their cottages on Cape Cod which are being converted into a national seashore. And the arrangement is that they do a valuation of your property and they pay you for the value of your property, but they offset that with a removal cost because when your house is finally --...., they're going to tear your house down. So you get an assessor, and they decide your house is worth -- your lodge is worth \$100,000, but it's going to cost \$10,000 to tear it down, so you get \$90,000."

"Well, the utility -- the water company's view is you don't get \$90,000, you only get about \$40,000 because the \$10,000 that it's going to cost to tear it down is not what it's going to cost when you die, which is probably about 30 years from now. So you inflate the \$10,000 by 3 percent for 30 years, and that's \$57,000. And that's what the water company would assess as the removal company -- removal cost. And that's exactly, exactly what they're doing in their methodology."

"They're assessing present ratepayers for all of the inflation between now and the time the property is removed, and that's incorrect."

proposition, the method proposed by Mr. Spanos is a prescription for “pay me now” for costs that are predicted to occur much later in the future.

In contrast, Mr. King’s methodology captures inflation in the period it occurs rather than a long-term projection. Inflation, which is the driving force that increases removal costs over long periods of time, is incurred as a period cost. Mr. Spanos agrees that the best practice in terms of depreciation is to recalculate depreciation rates every three to five years.<sup>160</sup> If depreciation rates are regularly recalculated every five years, Mr. King’s methodology would capture any increase in the cost of removal. Thus, the company suffers no risk of under-recovery while current ratepayers would not be saddled with far-flung and baseless long term projections for the predicted costs of future retirement.

Based on the foregoing, the Authority should adopt the depreciation rates recommended by Mr. King.

**2. The Depreciation Rates Adopted By The Authority Should Not In Any Case Be Applied To Plant Accounts That Have No Book Value.**

TAWC continues to charge a depreciation expense for some of its plant assets even though they are fully depreciated (that is, there are no values recorded in TAWC’s plant accounts for these assets,<sup>161</sup> so there is nothing left of them to depreciate).<sup>162</sup> This accounting practice is improper. As Consumer Advocate witness King testified, depreciation rates should not be applied to plant

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<sup>160</sup> Tr. Vol 6 at 757.

<sup>161</sup> The net book value of an asset is calculated by subtracting all of the prior years’ depreciation of the asset, which is held in an account called “accumulated depreciation,” from the recorded cost of the asset, which is held in an appropriately-described plant account, such as “Computers and Peripheral Equipment.”

<sup>162</sup> See attached Exhibit 16.

accounts with a net book value of zero or less.<sup>163</sup> In this case, the Consumer Advocate computed its depreciation expense forecast by applying the depreciation rates recommended by Mr. King to the plant accounts recorded and forecasted by TAWC.<sup>164</sup> However, consistent with Mr. King's testimony and sound accounting practice, the Consumer Advocate did not compute any depreciation expense for TAWC's accounts that had no book value during the attrition year ending August 2009.

On cross-examination, TAWC witness Sheila Miller acknowledged some of its plant accounts had a negative book value.<sup>165</sup> Ms. Miller also acknowledged that TAWC applied the depreciation rates recommended by TAWC witness Spanos to the plant accounts that had negative book values.<sup>166</sup> Ms. Miller's explanation for doing so was that TAWC wanted to recognize the "full effect" of Mr. Spanos' declining depreciation rates by applying these rates to accounts with negative values:

In our accounting, in our system at home, if it has a negative balance on that particular account, we wouldn't -- we wouldn't take depreciation -- accumulated depreciation or depreciation on that balance. However, in order to recognize the full effect -- because the depreciation rate is going to be going down from fifteen-point-nine percent down to one-point-eight-three percent, we did calculate it on these balances.<sup>167</sup>

TAWC's approach is absolutely improper because it circumvents the depreciation study by allowing TAWC to take a greater depreciation expense than its own study recommends. In other words, TAWC's application of a depreciation rate to a plant account with a negative book value

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<sup>163</sup> Tr.Vol.15 at 1577-1578.

<sup>164</sup> See attached Exhibit 17.

<sup>165</sup> Tr.Vol.5 at 592, 599-600.

<sup>166</sup> Tr.Vol.5 at 603.

<sup>167</sup> Tr.Vol.5 at 601.

results in an effective depreciation rate that is higher than the recommended rate. This is best illustrated by the following example: Suppose that there are two assets, Asset One and Asset Two, each with a recorded cost of \$1,000, and each with a recommended depreciation rate of 10%; and suppose further that Asset One is fully depreciated (that is, it has no net book value) and that Asset Two is new (that is, there has been no prior years' depreciation). The following table contrasts how depreciation expense would be computed under TAWC's method and the Consumer Advocate's method:

Asset Description	Recorded Cost	Accumulated Depreciation	Book Value	Depr. Study Rate	TAWC Method	CAPD Method
Asset One	\$ 1,000	\$ 1,000	\$ -	10%	\$ 100	\$ -
Asset Two	1,000	-	1,000	10%	100	100
Totals	<u>\$ 2,000</u>	<u>\$ 1,000</u>	<u>\$ 1,000</u>	<u>-</u>	<u>\$ 200</u>	<u>\$ 100</u>

This illustration demonstrates how TAWC's method of applying depreciation rates to plant accounts that have no book value results in more depreciation expense than recommended by the depreciation study. Asset One is fully depreciated; and the depreciation study concludes that Asset Two has an economically useful life of ten years ( $100\% / 10 \text{ years} = 10\% \text{ annual depreciation rate}$ ). But by applying the study's annual depreciation rate to both Asset One, which is fully depreciated, and Asset Two, which is new, \$200 in depreciation expense is computed. Thus, TAWC's method results in an effective depreciation rate of 20% of the total book value of the two assets ( $\$200 / \$1,000$ ) -- which means that these assets will be fully depreciated in only five years ( $100\% / 5 \text{ years} = 20\% \text{ annual depreciation rate}$ ). Using TAWC's method, Asset Two, which should be on the books for ten years ( $100\% / 10 = 10\%$ ), will be fully depreciated in only five years ( $100\% / 5 = 20\%$ ).

Accordingly, at the end of five years, there will be no book value for either Asset One or Asset Two, even though the depreciation study recommended that Asset Two should last for ten years.

TAWC's method of applying the depreciation rates to plant accounts without book values accelerates depreciation by computing more expense than recommended by the study. As Mr. King testified, this is an improper procedure that the Authority should reject. For these reasons, the Consumer Advocate urges the Authority to adopt its method of applying depreciation rates only to plant accounts with positive book values.

### **C. TAXES**

There are two tax issues that the Consumer Advocate will address in this section -- one dealing with income taxes and one with the gross receipts tax.

#### **1. The Authority Should Use The Enacted Income Tax Rates To Determine The Appropriate Income Tax Expense For Ratemaking Purposes.**

TAWC witness Mike Miller testified that Statement of Financial Accounting Standards ("SFAS") No. 109 promulgated by the Financial Accounting Standards Board ("FASB") should be used in this case to compute TAWC's income tax expense.<sup>168</sup> Using SFAS No. 109 as his support, Mr. Miller computed an effective federal income tax rate of 48% and an effective state excise tax rate of 13%, as opposed to the enacted federal income tax rate of 35% and the enacted state excise tax rate of 6.5%.<sup>169</sup> As a result, TAWC's income tax expense is about \$976 thousand more than it should be if the enacted income tax rates were applied.<sup>170</sup> The Authority properly rejected Mr.

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<sup>168</sup> Mike Miller Rebuttal at 86-87.

<sup>169</sup> See attached Exhibit 18.

<sup>170</sup> See attached Exhibit 18.



Miller's approach to income taxes in last year's rate case, and it should do so again this year.<sup>171</sup> Consistent with the decisions of this Authority, as well as appropriate ratemaking methodology, the Consumer Advocate computed its income tax expense forecast by applying the enacted federal income tax rate of 35% and the enacted state excise tax rate of 6.5%.<sup>172</sup>

Mr. Miller's application of SFAS No. 109 in this case is wrong. First, even if SFAS No. 109 were to be applied, it specifically requires the use of the enacted income tax rates for performing its calculations.<sup>173</sup> More importantly, the Authority does not follow FASB accounting standards, including SFAS No. 109, when making its own accounting and ratemaking decisions, as evidenced by the Authority's decision in last year's rate case. And with particular regard to applying SFAS No. 109 for ratemaking purposes, Mr. Miller acknowledged that other state utility commissions do not follow this standard either.<sup>174</sup> On further cross-examination, Mr. Miller also recognized, as he must, that the Authority is not bound to follow FASB's accounting rules and, in fact, does not use them for reaching its ratemaking decisions.<sup>175</sup> Indeed, TAWC must keep separate accounting records for its "financial accounting requirements" and its "regulatory accounting requirements."

Furthermore, Mr. Miller's proposed amortization of regulatory assets would have the effect of circumventing the Authority's ratemaking decisions.<sup>176</sup> "Regulatory assets" and "regulatory

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<sup>171</sup> TRA Order, 06-00290 at 38 (June 10, 2008).

<sup>172</sup> See attached Exhibit 1, Schedule 7, Lines 26 and 35.

<sup>173</sup> CAPD Response to Second Discovery Request of TAWC, Question No. 12 (SFAS No. 109 at ¶18).

<sup>174</sup> Tr.Vol.13 at 1328.

<sup>175</sup> Tr.Vol.13 at 1322-1324.

<sup>176</sup> Mike Miller Rebuttal at 88 and Rebuttal Exhibit MAM-11.

liabilities” have a very specific and technical meaning in FASB’s financial accounting world. According to FASB’s SFAS No. 71, TAWC must create in its financial accounting records either a “regulatory asset” or a “regulatory liability” to account for the difference between FASB’s accounting rules and this Authority’s accounting rules.<sup>177</sup>

For example, if the Authority does not allow TAWC to recover a particular expense in current rates but probably will allow this expense in the future, TAWC is required, under SFAS No. 71, to create a “regulatory asset” for financial accounting and reporting purposes.<sup>178</sup> An illustration of a regulatory asset is the TRA’s and FASB’s different treatment of pension expense. As acknowledged by Mr. Miller, the Authority generally uses the Employee Retirement Income Security Act (“ERISA”) to compute the amount of pension expense for ratemaking purposes; however, FASB requires pension expense to be computed pursuant to its SFAS No. 87.<sup>179</sup> So while pension expense is recoverable from ratepayers, the different treatment accorded to pensions under ERISA and SFAS No. 87 requires TAWC to recognize a regulatory asset for financial accounting and reporting purposes when the SFAS No. 87 pension calculation exceeds the ERISA calculation.<sup>180</sup>

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<sup>177</sup> CAPD Response to Second Discovery Request of TAWC, Question No. 12 (SFAS No. 71 at ¶ 3).

<sup>178</sup> CAPD Response to Second Discovery Request of TAWC, Question No. 12 (SFAS No. 71 at ¶ 9).

<sup>179</sup> TR.Vol.13 at 1321.

<sup>180</sup> Additionally, the ratemaking decision of this Authority may have the reverse effect, which results in an impairment of a regulatory asset. If, for example, the Authority does not allow TAWC to recover a particular expense in current rates and probably will never allow this expense to be recovered in the future, a regulatory asset is impaired under SFAS No. 71. *See* SFAS No. 71 at ¶10. However, if the Authority were to permit a public utility to recognize such impairments for ratemaking purposes, it would have the obvious effect of reversing its earlier decision to disallow the expense. Clearly, allowing such impairments to be recovered in rates would result in the utility recapturing expenses that the Authority has decided ratepayers should not pay.

However, if the Authority were to permit a public utility to amortize this regulatory asset for ratemaking purposes, it would have the obvious effect of reversing its earlier decision to compute pension expense in accordance with ERISA. Clearly, such amortizations of regulatory assets should not be used as a back-handed mechanism to recover expenses from current ratepayers when the Authority has decided that these expenses should be borne by future ratepayers.

For these reasons, the Authority should refuse to allow the amortization of regulatory assets for ratemaking purposes. Reconciling the difference between the Authority's requirements and FASB's requirements through such amortizations would serve only to subjugate the Authority's ratemaking decisions to FASB's accounting rules -- a result the Authority surely cannot intend. The Consumer Advocate therefore urges the Authority to reject TAWC's use of internally-generated income tax rates.

**2. The Authority Should Adopt The Consumer Advocate's Gross Receipts Tax Forecast.**

The Consumer Advocate is forecasting about \$188 thousand less in gross receipts tax than TAWC.<sup>181</sup> The disagreement between the parties on this tax stems primarily from application of the franchise and excise tax credits to the calculation of the gross receipts tax. According to Tennessee's gross receipts tax code, the taxpayer is allowed to deduct the amount of its franchise and excise taxes from its gross receipts tax calculation in order to determine the amount of gross receipts tax that is due.<sup>182</sup> In this case, the Consumer Advocate's calculation of the franchise and excise tax credits that should be applied is larger than TAWC's; thus, the Consumer Advocate's forecast of gross receipts tax is smaller than TAWC's. The Consumer Advocate asserts that TAWC's franchise and excise tax credits are understated primarily due to TAWC's use of a stale test period, as well as its failure to recognize the full effect of last year's \$4.1 million rate increase on excise tax (the rate increase will increase excise tax which, in turn, will reduce the gross receipts tax via application of a larger excise tax credit). The Authority, therefore, should adopt the Consumer Advocate's gross receipts tax forecast.

**D. RATE BASE**

The Consumer Advocate asserts that the Authority should approve an attrition year rate base of \$121.8 million, which is \$4.6 million higher than TAWC's projected rate base of \$117.2 million.<sup>183</sup> The Consumer Advocate's forecast for rate base is higher primarily due to including \$4.3

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<sup>181</sup> See attached Exhibit 1, Schedule 6, Line 2.

<sup>182</sup> Tenn. Code Ann. § 67-4-305.

<sup>183</sup> See attached Exhibit 19.

million of net utility plant for Walden's Ridge, which was excluded from this case by TAWC.<sup>184</sup>

In addition, the Consumer Advocate's rate base is about \$0.3 million higher due to its use of a more current test year, as well as more appropriate forecasting methodologies. Accordingly, with the exception of the different treatment of Walden's Ridge, the Consumer Advocate and TAWC are in basic agreement on the proper amount of total rate base for the attrition year, with the Consumer Advocate's figure being somewhat higher.<sup>185</sup> The parties, however, disagree on some of the methodologies that should be used to forecast rate base.

The appropriate methodologies for forecasting rate base, as well as the other components of the general ratemaking formula, are important; accordingly, the Authority may choose to address them in its decision of this case. The Consumer Advocate submits, however, that the Authority should not in any event select from the parties' opposing methodologies in a way that would result in a total rate base amount that is higher than the total being proposed by either of the parties. As noted previously, not only should the individual components of rate base be reasonable, but the methodologies used to forecast these components, when considered together, should produce an overall result that is also reasonable.

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<sup>184</sup> See attached Exhibit 5, Line 3.

<sup>185</sup> The Authority should consider the effects of the Consumer Advocate's higher rate base amount on revenue requirement as it decides TAWC's authorized rate of return in this case. As demonstrated by the general ratemaking formula, these two components of revenue requirement are interrelated ( $RR = \frac{RB \times ROR}{100} + O\&M + DEP + TAX$ ). Accordingly, the Consumer Advocate's higher rate base amount will put more money in the pocket of TAWC's investors. For example, if the Authority awarded an authorized rate of return of 7.5% in this case, the Consumer Advocate's higher rate base amount would result in \$569 thousand more in TAWC's revenue requirement (\$4.6 million in higher rate base times 7.5% authorized rate of return times 1.649695 revenue conversion factor).

Due to limitations on its time and resources, the Consumer Advocate will not address each component of rate base that the parties differ on, but will instead leave these areas of discussion to the Authority and its staff. One component of rate base that deserves special attention here, however, is construction work in process (“CWIP”). On August 18, 2008, TAWC revised its original CWIP forecast.<sup>186</sup> In addition to correcting a \$2 million dollar error in TAWC’s beginning balance, which lowered the CWIP forecast, TAWC also moved some of its original capital spending projects forward in time, which had the effect of offsetting some of the CWIP decrease caused by correction of the beginning balance error.<sup>187</sup> The Authority should pay close attention to TAWC’s shifting of its budgeted capital spending; and importantly, for the reasons set forth below, this shift should not be used as a basis to increase the Consumer Advocate’s overall rate base above the amount of its original attrition year forecast.

There is an interrelationship between CWIP and utility plant in service (“UPIS”). Capital spending projects are accounted for in CWIP as they are being constructed (such as the extension of a water main), but they are moved from CWIP to UPIS once the asset is placed into service (when the water begins to flow through the new main to ratepayers).<sup>188</sup> Both CWIP and UPIS are additions to rate base; however, the cost of a particular project cannot be accounted for in both CWIP and UPIS at the same time in order to prevent the double counting of this cost.<sup>189</sup> Because of this interrelationship between these accounts, a revision to the CWIP forecast must also result in a

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<sup>186</sup> TAWC Response to TRA Data Request (8/14/08), Question 7.

<sup>187</sup> *Id.*

<sup>188</sup> TAWC witness Sheila Miller agreed with this elementary concept of ratemaking on cross-examination. *See* Tr.Vol.5 at 608.

<sup>189</sup> *Id.*

revision to the UPIS forecast. Additionally, because UPIS is used as a basis to calculate depreciation, a revision to the UPIS forecast would also affect the forecast for depreciation expense. A revision to the depreciation expense forecast would obviously affect accumulated depreciation, as well as federal and state income taxes. Of course, all of these revisions would undoubtedly change the revenue requirement. And while the Consumer Advocate has reviewed TAWC's revised CWIP forecast, it is unable to locate anywhere in this record TAWC's corresponding revisions to UPIS, depreciation expense, accumulated depreciation, and federal and state income taxes, all of which must surely result from its changes to CWIP. Accordingly, if the Authority intends to rely on TAWC's revised CWIP forecast in this case, it should assure that all of the other interrelated parts of the ratemaking formula are adjusted accordingly. Otherwise, the revenue requirement will be misstated.

Furthermore, TAWC's revision to its CWIP does not affect the Consumer Advocate's forecast of rate base for the attrition year. It is undisputed that the amount of capital spending added to CWIP plus the amount of additions to UPIS equals the total capital additions to rate base.<sup>190</sup> As demonstrated in the attached exhibit, the Consumer Advocate actually has about \$28 thousand more in total capital additions to its rate base forecast than TAWC, even in light of TAWC's revised CWIP calculation.<sup>191</sup> In other words, when considered together, the Consumer Advocate's UPIS and CWIP forecasts are slightly greater than TAWC's UPIS and revised CWIP forecasts for the attrition year. It therefore would overstate the Consumer Advocate's rate base forecast for the attrition year

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<sup>190</sup> On cross-examination, TAWC witness Sheila Miller acknowledged the validity of this concept. *See* Tr.Vol.5 at 615-616.

<sup>191</sup> *See* attached Exhibits 20-21.

if TAWC's revised CWIP calculation is used as a basis for increasing the Consumer Advocate's original forecast.

For these reasons, the Consumer Advocate urges the Authority to adopt its rate base forecast. However, if TAWC's rate base forecast is used by the Authority for its analysis of rate base issues, particularly TAWC's revised CWIP calculation, the Authority should assure that all of the ratemaking components affected by CWIP are properly adjusted to reflect TAWC's revised CWIP calculation.

**E. RATE OF RETURN**

As argued below, the Consumer Advocate maintains ratepayers should pay a reasonable cost of capital that does not exceed the rate ordered by the Authority just last year, not one based on continuous market gains or a method never accepted by any state regulatory authority in the United States.

**1. There Is No Evidence Supporting A Higher Rate Of Return Than That Granted By The Authority Less Than A Year Ago.**

A little over a year ago, the Authority granted TAWC an overall rate of return of 7.89% with an equity return of 10.2% and debt costing 6.1%.<sup>192</sup> In the present case, both Consumer Advocate witness Dr. Brown and TAWC witness Dr. Vilbert acknowledged that the stock market is generally weaker than it was a year ago.<sup>193</sup> In addition, Dr. Brown noted that all but two of the eight comparable water companies used to develop the cost of equity in this case suffered a drop in share

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<sup>192</sup> TRA Order, 06-00290, at 47 (June 10, 2008).

<sup>193</sup> Brown Direct at 11-12; (USA Today headline, July 1, 2008: "Stocks off \$2.1 trillion this year"); Vilbert Hearing Testimony at Tr.Vol.3 at 329:24-330:3 ("Q. Okay. Didn't you testify a little while ago that a lot of people had lost money in the stock market in the last year, Dow Jones has dropped about 20 %. A. Yes.").



price over the past year.<sup>194</sup> Accordingly, the TRA should in no case grant TAWC a higher rate of return or cost of equity than it granted last year.

The Consumer Advocate, of course, believes the overall rate of return and cost of equity should be lower than that granted last year. The reasons for this position are set forth below. However, to repeat, the Consumer Advocate maintains that there is no evidence to support a higher rate of return than was granted in the last case, 06-00290, and ample evidence to support a lower finding.

**2. The Authority Should Not Base A Return On Equity On The Methodology Of Dr. Vilbert Which Has Not Been Accepted By Any State Regulatory Authority.**

Dr. Steve Brown testified as to the cost of capital in this case for the Consumer Advocate. Dr. Brown testified as to both the cost of equity and the cost of debt. In his testimony, Dr. Brown stated that the most reliable method of determining the cost of equity was to focus on dividend yield and dividend growth.<sup>195</sup> Dr. Brown's emphasis on dividend yield and growth as opposed to capital gains as a method of determining the cost of equity was one of the main differences between him and TAWC's cost of equity expert, Dr. Vilbert. In addition to Dr. Brown and Dr. Vilbert, Michael Gorman also testified as to the cost of capital for the Chattanooga Manufacturers Association.

Dr. Brown, Dr. Vilbert, and Mr. Gorman all used the Discounted Cash Flow (DCF) and Capital Asset Pricing Model (CAPM) methods to determine the cost of equity. Dr. Vilbert, however, based both his DCF and CAPM calculations on a "Market-Value Capital Structure" methodology which he acknowledged had never been accepted by any state regulatory authority in

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<sup>194</sup> Brown Direct at 12.

<sup>195</sup> Brown Direct at 14-16.

the United States.<sup>196</sup> The Authority should not be the first state to accept this speculative methodology.

After applying both the DCF and CAPM methodologies, Dr. Brown testified that the cost of equity should be 7.5%.<sup>197</sup> Dr. Vilbert, using the methodology which has not been accepted by any state regulatory authority, testified that the cost of equity should be 11.75%.<sup>198</sup> Mr. Gorman's cost of equity was in a range of 9.0% to 10.7% with a midpoint of approximately 9.9%, although Mr. Gorman stated that it was reasonable for the Authority to use the 10.2% equity return it ordered in the last Tennessee American rate case, 06-00290.<sup>199</sup>

In addition to the issues related to the cost of equity, there were also issues about the cost of debt and the precise percentage of each kind of capital, equity and debt, in Tennessee American's capital structure. Briefly, Dr. Brown testified that the cost of long-term debt was 5.86% and the cost of short-term debt was 2.87%.<sup>200</sup> Dr. Vilbert did not testify as to the cost of debt but instead left that subject to Mike Miller of TAWC who testified that the cost of long-term debt was 6.26 % and short-term debt 4.5%.<sup>201</sup> Mr. Gorman testified that the cost of long-term debt was 6.26% and short-term debt 3.25%.<sup>202</sup>

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<sup>196</sup> Vilbert Rebuttal at 22:4-14.

<sup>197</sup> Brown Direct at 4:28.

<sup>198</sup> Vilbert Direct at 4:5; Petition at ¶ 10.

<sup>199</sup> Gorman Direct at 3:6-7 and 23:12-14.

<sup>200</sup> Brown Direct at 5, 7, and 8.

<sup>201</sup> Mike Miller Direct at MAM-3, p. 1 of 3, and Rebuttal at 24:9-11.

<sup>202</sup> Gorman Direct at 25:15.

With regard to capital structure, Dr. Brown, following the Authority precedent of using double leveraging to determine the capital structure of an affiliate, determined that the capital structure was 42.96% equity, 55.14% long-term debt, and 1.90% short-term debt.<sup>203</sup> Dr. Vilbert had no independent opinion as to the capital structure of Tennessee American.<sup>204</sup> Instead, Mike Miller of TAWC testified that the capital structure of the parent was 42.98% equity, 50.66% long-term debt, and 5.20% short-term debt.<sup>205</sup> Mr. Gorman, who, like Dr. Brown, used the double leveraging method, determined that the capital structure of the parent was 29.07% equity, 65.77% long-term debt, and 5.09% short-term debt.<sup>206</sup>

Finally, Dr. Brown and Mike Miller calculated an overall cost of capital or rate of return. Dr. Brown testified to an overall cost of capital of 6.65%.<sup>207</sup> Mike Miller testified to an overall cost of capital of 8.514%.<sup>208</sup> Mr. Gorman calculated an overall rate of return of 7.33%.<sup>209</sup>

In this section on the Cost of Capital, the Consumer Advocate will discuss five main subjects: (A) the choice of comparable companies; (B) the capital structure of TAWC, *i.e.*, the percentage amounts of TAWC's debt and equity; (C) the use of the Discounted Cash Flow (DCF) model to compute the cost of equity; (D) the use of the Capital Asset Pricing Model (CAPM) to

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<sup>203</sup> Brown Direct at 4:20-24.

<sup>204</sup> Tr.Vol.2 at 290:6-25.

<sup>205</sup> Mike Miller Direct at MAM-3; Petition at ¶ 10.

<sup>206</sup> Gorman Direct at MPG-8 and 23-25.

<sup>207</sup> Brown Direct at 4:4-5.

<sup>208</sup> Mike Miller Direct at 8:3; Petition at ¶ 11.

<sup>209</sup> Gorman Direct at Exhibit MPG-8.

compute the cost of equity; (E) the cost of debt; and (F) the overall cost of capital and the impact of Sarbanes-Oxley (SOX) on the cost of capital.

**3. Analysis Of Cost Of Capital Issues.**

**a. Comparable companies.**

All three experts used the same water companies in their analyses of comparable companies. Dr. Vilbert also used a set of gas companies as comparable companies and Mr. Gorman “adopted” the same set of gas companies.<sup>210</sup> Dr. Brown testified that it was not proper to use gas companies as comparable companies to water companies.<sup>211</sup> Dr. Brown pointed out the great differences between the two commodities, particularly the difference in acquiring and transporting the two commodities.

Thus, with the exception of the use of gas companies as comparable companies, the choice of comparable companies is not a major issue in this case.

**b. Capital structure.**

Both Dr. Brown and Mr. Gorman made significant adjustments to the capital structure proposed by TAWC, but for different reasons. The company’s proposed capital structure of the parent was 42.98% equity, 50.66% long-term debt, and 5.20% short-term debt.<sup>212</sup>

Dr. Brown’s adjustment to the company’s proposed capital structure was made to account for the so-called “equity infusion” made to AWWC. Dr. Brown disputed that there was, in fact, any “equity infusion”. Dr. Brown testified that:

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<sup>210</sup> Vilbert Direct at 14:10-21 and Gorman Direct at 27:7-12.

<sup>211</sup> Brown Direct at 83.

<sup>212</sup> Mike Miller Direct at MAM-3; Petition at ¶ 10.

However, I did make one additional change. AWW engaged in a \$200 million off-book loan transaction. According to the company this amount was to be used to pay down short-term debt. Off-book transactions are like any other obligation. Therefore, I reduced the short-term debt from \$368 million to \$168 million and raised the long-term debt by \$200 million.<sup>213</sup>

Thus, this so-called “equity infusion” was debt, not equity.<sup>214</sup>

Even though the Authority, in the last TAWC rate case, used the double leveraging method to determine the company’s capital structure, TAWC did not support the use of that method. The company did, however, attempt to employ double leveraging under duress, as it were, with the explanation that if the Authority were to use double leveraging it should do so in such-and-such a manner. Because TAWC failed to properly follow the Authority method of employing double leveraging, the company’s double leveraging calculations should be rejected.

Both Dr. Brown and Mr. Gorman, on the other hand, willingly employed double leveraging as a first step to determining a capital structure. As a result of using the double leveraging methodology and with the adjustment for the off-book transaction, Dr. Brown found that the capital structure of TAWC was 42.96% equity, 55.14% long-term debt and 1.90% short-term debt.<sup>215</sup>

Mr. Gorman made a significant adjustment to the company’s proposed capital structure by removing \$1.7 million of equity that was based on “goodwill”.<sup>216</sup> Accordingly, his capital structure was 29.07% equity, 65.77% long-term debt, and 5.09% short-term debt.<sup>217</sup>

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<sup>213</sup> Brown Direct at 8:12-20.

<sup>214</sup> *Id.*

<sup>215</sup> Brown Direct at 4:20-24.

<sup>216</sup> Gorman Direct at 24.

<sup>217</sup> Gorman Direct at MPG-8 and 23-25.

**c. Discounted Cash Flow (DCF) model.**

Dr. Brown placed his primary reliance in computing the cost of equity on the Discounted Cash Flow (DCF) model.<sup>218</sup> Dr. Brown stated:

In my opinion TAW's equity return should be no more than 7.5% because this return represents the normal dividend-payment behavior of water companies in good times and bad and is not tied to equity gains or losses caused by per share price changes.<sup>219</sup>

Thus, Dr. Brown explicitly stated that he believed that a method based on analysis of dividend yield and growth was more appropriate than one based on capital gains such as the Capital Asset Pricing Model.<sup>220</sup>

All three cost of capital witnesses, Dr. Brown, Dr. Vilbert and Mr. Gorman, used the Discounted Cash Flow (DCF) model in computing the cost of equity. There was, however, at least one significant difference in the way Dr. Brown applied the DCF method, namely, the inputs he used in computing the dividend growth portion of the DCF formula.

The basic DCF formula is as follows:

$$K = D/P + g$$

Where: K = cost of equity

D = dividend per share

P = price per share

g = growth rate

The expression D/P is the dividend yield.

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<sup>218</sup> Brown Direct at 17-20.

<sup>219</sup> Brown Direct at 17:6-11.

<sup>220</sup> Brown Direct at 16.

When Dr. Brown computed the dividend growth portion of the DCF formula he used an average of the last five years of dividend growth.<sup>221</sup> Dr. Vilbert, on the other hand, used analysts' expectations to estimate future dividend growth.<sup>222</sup> In the opinion of the Consumer Advocate, the past is the best predictor of the future in the case of dividend growth.

Dr. Brown also testified that the DCF's reliance on dividend yield and growth makes it superior to the CAPM because, quoting an article by Arnott and Bernstein, "the dividend is the one reliable aspect of stock ownership over the past two centuries. It is the cash income returned to the shareholders; it is the means by which the long-term investor earns most of his or her internal rate of return."<sup>223</sup>

Dr. Brown testified that his DCF return was 7.5%.<sup>224</sup> Dr. Brown further testified that this 7.5% result was consistent with the forecast of investment professionals such as the Bank of America, Bank of Tokyo, Merrill Lynch, Goldman Sachs and Wells Fargo, who took part in a survey conducted by the Federal Reserve Bank of Philadelphia.<sup>225</sup> According to this survey, professional forecasters were predicting an equity return of 6.5%; Dr. Vilbert's equity return of 11.75% is 80% higher than this figure forecast by investment professionals.<sup>226</sup>

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<sup>221</sup> Brown Direct at 19.

<sup>222</sup> Vilbert Direct at 26:5-9.

<sup>223</sup> Brown Direct at 38.

<sup>224</sup> Brown Direct at 19.

<sup>225</sup> Brown Direct at 20-23.

<sup>226</sup> *Id.* at 21.

Dr. Brown's 7.5% cost of equity is also supported by the fact that bond rates for U.S. 30-year, 10-year, and 5-year bonds have declined from November 2006 to March 2008, with the highest rate being 4.35%; thus, compared to the alternative of U.S. bonds, a 7.5% return is a good one.<sup>227</sup>

In addition, Dr. Vilbert also based his forecasts on a predicted GDP growth of 4.9%. The forecasters surveyed by the Federal Reserve Bank of Philadelphia, however, predicted only a 2.75% growth rate.<sup>228</sup>

Finally, it should be noted that Dr. Vilbert's DCF calculations were ultimately tied to the use of his "Market-Value Capital Structure", a methodology that Dr. Vilbert admitted has not been accepted by any state regulatory authority.<sup>229</sup>

**d. CAPM model.**

The CAPM model is expressed as follows:

$$K = R_f + \beta(R_m - R_f)$$

Where: K = expected return

$R_f$  = risk free return

$R_m$  = overall market return

$\beta$  = measure of asset risk relative to market risk.

All three cost of capital witnesses, Dr. Brown, Dr. Vilbert and Mr. Gorman, used the CAPM method of calculating the cost of equity (Dr. Vilbert also used a variation called the empirical CAPM). Dr. Brown, however, was critical of the CAPM, noting that "[o]f the two general methods,

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<sup>227</sup> Tr.Vol.19 at 1896:8 and 1897:9.

<sup>228</sup> Brown Direct at 20-23; Tr.Vol.18 at 1780:10-1781:11.

<sup>229</sup> Vilbert Rebuttal at 22:4-14.



DCF and CAPM, my opinion is that the DCF is more appropriate because it tracks the actual flow of a company's payments to shareholders.”<sup>230</sup>

Dr. Brown supported his criticism of the CAPM method by referring to several scholarly articles which pointed out shortcomings in the CAPM.<sup>231</sup> An article by Fama and French entitled “The Capital Asset Pricing Model: Theory and Evidence” noted that “the failure of the CAPM in empirical tests implies that most applications of the model are invalid.”<sup>232</sup> Furthermore, an article by Cohen, Polk and Vuolteenaho entitled “Money Illusion in the Stock Market: The Modigliani-Cohn Hypothesis” described how the “money illusion” has affected the case of the CAPM.<sup>233</sup>

Dr. Brown particularly criticized the CAPM's reliance on capital gains. Dr. Brown noted that the “CAPM assumes there are capital gains in the overall market.”<sup>234</sup> Dr. Vilbert also acknowledged the assumption of capital gains in his equity analysis, stating that investors had “expected” returns that were always positive.<sup>235</sup> Thus, Dr. Vilbert's CAPM analysis is ultimately premised on the assumption that there will always be capital gains.<sup>236</sup> Setting rates based on a stock always having capital gains is clearly not reflective of economic reality.

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<sup>230</sup> Brown Direct at 23-27.

<sup>231</sup> Brown Direct at 32-40.

<sup>232</sup> Brown Direct at 33.

<sup>233</sup> *Id.* at 34.

<sup>234</sup> Brown Direct at 16:1-2.

<sup>235</sup> Vilbert Rebuttal at 9:5-11.

<sup>236</sup> Tr.Vol.2 at 319:1-320.

In applying the CAPM methodology, Dr. Brown used betas from the NASDAQ web site.<sup>237</sup>

Dr. Brown explained that he used the NASDAQ betas because they were based on the S & P 500 Index, the index most often used by the sample group water companies to compare their performance with.<sup>238</sup>

Dr. Vilbert, on the other hand, used betas from Valueline, which tracks the New York Stock Exchange.<sup>239</sup> Dr. Brown testified that the Valueline betas (adjusted by Dr. Vilbert) for the sample water companies averaged .86, while the NASDAQ betas averaged .50.<sup>240</sup> Given the nature of the CAPM formula, the higher betas inevitably lead to a higher cost of equity.

Dr. Brown also testified that betas, whether from Valueline or NASDAQ, reflected all the risk faced by the company.<sup>241</sup> Thus, there is no need to add the extra layer of “financial risk” as advocated by Dr. Vilbert.<sup>242</sup>

Finally, it should be noted that Dr. Vilbert’s CAPM calculations were ultimately tied to the use of his “Market-Value Capital Structure”, a methodology that Dr. Vilbert admitted has not been accepted by any state regulatory authority.<sup>243</sup>

**e. Cost of debt.**

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<sup>237</sup> Brown Direct at 41:26-32.

<sup>238</sup> *Id.*

<sup>239</sup> *Id.* at 47:8-11 and 48:4-7.

<sup>240</sup> Brown Direct at 48.

<sup>241</sup> Tr.Vol.18 at 1794:17-19.

<sup>242</sup> Vilbert Direct at 3:17-28.

<sup>243</sup> Vilbert Rebuttal at 22:4-14.

Dr. Brown set forth his calculations of debt in a chart on page 5 of his Pre-Filed Direct Testimony. Dr. Brown testified that the long-term debt cost was 5.8% and the short-term debt cost was 2.87%. Dr. Brown used publicly available 10 Qs of AWW filed with the SEC on May 15, 2008. In contrast, Dr. Brown testified that Mike Miller used certain information that was only privately available to the company in computing the cost of debt.<sup>244</sup> Dr. Brown rejected this approach as one that conflicted with using information readily available to the investing public.

Mr. Miller's cost of debt was 6.26% in long-term debt and 4.5% for short-term debt.<sup>245</sup>

**f. Overall rate of return and the impact of SOX on the cost of capital.**

In TAWC's last rate case, Docket 06-00290, the Authority granted an overall rate of return of 7.89% at a TRA conference on May 15, 2007. Both Dr. Brown and Dr. Vilbert recognized that the stock market, the source of equity capital, is currently not as strong as it was a year ago.<sup>246</sup> (USA Today headline, July 1, 2008: "stocks off \$2.1 trillion this year");<sup>247</sup> ("Q. Okay. Didn't you testify a little while ago that a lot of people had lost money in the stock market in the last year, Dow Jones has dropped about 20 %. A. Yes."). Thus, current economic conditions provide no support for increasing the cost of capital and the corresponding overall rate of return.

In addition to establishing that economic conditions do not support an upward revision of the overall rate of return, the Consumer Advocate also testified that TAWC's failure to obtain full Section 404 certification under the Sarbanes-Oxley (SOX) Act had a negative impact on TAWC's

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<sup>244</sup> Tr.Vol.18 at 1861-1862.

<sup>245</sup> Mike Miller Direct at MAM-3.

<sup>246</sup> Brown Direct at 11-12

<sup>247</sup> Tr.Vol.3 at 329:24-330:3.

ability to attract capital. Section 404 provides for certification of a company's internal financial controls by an outside auditor. TAWC's decision to forgo SOX 404 certification until 2010 provides yet another reason for the Authority to deny an increase in TAWC's overall rate of return.

As Dr. Brown testified, investors recognize the value of SOX Section 404 certification. For example, SEC Commission Campos stated that "[i]nvestors love it . . . because "capital demands protection."<sup>248</sup> In addition, Dr. Brown testified that the Ohio Public Employees Retirement System (OPERS) placed great value in SOX Section 404 certification and compared it to the Good Housekeeping Seal of Approval.<sup>249</sup>

The evidence also established that all the other publicly traded public utilities regulated by the Authority had received SOX certification.<sup>250</sup>

Finally, Dr. Brown testified that "one reason AWW is seeking an extreme equity return is to overcome the negative effect of not having a SOX certification."<sup>251</sup> The Authority should not allow TAWC's failure to obtain SOX Section 404 certification to drive up the rate of return in this case.

## **VI. REVENUE CONVERSION FACTOR**

The gross revenue conversion factor is a calculation that shows how much gross operating revenue should be adjusted to compensate for any forecasted surplus or deficiency in net operating

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<sup>248</sup> Brown Direct at 51:22-28.

<sup>249</sup> Tr.Vol.18 at 1794.

<sup>250</sup> Brown Direct at 67:6-10.

<sup>251</sup> Brown Direct at 70:11-14.

profits earned by TAWC.<sup>252</sup> The Consumer Advocate and TAWC disagree on how to compute the gross revenue conversion factor; application of the Consumer Advocate's gross revenue conversion factor results in about \$400 thousand less in revenue requirement.<sup>253</sup> As Consumer Advocate witness Buckner testified, TAWC's method of computing the gross revenue conversion factor incorrectly includes the gross receipts tax and incorrectly excludes forfeited discounts for converting profits to revenue.<sup>254</sup> Inclusion of the gross receipts tax in the factor is not valid because this tax is not paid in the period the associated revenue is collected; and exclusion of the forfeited discounts is not valid because these amounts are received in the period the associated revenue is collected.<sup>255</sup>

The computation of the gross revenue conversion factor was also an issue in last year's rate case, and the Authority properly adopted the Consumer Advocate's methodology for computing the factor in that case.<sup>256</sup> It should do so again this year.

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<sup>252</sup> Buckner Direct at 12.

<sup>253</sup> *Id.*

<sup>254</sup> Buckner Direct at 12.

<sup>255</sup> *Id.*

<sup>256</sup> TRA Order, 06-00290, at 43 (June 11, 2008).

## **VII. REVENUE SURPLUS**

Based on the foregoing, the Consumer Advocate concludes that the rates presently charged to TAWC's customers are more than sufficient to cover TAWC's expenses and taxes, as well as provide a fair rate of return to its investors. Indeed, the Consumer Advocate's accounting forecast, when coupled with its rate of return recommendation, supports a rate reduction of \$1.5 million.<sup>257</sup> If the Consumer Advocate's accounting forecast is coupled with the rate of return recommended by CMA witness Gorman, the rates charged to TAWC's customers should be reduced by \$800 thousand.<sup>258</sup> And as argued in Section V.E.1, *supra*, the Consumer Advocate does not believe that a rate of return higher than the one authorized by the Authority in last year's case can be justified in light of the facts of this case. Accordingly, in no event should the Authority approve a rate increase that exceeds \$800 thousand, which is computed by coupling the Consumer Advocate's accounting forecast with TAWC's currently authorized rate of return.<sup>259</sup>

## **VIII. RATE DESIGN**

The Consumer Advocate is proposing that any increase or decrease in rates be spread evenly across the board to all ratepayer classes and locations.<sup>260</sup> As Mr. Buckner testified, "[t]his approach would assure that the benefits or burdens created by any rate adjustment in this case are shared

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<sup>257</sup> See attached Exhibit 22.

<sup>258</sup> *Id.*

<sup>259</sup> *Id.*

<sup>260</sup> Buckner Direct at 71.

proportionately by all customers.”<sup>261</sup> This across-the-board principle was also endorsed by Mr. Gorman testifying for the Chattanooga Manufacturers Association.<sup>262</sup>

TAWC, on the other hand, proposes that some districts should pay more on a percentage basis, and some less.<sup>263</sup> For example, under the TAWC plan as initially proposed, Chattanooga would pay 22.05% more; Lookout Mountain, 13.60%; Lakeview, 28.26%; Lone Oak, -8.21%; and Suck Creek, -16.34%.<sup>264</sup> And as described earlier, Walden’s Ridge would not be included at all under the TAWC rate increase plan.

The Consumer Advocate’s across the board plan is the most fair plan and should be adopted by the Authority.<sup>265</sup>

## **IX. CONCLUSION**

For the foregoing reasons, the Authority should find that TAWC’s petition to increase water rates is without merit. In light of the facts of this record, TAWC has not carried its burden of proving that a rate increase would be just and reasonable at this time. The Authority therefore should deny TAWC’s proposed rate increase and, instead, reduce the water rates charged to TAWC’s customers by \$1.5 million as recommended by the Consumer Advocate.

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<sup>261</sup> *Id.*

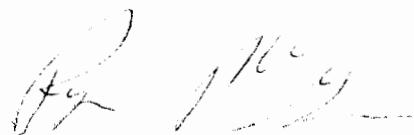
<sup>262</sup> Gorman Direct at 56 (noting the absence of a district-specific cost of service study as one reason for his position).

<sup>263</sup> Buckner Direct at 70.

<sup>264</sup> TN-TRA-01-Q013-REVENUES, p. 15 of 99.

<sup>265</sup> If the Authority includes Walden’s Ridge in this case, however, the Consumer Advocate urges it to assure that the rate charged to Walden’s Ridge covers any revenue requirement attributable to serving Walden’s Ridge.

RESPECTFULLY SUBMITTED,

A handwritten signature in dark ink, appearing to read "R. McGehee", is written over a horizontal line.

RYAN L. MCGEHEE

Assistant Attorney General

Office of the Attorney General and Reporter

Consumer Advocate and Protection Division

P.O. Box 20207

Nashville, TN 37202-0207

Dated: September 2, 2008



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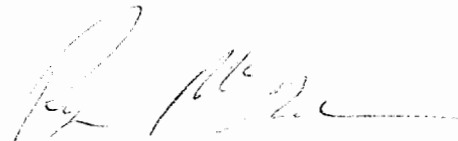
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**Office of the Attorney General - State of Tennessee**  
**Consumer Advocate and Protection Division**  
**TRA Docket 08-00039**  
**Tennessee American Water Company**

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**Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
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# Exhibit 1

## Revised Exhibit CAPD

Tennessee-American Water Company  
Revenue Deficiency  
For the 12 Months Ending August 31, 2009

Exhibit 1, Page 1 of 9

Line No.		CAPD		TAWC		Difference
1	Rate Base	121,818,865	A/	118,199,645	A/	3,619,220
2	Operating Income at Present Rates	9,006,538	B/	5,452,341	B/	3,554,197
3	Earned Rate of Return (Line 2/Line 1)	7.39%		4.61%		2.78%
4	Cost of Capital	6.65%	C/	8.514%	E/	-1.86%
5	Required Operating Income (Line 1*Line 4)	8,105,387		10,063,518		(1,958,131)
6	Operating Income Deficiency (Line 5-Line 2)	(901,151)		4,611,177		(5,512,328)
7	Gross Revenue Conversion Factor	1.649695	D/	1.71974555	E/	(0.070050)
8	Revenue Deficiency (Line 6*Line 7)	<u>(1,486,624)</u>		<u>7,930,051</u>		<u>(9,416,675)</u>

A/ Schedule 2  
B/ Schedule 3  
C/ Schedule 9  
D/ Schedule 8  
E/ TAWC Exhibit 1, Schedule 1

Tennessee-American Water Company  
Comparative Rate Base  
For the 12 Months Ending August 31, 2009

**Exhibit 1, Page 2 of 9**

Line No.		CAPD	B/	TAWC	A/	Difference
1	Utility Plant in Service	209,341,111		203,998,392		5,342,719
2	Construction Work in Progress	5,284,789		7,996,461		(2,711,672)
3	Utility Plant Capital Lease	1,590,500		1,590,500		-
4	Limited-Term Utility Plant - Net	-		-		-
5	Working Capital	599,651		1,396,084		(796,433)
6	Def. Maint.	-		-		-
7	Total Additions	<u>216,816,051</u>		<u>214,981,437</u>		<u>1,834,614</u>
8	Accumulated Depreciation	62,426,348		63,563,205		(1,136,857)
9	Accumulated Amort. of Utility Capital Lease	1,139,858		1,139,858		-
10	Accumulated Deferred Income Taxes	15,242,359		16,931,771		(1,689,412)
11	Customer Advances for Construction	7,628,149		6,793,935		834,214
12	Contributions In Aid of Construction	8,459,113		8,399,016		60,097
13	Unamortized Investment Tax Credit	33,994		37,993		(3,999)
14	RWIP/Utility Plant Acquisition Adj.	<u>67,365</u>		<u>(83,986)</u>		<u>151,351</u>
15	Total Deductions	<u>94,997,186</u>		<u>96,781,792</u>		<u>(1,784,606)</u>
16	Rate Base	<u>121,818,865</u>		<u>118,199,645</u>		<u>3,619,220</u>

A/ TAWC Exhibit 1, Sch. 2

B/ CAPD work papers.

Tennessee-American Water Company  
Income Statement at Current Rates  
For the 12 Months Ending August 31, 2009

**Exhibit 1, Page 3 of 9**

Line No.		CAPD		TAWC		Difference
1	Operating Revenues	39,492,768	A/	37,142,460	A/	2,350,308
2	Operations and Maintenance Expense	19,752,233	B/	21,478,005	B/	(1,725,772)
3	Depreciation and Amortization Expense	4,366,120	I/	4,730,347	C/	(364,227)
4	Taxes Other Than Income	4,047,986	D/	4,176,423	G/	(128,437)
5	State Excise Tax	473,924	E/	406,685	H/	67,239
6	Federal Income Tax	2,309,657	E/	1,362,349	H/	947,308
7	Total Operating Expense	30,949,920		32,153,809		(1,203,889)
8	AFUDC	463,690	F/	463,690	F/	-
9	Net Operating Income for Return	9,006,538		5,452,341		3,554,197

A/ TAWC Exhibit 2, Sch. 2

B/ Schedule 5

C/ TAWC Exhibit 2, Sch. 1

D/ Schedule 6

E/ Schedule 7

F/ TAWC Exhibit 2, Sch. 3

G/ TAWC Exhibit 2, Sch. 1

H/ TAWC Exhibit 2, Sch. 6

I/ CAPD work paper E-DEP

Tennessee-American Water Company  
Income Statement at Proposed Rates  
For the 12 Months Ending August 31, 2009

Exhibit 1, Page 4 of 9

Line No.		Current Rates	A/ B/	Adjustments	C/	Proposed Rates
1	Operating Revenues	39,173,060	B/	(1,486,624)		37,686,436
2	Forfeited Discount Revenues	319,708	B/	(12,785)		306,923
3	Total Revenues	<u>39,492,768</u>		<u>(1,499,409)</u>		<u>37,993,359</u>
4	Operations and Maintenance Expense	19,752,233		(16,643)		19,735,590
5	Depreciation and Amortization Expense	4,366,120				4,366,120
6	Taxes Other Than Income	4,047,986				4,047,986
7	State Excise Tax	473,924		(96,380)		377,544
8	Federal Income Tax	<u>2,309,657</u>		(485,235)		<u>1,824,422</u>
9	Total Operating Expense	<u>30,949,920</u>				<u>30,351,662</u>
10	AFUDC	<u>463,690</u>				<u>463,690</u>
11	Net Operating Income for Return	<u>9,006,538</u>				<u>8,105,387</u>

A/ Schedule 3

B/ TAWC Exhibit 2, Sch. 2

C/ Schedule 1, Line 8 x appropriate factor from Schedule 8



Tennessee-American Water Company  
Operation & Maintenance Expenses  
For the 12 Months Ending August 31, 2009

**Exhibit 1, Page 5 of 9**

Line No.		CAPD	A/	TAWC	B/	Difference
1	Salaries and Wages	4,877,597		5,058,987		(181,390)
2	Purchased Water	52,621		52,110		511
3	Fuel and Power	2,337,108		1,922,043		415,065
4	Chemicals	1,060,227		1,559,222		(498,995)
5	Waste Disposal	169,535		179,088		(9,553)
6	Management Fees	3,453,223		4,335,190		(881,967)
7	Group Insurance	1,672,934		1,714,550		(41,616)
8	Pensions	1,156,442		1,161,108		(4,666)
9	Regulatory Expense	341,868		543,384		(201,516)
10	Insurance Other Than Group	534,380		583,492		(49,112)
11	Customer Accounting	763,785		738,845		24,940
12	Uncollectible Expense	434,707		417,756		16,951
13	Rents	17,618		11,336		6,282
14	General Office Expense	256,041		245,926		10,115
15	Miscellaneous Expense	1,802,072		2,018,623		(216,551)
16	Other Maintenance Expense	822,075		936,345		(114,270)
17	Total O&M Expense	<u>19,752,233</u>		<u>21,478,005</u>		<u>(1,725,772)</u>

A/ CAPD work papers

B/ TAWC Exhibit 2, Sch. 3

Tennessee-American Water Company  
Taxes Other Than Income Taxes  
For the 12 Months Ending August 31, 2009

**Exhibit 1, Page 6 of 9**

Line No.		CAPD	TAWC	D/	Difference
1	Other General Taxes	-	568		(568)
2	Gross Receipts Tax	357,833 A/	546,017		(188,184)
3	TRA Inspection Fee	75,588	74,295		1,293
4	Property Taxes	2,842,849 B/	2,824,972		17,877
5	Franchise Tax	397,550	344,020		53,530
6	FICA Taxes	366,896 C/	378,917		(12,021)
7	Unemployment Taxes	<u>7,270</u> C/	<u>7,634</u>		<u>(364)</u>
8	Total Taxes Other Than Income Taxes	<u>4,047,986</u>	<u>4,176,423</u>		<u>(128,437)</u>

A/ CAPD work paper T-OTAX2

B/ CAPD work paper T-OTAX1

C/ CAPD work paper T-OTAX3

D/ TAWC Exhibit 2, Sch. 5, TAWC response to TRA #13, Page 1 of 147.

Tennessee-American Water Company  
Excise and Income Taxes  
For the 12 Months Ending August 31, 2009

Exhibit 1, Page 7 of 9

Line No.		Attrition Amount A/ B/
1	Operating Revenues	39,492,768 B/
2	Salaries and Wages	4,877,597
3	Purchased Water	52,621
4	Fuel and Power	2,337,108
5	Chemicals	1,060,227
6	Waste Disposal	169,535
7	Service Company Charges	3,453,223
8	Group Insurance	1,672,934
9	Pensions	1,156,442
10	Regulatory Expense	341,868
11	Insurance Other Than Group	534,380
12	Customer Accounting	763,785
13	Uncollectible Expense	434,707
14	Rents	17,618
15	General Office Expense	256,041
16	Miscellaneous Expense	1,802,072
17	Other Maintenance Expense	822,075
18	Depreciation and Amortization Expense	4,366,120
19	Taxes Other Than Income	4,047,986
20	NOI Before Excise and Income Taxes	11,326,429
21	AFUDC	463,690
22	Interest Expense	(4,479,075) C/
23	Pre-tax Book Income	7,311,044
24	Schedule M Adjustments	(19,904) D/
25	Excise Taxable Income	7,291,140
26	Excise Tax Rate	6.50%
27	Excise Tax Payable	473,924
28	Excise Tax Deferred	-
29	Excise Tax Expense	473,924
30	Pre-tax Book Income	7,311,044
31	Preferred Dividend Credit	-
32	Excise Tax	(473,924)
33	Schedule M Adjustments	(19,904) D/
34	FIT Taxable Income	6,817,215
35	FIT Rate	35.00%
36	Federal Income Tax Payable	2,386,025
37	ITC Amortization	(76,368) E/
38	Federal Income Tax Deferred	-
39	Federal Income Tax Expense	2,309,657

A/ Schedule 5

B/ Schedule 4

C/ Schedule 1, line 1 \* Weighted Cost of Debt per Schedule 9

D/ TAWC Exhibit No. 2, Schedule 7, Line 36.

E/ TAWC Exhibit No. 2, Schedule 7, Line 11.

Tennessee-American Water Company  
Revenue Conversion Factor  
For the 12 Months Ending August 31, 2009

**Exhibit 1, Page 8 of 9**

Line No.		<u>Amount</u>	<u>Balance</u>
1	Operating Revenues		1.000000
2	Add: Forfeited Discounts	0.0086 A/	<u>0.008600</u>
3	Balance		1.008600
4	Uncollectible Ratio	0.0111 B/	<u>0.011195</u>
5	Balance		0.997405
6	State Excise Tax	0.0650 C/	<u>0.064831</u>
7	Balance		0.932573
8	Federal Income Tax	0.3500 C/	<u>0.326401</u>
9	Balance		<u>0.606173</u>
10	Revenue Conversion Factor (Line 1 / Line 11)		<u><u>1.649695</u></u>

A/ 12 MTD 3/31/08 (\$319,708/\$37,196,860)

B/ 12 MTD 3/31/08 (\$429,323/\$38,589,907)

C/ Statutory Rate

Tennessee-American Water Company  
Cost of Capital  
For the 12 Months Ending August 31, 2009

Exhibit 1, Page 9 of 9

Line No.	Parent:	Ratio	Cost	Weighted Cost	Tax Deductible
1	Long Term Debt	55.14%	5.86%	3.23%	2.99%
2	Short Term Debt	1.90%	2.87%	0.05%	
3	Common Equity	42.96%	7.50%	3.22%	
4	Total	100.0%		6.51%	
	Tennessee American:	Ratio	Cost	Weighted Cost	
5	Long Term Debt	7.61%	8.43%	0.64%	0.64%
6	Common Equity	92.39%	6.51%	6.01%	
7	Total	100.0%		6.65%	3.6%
Final Capital Structure					
	Parent:	Ratio	Cost	Weighted Cost	Tax Deductible
8	Long Term Debt	50.94%	5.86%	2.99%	2.99%
9	Short Term Debt	1.76%	2.87%	0.05%	0.05%
10	Common Equity	39.69%	7.50%	2.98%	
11	Total Parent	92.39%	6.51%	6.01%	
	Tennessee American:				
12	Long Term Debt	7.61%	8.43%	0.64%	0.64%
13	Total Subsidiary	7.61%	8.43%	0.64%	
14	Total	100.0%		6.65%	3.68%

Source: Exhibit CAPD-SB

## Exhibit 2

### Forecasted Usage Comparison

## Operating Revenue Forecast

# Revenue

YEAR	TEMPERATURE	PRECIPITATION	AVERAGE RESIDENTIAL CUSTOMERS	RESIDENTIAL CCF	AVERAGE COMMERCIAL CUSTOMERS	COMMERCIAL CCF
2004	71	60.17"	61,663	4,585,577	8,203	4,131,613
2005	72	46.27"	62,487	4,651,176	8,208	4,271,893
2006	73	46.70"	63,407	4,599,602	8,204	4,190,021
2007	75	38.62"	64,314	4,830,039	8,252	4,334,288
CAPD FORECAST CCF				4,885,719		4,373,320
TAWC FORECAST CCF				4,455,330		4,146,286

Source: National Oceanic & Atmospheric Administration; TAWC Responses to TRA 1st Data Request, #20, (ORCOM Reports); CAPD Workpapers R-Residential Trend, R-Commercial Trend; TAWC Exhibit #4, Schedule 1.

Office of the Attorney General - State of Tennessee  
 Consumer Advocate and Protection Division  
 TRA Docket 08-00039  
 Tennessee American Water Company

## Exhibit 3

### Forecasted Usage Comparison - CMA



**OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE  
CONSUMER ADVOCATE AND PROTECTION DIVISION**

**TRA Docket 08-00039**

**Tennessee American Water Company  
CMA Forecast Usage Comparative**

	<u><b>Residential</b></u>		<u><b>Commercial</b></u>	
CMA Forecasted Gallons per Day	150.5	A/	1,055	B/
CMA Forecasted CCF	4,899,644	C/	4,238,062	D/
CAPD Forecasted CCF	4,885,719	E/	4,373,320	F/
CAPD percent of CMA Forecast	99.72%		103.19%	
CAPD Forecasted Gallons per Day	150.1	G/	1,088.67	G/
5-Year Average	149.2	H/	1,061.2	H/
CAPD percent of 5-year Average	100.58%		102.59%	

*A/ CMA Direct Testimony, M. Gorman, page 20, Line 9.*

*B/ CMA Direct Testimony, M. Gorman, page 21, Line 1.*

*C/ CMA Revised Exhibit MPG-7, Page 2 of 6, Line 14.*

*D/ CMA Revised Exhibit MPG-7, Page 3 of 6, Line 14.*

*E/ CAPD work papers, R-RESIDENTIAL TREND, Index of work papers, pages 8-12.*

*F/ CAPD work papers, R-COMMERCIAL TREND, Index of work papers, pages 57-61.*

*G/ Line 4 times Line 1.*

*H/ CMA Exhibit MPG-7, Page 6 of 6, Line 28.*

## Exhibit 4

Forecast to Actual Comparison - TRA  
Docket 06-00290

TENNESSEE AMERICAN WATER COMPANY			R-REV COMP #06-00290
TRA DOCKET #08-00039			Exhibit 4
ATTRITION PERIOD 2/29/08 REVENUE COMPARATIVE			
Total Forecast Differences	A/ Forecast	B/ Per Actual	Over (Under) Forecast
<b>Residential Class</b>			
Volumetric	4,575,131	4,846,610	271,479
Meters	782,329	789,751	7,422
Dollars	\$ 13,681,917	\$ 16,259,821	\$ 2,577,904
<b>Commercial Class</b>			
Volumetric	4,253,671	4,355,392	101,721
Meters	102,804	102,369	(435)
Dollars	\$ 10,230,156	\$ 11,867,467	\$ 1,637,311
<b>Industrial Class</b>			
Volumetric	3,092,865	3,435,475	342,610
Meters	2,135	2,043	(92)
Dollars	\$ 3,428,902	\$ 4,136,723	\$ 707,821
<b>Other Public Authority Class</b>			
Volumetric	1,210,272	1,115,865	(94,407)
Meters	8,635	8,826	191
Dollars	\$ 2,404,176	\$ 2,603,902	\$ 199,727
<b>Other Water Utility Class</b>			
Volumetric	1,302,516	1,549,069	246,553
Meters	48	48	-
Dollars	\$ 1,048,255	\$ 1,346,798	\$ 298,543
<b>Private Fire Service Class</b>			
Meters	1,252	1,215	(37)
Dollars	\$ 1,373,646	\$ 1,513,616	\$ 139,970
Total Volumetric	14,434,455	15,302,411	867,956
Total Meters	897,203	904,252	7,049
Total Dollars	\$ 32,167,053	\$ 37,728,327	\$ 5,561,274

A/ Sheila A. Miller Exhibit No. 4, Schedule 2, Pages 1 of 13  
B/ ORCOM Billing Analysis at TRA #06-00290 approved rates.

## Exhibit 5

# Walden's Ridge Test Year Revenue Requirement Comparison

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE  
 CONSUMER ADVOCATE AND PROTECTION DIVISION  
 WALDEN'S RIDGE REVENUE REQUIREMENT COMPARISON  
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #08-00039  
 FOR THE TEST YEAR ENDED NOVEMBER 30, 2007

		TRA DATA REQUEST #5, QUESTION #4		TRA VERBAL REQUESTS QUESTION #2		CAPD DATA REQUESTS	
1	Utility Plant in Service	\$4,455,819	A/	\$4,455,819	A/	\$4,455,819	E/
2	Accumulated Depreciation	\$187,014	A/	\$187,014	A/	\$187,014	E/
3	Net Utility Plant in Service	\$4,268,805		\$4,268,805		\$4,268,805	
4	TRA Rate of Return	7.89%	B/	7.89%	B/	7.89%	B/
5	NOI	\$336,809		\$336,809		\$336,809	
6	Gross Conversion Factor	1.6454	C/	1.6454	C/	1.6454	C/
7	Required Operating Income	\$554,190		\$554,190		\$554,190	
8	Revenues	\$434,810	A/	\$434,810	A/	\$434,810	A/
9	Waste Disposal	\$0		\$0		\$3,598	F/
10	Chemicals	\$33,790	A/	\$33,790	A/	\$25,420	F/
11	Fuel and Power	\$44,342	A/	\$222,042	D/	\$189,172	G/
12	Depreciation	\$74,806	A/	\$74,806	A/	\$74,806	A/
13	Total O&M	\$152,938		\$330,638		\$292,996	
13	Interest Expense @ 3.98%	\$169,898	B/	\$169,898	B/	\$169,898	B/
14	Taxable Income	\$111,974		(\$65,726)		(\$28,085)	
15	State Excise Tax Rate	6.50%		6.50%		6.50%	
16	State Excise Tax	\$7,278		(\$4,272)		(\$1,825)	
17	Federal Taxable Income	\$104,695		(\$61,454)		(\$26,259)	
18	Federal Tax Rate	35.00%		35.00%		35.00%	
19	Federal Income Taxes	\$36,643		(\$21,509)		(\$9,191)	
20	NOI	\$237,950		\$129,953		\$152,830	
21	Gross Conversion Factor	1.6454	C/	1.6454	C/	1.6454	C/
22	Operating Income at Present Rates	\$391,527		\$213,827		\$251,469	
23	Revenue Excess (Deficiency)	(\$162,663)		(\$340,363)		(\$302,721)	

A/ TAWC response to TRA Data Request #5.

B/ TRA Order #06-00290.

C/ One minus effect of state excise tax rate of 6.5% and federal tax rate of 35%.

D/ Includes \$177,700 of historical booster costs not included in response to TRA Data Request #5.

E/ TN-CAPD-01-PART-IV-Q066-ATTACHMENT, Page 1 of 1.

F/ TN-CAPD-01-PART-IV-Q025-ATTACHMENT, Page 1 of 2.

G/ TN-CAPD-01-PART-IV-Q025-ATTACHMENT, Page 2 of 2.

## Exhibit 6

# Forecasted O&M Cost Structure Comparison

$$RR = (RB \times ROR) + \underline{O\&M} + DEP + TAX$$

Increase in Cost Structure Since TRA Docket 06-00290

	<u>TAWC</u>	<u>CAPD</u>
O&M ORDERED BY TRA DOCKET #06-00290	\$18M	\$18M
O&M FORECAST DOCKET #08-00039	\$21.6M	\$19.8M
PERCENT INCREASE	20.00%	10.00%

Source: TRA Order dated 6/10/08, pages 24-33; Revised Exhibit CAPD, Schedule 5, Line 17;  
TAWC Amended Exhibit No. 2, Schedule 3, Lines 1-17.

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company

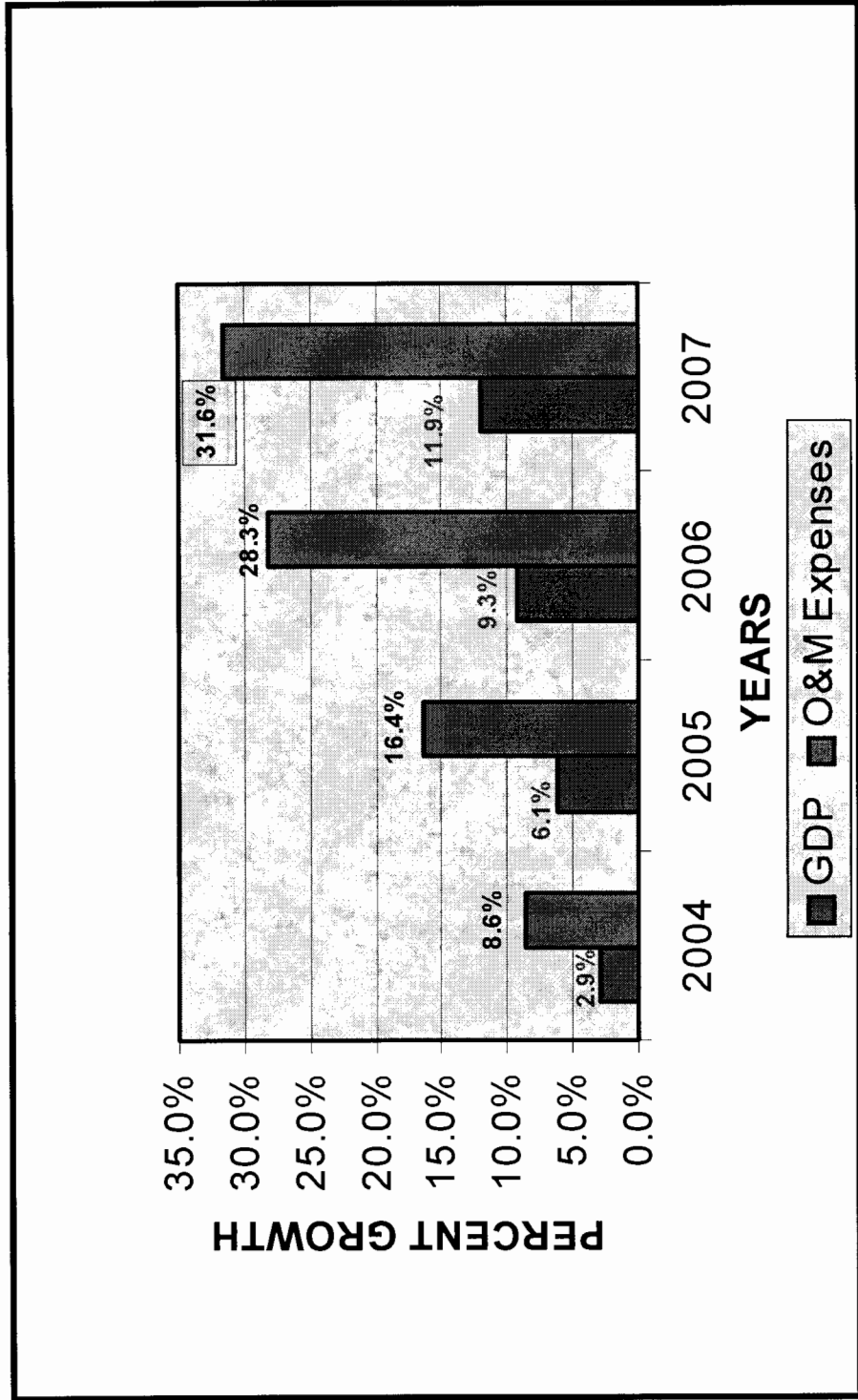
## Exhibit 7

# Historic O&M Growth Comparison



$$RR = (RB \times ROR) + \frac{O\&M}{+ DEP + TAX}$$

# Comparison of TAWC O&M Expense vs Inflation



Source: U.S. Department of Commerce (CAPD Workpaper E-GDP); TRA 3-06 December 12MTD Surveillance Reports, Sum of lines 6-11.

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company

## Exhibit 8

### Historic Customer Growth

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company  
Customer Count

R-Customer Growth

Year	Residential	Commercial	Industrial	Fire Service	Public Authority	Resale	Total	Avg Annual Growth %	Annual Growth %
2002	60,344	8,192	143	1,056	631	6	70,372		
2003	60,951	8,260	139	1,073	630	6	71,059	0.98%	0.98%
2004	61,972	8,195	135	1,078	627	6	72,013	1.17%	1.34%
2005	62,621	8,214	130	1,054	635	6	72,660	1.08%	0.90%
2006	63,661	8,174	129	1,069	659	9	73,701	1.18%	1.43%
2007	64,410	8,238	125	1,088	670	9	74,540	1.18%	1.14%

A/ TAWC response to TRA #19, TRA Docket #04-00288.

B/ TAWC response to TRA #20, TRA Docket #06-00290.

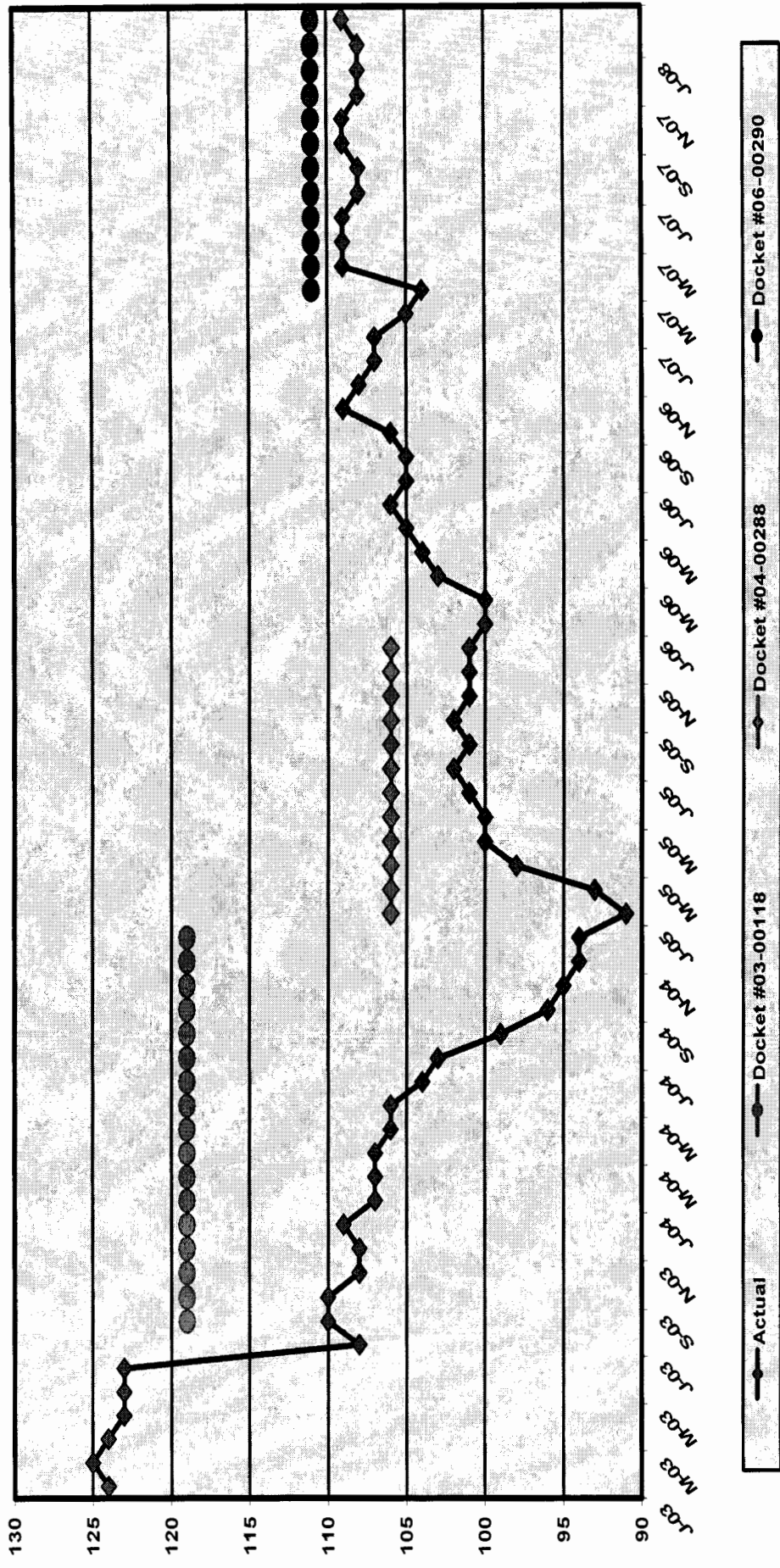
C/ TAWC response to TRA #20, TRA Docket #08-00039.

## Exhibit 9

# Historic Employee Level Comparison

$$RR = (RB \times ROR) + \frac{O \& M}{DEP} + TAX$$

# Actual Employee Levels vs TAWC Projections



Source: CAPD Workpaper, E-Pay-5, Page 173.

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company

## Exhibit 10

### Historic Average Forecast Period Employee Levels

## E-PAY-5

Tennessee - American Water Company ("TAWC")  
 Comparison of Employee Levels  
 For the 63 months ended March 31, 2008

	A/ Actual	B/ Docket #03-00118	B/ Docket #04-00288	C/ Docket #06-00290	D/ Docket #08-00039	Average
Jan-03	124					
Feb-03	125					
Mar-03	124					
Apr-03	123					
May-03	123					
Jun-03	123					
Jul-03	108					
Aug-03	110	119				
Sep-03	110	119				
Oct-03	108	119				
Nov-03	108	119				
Dec-03	109	119				
Jan-04	107	119				
Feb-04	107	119				
Mar-04	107	119				113
Apr-04	106	119				
May-04	106	119				
Jun-04	104	119				
Jul-04	103	119				
Aug-04	99	119				
Sep-04	96	119				
Oct-04	95	119				
Nov-04	94	119				
Dec-04	94	119				102
Jan-05	91		106			
Feb-05	93		106			
Mar-05	98		106			
Apr-05	100		106			
May-05	100		106			
Jun-05	101		106			
Jul-05	102		106			
Aug-05	101		106			
Sep-05	102		106			
Oct-05	101		106			
Nov-05	101		106			
Dec-05	101		106			99
Jan-06	100					
Feb-06	100					
Mar-06	103					
Apr-06	104					
May-06	105					
Jun-06	106					102
Jul-06	105					
Aug-06	105					
Sep-06	106					
Oct-06	109					104
Nov-06	108					
Dec-06	107					105
Jan-07	107					105
Feb-07	105					
Mar-07	104			111		
Apr-07	109			111		
May-07	109			111		
Jun-07	109			111		
Jul-07	108			111		
Aug-07	108			111		
Sep-07	109			111		
Oct-07	109			111		
Nov-07	108			111		
Dec-07	108			111		
Jan-08	108			111		
Feb-08	109			111		108
Mar-08	109					108
Apr-08						
May-08						
Jun-08						
Jul-08						
Aug-08						
Sep-08					114	
Oct-08					114	
Nov-08					114	
Dec-08					114	
Jan-09					114	
Feb-09					114	
Mar-09					114	
Apr-09					114	
May-09					114	
Jun-09					114	
Jul-09					114	
Aug-09					114	

A/ Per TAWC Responses, Jan. 2003 through Aug. 2005 in Docket #04-00288, Question #12; Sept. 2004 through Jan. 2007 in Docket #06-00290, Part II, Question #4, Feb. 2007 through March 2008 in Docket #08-00039, Part IV, Question #13.

B/ Per TRA Docket #04-00288 Company Direct Testimony, M. Miller, Page 14, Lines 16-17.

C/ Per Company Response, TRA Data Request #13, Page 5 of 68 Labor, Book 2 of 2.

D/ Per Company Response, TRA Data Request #13, TN-TRA-01-Q013-LABOR, Page 26 of 102.

## Exhibit 11

### Historic Employee Level by Position



**TENNESSEE AMERICAN WATER COMPANY**  
**TRA DOCKET #08-00039**  
**EMPLOYEE LEVEL BY POSITION HISTORY**

E-PAY-7

Exhibit 11

Position Description	D/ Actual		E/ Actual		F/ Actual	
	A/ TRA Docket #03-00118	Average Employees	A/ TRA Docket #04-00288	Average Employees	B/ TRA Docket #06-00290	C/ TRA Docket #08-00039
Heavy Equipment Operator		7	7		10	10
Truck Driver/Utility Worker		21	21		22	21
On & Off Man		7	7		2	2
Distribution Clerk		3	2		2	2
Meter Repairer		3	3		2	2
Maintenance Mechanic/Master		7	7		7	7
Utility Worker		3	3		2	2
Meter Reader		10	8		2	2
Laborer/Relief Process Tech		2	2		4	4
Off Shift Utility Worker		1	1		0	0
Process Technician		5	3		4	4
Customer Service Representative		2	2		0	0
Laborer		3	2		0	0
Outside Commercial Clerk		2	2		0	0
CAD Drafter		1	1		1	1
Engineering Clerk		3	1		3	3
Field Services Representative		3	4		19	18
Laboratory Worker		1	1		1	1
Production Clerk		1	1		1	1
Field Service Person					2	2
Field Service Records Specialist					2	2
Total Hourly Union		85	78	78	86	84
Sr. Secretary/Administrative Asst.		1	1		1	1
Total Non-Union Hourly		1	1	1	1	1
Maintenance Service Specialist		1	1		0	0
Business Manager		1	1		0	0
Lab Analyst		3	3		2	2
Customer Service Superintendent		1	1		0	0
Maintenance Service Supervisor		2	2		0	0
Operations Manager		1	1		0	0
Operations Supervisor		8	7		0	0
Customer Service Supervisor		2	0		0	0
Business Development Specialist		1	1		0	0
Communications Specialist		1	1		0	0
Operations Superintendent		3	3		0	0
President		1	1		0	0
Communications Manager		1	1		0	0
Human Resources Manager		1	0		0	0
Executive Assistant		1	1		1	1
HR Specialist/Sr. HR Generalist		1	0		1	1
Operations Specialist		1	1		2	4
Water Quality Superintendent		1	1		0	1
Office Supervisor		1	0		0	0
Operations Engineer		1	1		0	0
Water Quality Specialist					2	2
Supervisor Network					6	6
General Manager					1	1
Supervisor Water Quality					1	0
Production Supervisor					2	2
Engineer					1	1
Superintendent Production					1	1
Loss Control Specialist					1	1
Superintendent Network					1	1
Communications Specialist					1	1
Project Manager					1	1
Engineering Manager						1
Non-Revenue Water Supervisor						1
Total Salary		33	27	20	24	23
Total Employees		119	113	106	111	108

A/ TAWC Working Papers

B/ TAWC response to TRA Discovery #13, TN-TRA-01-Q013-LABOR, Pages 1 and 2 of 68.

C/ TAWC response to TRA Discovery #13, TN-TRA-01-Q013-LABOR, Pages 25 and 26 of 102.

D/ CAPD Work Paper E-PAY-5, 13 month average for the attrition years ended March 2004.

E/ TAWC response to CAPD Discovery #4 in Docket #06-00290, 13 month average for the attrition years ended December 2005.

F/ TAWC response to CAPD Discovery Part IV, #13 in Docket #08-00039, 13 month average for the attrition years ended February 2008.

## Exhibit 12

Actual Employee Level by Position -  
TRA Docket #06-00290

## Exhibit 13

### Management Fees and Payroll & Benefits 2004 to 2005

$$RR = (RB \times ROR) + \underline{O\&M} + DEP + TAX$$

Total Management Fees And  
Payroll & Benefits 2004 to 2005

	<u>2004</u>	<u>2005</u>	<u>ACTUAL \$ INCREASE</u>	<u>PERCENT INCREASE</u>
MANAGEMENT FEES	\$2.9M	\$4.3M	\$1.4M	48%
PAYROLL & BENEFITS	\$5.7M	\$5.7M	\$0M	0%
TOTAL	\$8.6M	\$10M	\$1.4M	16%

Source: CAPD Discovery Request, Part II, #19, TRA Docket #06-00290; TAWC Rebuttal Exhibit MAM-15, Page 2 of 2, TRA Docket #06-00290.

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket o8-00039  
Tennessee American Water Company

## Exhibit 14

### Management Fees and Payroll & Benefits 2005 to 2007

$$RR = (RB \times ROR) + \frac{O \& M}{\text{}} + DEP + TAX$$

Total Management Fees And  
Payroll & Benefits Since 2005

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>ACTUAL \$</u> <u>INCREASE</u>	<u>PERCENT</u> <u>INCREASE</u>
MANAGEMENT FEES	\$4.3M	\$4.8M	\$4.7M	\$ .4M	9%
PAYROLL & BENEFITS	\$5.7M	\$7M	\$7.1M	\$1.4M	25%
TOTAL	\$10M	\$11.8M	\$11.8M	\$1.8M	18%

Source: TAWC Response to CAPD 1st Discovery Request Part IV, #41; CAPD Discovery Request, Part II, #19 TRA Docket #06-00290; TAWC Rebuttal Exhibit MAM-15, Page 2 of 2, TRA Docket #06-00290.

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company

TENNESSEE AMERICAN WATER COMPANY  
TRA DOCKET #08-00039  
EMPLOYEE LEVEL BY POSITION HISTORY

E-PAY-8

Exhibit 12

Position Description	A/ February 2007	A/ March 2007	A/ April 2007	A/ May 2007	A/ June 2007	A/ July 2007	A/ August 2007	A/ September 2007	A/ October 2007	A/ November 2007	A/ December 2007	A/ January 2008	A/ February 2008	A/ March 2008
Heavy Equipment Operator	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Truck Driver/Utility Worker	22	22	22	21	21	21	21	22	22	22	22	21	21	21
On & Off Man	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Distribution Clerk	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Meter Repairer	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Maintenance Mechanic/Master	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Utility Worker	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Meter Reader	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Laborer/Relief Process Tech	3	3	4	4	4	4	4	4	4	4	3	3	2	2
Off Shift Utility Worker														
Process Technician	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Customer Service Representative														
Laborer														
Outside Commercial Clerk														
CAD Drafter	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Engineering Clerk	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Field Services Representative	17	16	19	19	19	18	18	18	18	18	18	18	18	18
Laboratory Worker	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Production Clerk	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Field Service Person	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Field Service Records Specialist	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total Hourly Union	83	82	86	85	85	84	84	85	85	84	84	82	82	82
Sr. Secretary/Administrative Asst.	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total Non-Union Hourly	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maintenance Service Specialist														
Business Manager														
Lab Analyst	1	1	2	2	2	2	2	2	2	2	2	2	2	2
Customer Service Superintendent														
Maintenance Service Supervisor														
Operations Manager														
Operations Supervisor														
Customer Service Supervisor														
Business Development Specialist														
Communications Specialist														
Operations Superintendent														
President														
Communications Manager														
Human Resources Manager														
Executive Assistant	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HR Specialist/Sr. HR Generalist	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Operations Specialist	2	2	2	2	2	2	2	2	2	2	2	2	3	3
Water Quality Superintendent	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Office Supervisor														
Operations Engineer														
Water Quality Specialist	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Supervisor Network	6	6	6	6	6	6	6	6	6	6	6	6	6	6
General Manager	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Supervisor Water Quality														
Production Supervisor	2	2	2	2	2	2	2	2	1	1	1	2	2	2
Engineer	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Superintendent Production									1	1	1	1	1	1
Loss Control Specialist				1	1	1	1	1	1	1	1	1	1	1
Superintendent Network	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Communications Specialist	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Manager	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Engineering Manager														
Non-Revenue Water Supervisor												1	1	1
Total Salary	21	21	22	23	23	23	23	23	23	23	23	25	26	26
Total Employees	105	104	109	109	109	108	108	109	109	108	108	108	109	109

A/ TAWC response to CAPD Discovery Part IV, #13 in Docket #08-00039.

## Exhibit 15

**Total O&M 15% Cap on Unaccounted  
for Water Loss - Column (6)**



Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company  
For The Attrition Year Ended August 31, 2009  
Comparison of Operating Expenses

REVISED E-REC-1  
09/02/08  
12:19 PM

Line #	Category	A/ (1) Company TRA Docket #04- 0028612/31/05	A/ (2) Company TRA Docket #06-00290 \$3006	A/ (3) Company TRA Docket #08- 00039 11/30/2007	A/ (4) Company TRA Docket #08- 00039 Attrition Yr	(5) Employee Positions	(6) 15% Cap On Unaccounted	(7) Growth	(8) Test Period	(9) Incentive Pay Plan	(10) Cap Percents	(11) B/ CAPD AMOUNT	(12) Difference
1	O&M LABOR	\$4,383,883	\$4,001,678	\$4,641,460	\$5,058,987	\$169,623		\$0		\$33,246	(\$21,476)	\$4,877,597	\$181,390
2	PURCHASED WATER	\$15,330	\$52,331	\$58,216	\$52,110			(\$5,296)	\$7,785			\$52,621	(\$511)
3	FUEL AND POWER	\$1,755,680	\$1,819,430	\$2,274,888	\$1,922,043		\$134,165	(\$321,445)	(\$93,620)			\$2,337,108	(\$415,055)
4	CHEMICALS	\$861,861	\$933,913	\$1,075,171	\$1,559,222		\$60,876	\$498,299	\$696			\$1,060,227	\$498,995
5	WASTE DISPOSAL	\$133,438	\$143,948	\$161,721	\$179,088			\$10,315	(\$7,62)			\$169,535	\$9,553
6	MANAGEMENT FEES	\$3,062,940	\$4,006,278	\$4,789,601	\$4,335,190			\$881,967				\$3,453,223	\$881,967
7	GROUP INSURANCE	\$1,396,004	\$1,543,022	\$1,596,405	\$1,714,550			\$0	(\$6,950)			\$1,672,934	\$41,616
8	PENSIONS	\$892,790	\$899,154	\$726,428	\$1,161,108			\$0			\$4,666	\$1,156,442	\$4,666
9	REGULATORY EXPENSE	\$58,000	\$292,095	\$508,129	\$543,384			\$201,516				\$341,868	\$201,516
10	INSURANCE OTHER THAN GROUP	\$657,000	\$530,011	\$559,655	\$583,492			\$1,612	\$47,500			\$534,380	\$49,112
11	CUSTOMER ACCOUNTING	\$572,893	\$585,288	\$704,362	\$738,845			\$4,743	(\$29,683)			\$763,785	(\$24,940)
12	UNCOLLECTIBLE EXPENSE	\$289,530	\$616,171	\$417,277	\$417,756			(\$4,905)	(\$12,046)			\$434,707	(\$16,451)
13	RENTS	\$38,286	\$38,043	\$30,037	\$11,336			(\$19,434)	\$13,152			\$17,618	(\$6,202)
14	GENERAL OFFICE EXPENSE	\$193,122	\$575,179	\$244,966	\$245,926			(\$5,687)	(\$428)			\$256,041	(\$10,115)
15	MISCELLANEOUS EXPENSE	\$1,661,970	\$1,798,639	\$1,931,046	\$2,018,623			\$68,437	\$148,114			\$1,802,072	\$216,551
16	OTHER MAINTENANCE EXPENSE	\$746,632	\$1,110,461	\$1,211,604	\$936,345			\$93,046	\$21,224			\$822,075	\$114,270
17	AFUDC	(\$26,791)	(\$193,631)	(\$110,459)	(\$183,690)							(\$463,690)	\$0
18	TOTAL	\$16,680,568	\$18,552,210	\$20,820,447	\$21,014,315		\$195,041	\$1,356,168	\$94,982	\$53,246	(\$16,613)	\$19,288,543	\$1,725,772
19	PERCENT CHANGE		11.22%	24.82%	0.93%							15.63%	
20	CUMULATIVE CHANGE EXCLUDING AFUDC		12.19%	25.26%	28.54%							18.21%	

A/ Company Exhibit No 2, Schedule 3, Page 1 of 1 plus amounts per TRA data request #1, dated 7/29/08.

B/ CAPD work papers.

## Exhibit 16

# Zero Book Balance Depreciation Expense Comparison

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company  
Zero Book Balance Depreciation Expense Comparative

Account Number	Account Name	A/ Plant in Service Balance 3/31/2008	A/ Accumulated Depreciation 3/31/2008	A/ Net Plant Balance 3/31/2008	C/ Net Plant Balance 8/31/2009	A/ Current Depreciation Rates 3/31/2008	B/ Proposed Depreciation Rates 9/30/2008	D/ CAPD Forecast Depreciation	D/ TAWC Forecast Depreciation	Forecast Depreciation Difference
340200	Comp & Periph Equip	\$296,134	\$297,437	(\$1,303)	(\$1,303)	15.90%	2.19%	\$0	\$6,750	
340210	Comp & Periph Mainframe	\$603,486	\$600,717	\$2,769	\$0	15.90%	2.18%	\$0	\$13,216	
340300	Computer Software	\$412,127	\$430,613	(\$18,486)	\$692	15.90%	1.83%	\$1,322	\$7,301	
340310	Comp Software Mainframe	\$3,535,059	\$3,531,238	\$3,821	\$0	15.90%	1.83%	\$0	\$64,692	
340320	Comp Software Personal	\$190,122	\$194,487	(\$4,365)	(\$4,365)	15.90%	1.83%	\$0	\$3,504	
340330	Comp Software Other	\$14,222	\$17,024	(\$2,802)	(\$2,802)	15.90%	1.83%	\$0	\$260	
	Total	\$5,051,150	\$5,071,515	(\$20,365)	(\$7,777)			\$1,322	\$95,723	\$94,401

A/ TAWC response to CAPD Part IV, #63, TN-CAPD-01-PART IV-Q063-SECOND SUPPLEMENTAL ATTACHMENT, Page 5 of 5.

B/ CAPD Exhibit, Exhibit of Charles W. King, Schedule 3.

C/ CAPD work paper, E-DEP, Index of work papers, page 298.

D/ CAPD work paper, E-DEP-COMP, Index of work papers, page 297.

## Exhibit 17

# Depreciation Expense Comparison

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company  
Depreciation Expense Comparative

## E-DEP COMP

Account	Account Description	A/ Current Depreciation Rates	B/ Proposed Company Depreciation Rates	B/ Company Depreciation Expense	C/ Proposed CAPD Depreciation Rates	D/ CAPD Depreciation Expense	Over (Under) CAPD Depreciation Expense
304100	Struct & Imp SS	0.00%	0.00%	\$0	1.13%	\$109	(\$109)
304200	Struct & Imp P	3.86%	1.98%	\$76,499	1.98%	\$76,499	\$0
304300	Struct & Imp WT	4.57%	4.11%	\$121,859	4.11%	\$116,184	\$5,675
304301	Struct & Imp WT Depr Pntng	10.00%	12.06%	\$204,394	12.06%	\$204,394	\$0
304400	Struct & Imp TD	3.51%	2.13%	\$11,178	2.13%	\$11,178	\$0
304500	Struct & Imp AG	3.98%	0.00%		1.13%	\$2,010	(\$2,010)
304510	Struct & Imp AG Cap Lease	0.00%	0.00%		0.00%	\$0	\$0
304600	Struct & Imp Offices	3.98%	1.13%	\$3,465	1.13%	\$1,539	\$1,926
304700	Struct & Imp Store,Shop,Gar	4.65%	0.73%	\$2,282	0.73%	\$2,282	\$0
304800	Struct & Imp Misc	5.64%	0.49%	\$3,222	0.49%	\$3,222	\$0
306000	Lake, River & Other Intakes	3.40%	0.83%	\$4,060	0.83%	\$4,060	\$0
309000	Supply Mains	5.92%	1.87%	\$11,292	1.87%	\$11,292	\$0
310000	Power Generation Equip	3.44%	12.33%	\$28,041	12.33%	\$28,041	\$0
311200	Pump Equip Electric	1.73%	2.45%	\$140,075	2.45%	\$140,117	(\$42)
311300	Pump Equip Diesel	1.97%	2.50%	\$2,982	2.50%	\$2,982	\$0
311500	Pump Equip Other	3.94%	1.83%	\$5,803	1.83%	\$4,906	\$897
311520	Pumping Equipment SS	1.65%	0.00%	\$0	1.83%	\$1,650	(\$1,650)
311530	Pumping Equipment WT	1.65%	0.00%	\$0	1.83%	\$0	\$0
320100	WT Equip Non-Media	4.27%	1.09%	\$138,724	1.09%	\$138,039	\$685
320200	WT Equip Filter Media	0.00%	0.00%	\$0	0.00%	\$0	\$0
330000	Dist Reservoirs & Standpipes	1.80%	2.08%	\$115,752	2.08%	\$143,047	(\$27,295)
330003	Dist Res & Stand Orig Repaint	10.00%	11.08%	\$220,998	11.08%	\$221,517	(\$519)
330100	Elevated Tanks & Standpipes	1.80%	2.74%	\$51,789	2.74%	\$51,789	\$0
330400	Clearwell	1.80%	1.65%	\$11,233	1.65%	\$11,233	\$0
331001	TD Mains Not Classified by Siz	1.41%	1.50%	\$33,268	1.25%	\$24,479	\$8,789
331100	TD Mains 4in & Less	1.62%	1.50%	\$70,173	1.25%	\$59,508	\$10,665
331200	TD Mains 6in to 8in	1.36%	1.50%	\$22	1.25%	\$18	\$4
331210	TD Mains 6in to 10in (TN)	1.36%	1.50%	\$962,123	1.25%	\$809,377	\$152,746
331300	TD Mains 10in to 16in	1.42%	1.50%	\$101,184	1.25%	\$122,689	(\$21,505)
331350	TD Mains 12in & Grtr (TN)	1.42%	1.50%	\$388,755	1.25%	\$313,121	\$75,634
331400	TD Mains 18in & Grtr	1.42%	0.00%	\$0	1.25%	\$8,150	(\$8,150)
333000	Services	2.28%	6.91%	\$333,477	1.11%	\$223,011	\$110,466
334100	Meters	0.98%	6.91%	\$323,473	7.47%	\$347,097	(\$23,624)
334110	Meters Bronze Case	2.45%	6.91%	\$91,490	7.23%	\$99,708	(\$8,218)
334120	Meters Plastic Case	15.35%	6.91%	\$0	7.23%	\$0	\$0
334130	Meters Other	0.98%	0.00%	\$0	7.23%	\$47,840	(\$47,840)
334131	Meters Other-Rem Rdr Unts	0.98%	6.91%	\$57,562	7.23%	\$1,227	\$56,335
334200	Meter Installations	1.64%	3.23%	\$349,187	2.73%	\$299,798	\$49,389
335000	Hydrants	2.21%	2.63%	\$212,447	2.30%	\$185,327	\$27,120
339200	Other P/E SS	5.92%	0.00%	\$0	0.00%	\$0	\$0
339500	Other P/E TD	0.00%	0.00%	\$0	0.00%	\$0	\$0
339600	Other P/E CPS	20.00%	0.00%	\$0	0.00%	\$0	\$0
340100	Office Furniture & Equip	2.73%	1.39%	\$8,445	1.39%	\$8,142	\$303
340200	Comp & Periph Equip	15.90%	2.19%	\$6,750	2.19%	\$0	\$6,750
340210	Comp & Periph Mainframe	15.90%	2.19%	\$13,216	2.19%	\$0	\$13,216
340220	Comp & Periph Personal	15.90%	2.19%	\$9,042	2.19%	\$9,060	(\$18)
340230	Comp & Periph Other	15.90%	2.19%	\$4,183	2.19%	\$4,779	(\$596)
340300	Computer Software	15.90%	1.83%	\$7,301	1.83%	\$1,322	\$5,979
340310	Comp Software Mainframe	15.90%	1.83%	\$64,692	1.83%	\$0	\$64,692
340320	Comp Software Personal	15.90%	1.83%	\$3,504	1.83%	\$0	\$3,504
340330	Comp Software Other	15.90%	1.83%	\$260	1.83%	\$0	\$260
340400	Data Handling Equipment	15.90%	4.94%	\$755	4.94%	\$755	\$0
340500	Other Office Equipment	4.07%	1.39%	\$1,288	1.39%	\$1,249	\$39
341100	Trans Equip Lt Duty Trks	9.36%	16.00%	\$221,057	16.00%	\$212,195	\$8,862
341200	Trans Equip Hvy Duty Trks	9.99%	16.62%	\$158,398	16.62%	\$222,608	(\$64,210)
341300	Trans Equip Autos	10.54%	11.38%	\$34,028	11.38%	\$33,799	\$229
341400	Trans Equip Other	0.70%	7.24%	\$17,176	7.24%	\$23,236	(\$6,060)
342000	Stores Equipment	4.98%	0.00%	\$0	0.00%	\$0	\$0
343000	Tools,Shop,Garage Equip	3.85%	6.89%	\$90,605	6.89%	\$92,105	(\$1,500)
344000	Laboratory Equipment	11.12%	1.01%	\$3,854	1.01%	\$3,921	(\$67)
345000	Power Operated Equipment	9.21%	0.00%	\$0	0.00%	\$0	\$0
346100	Comm Equip Non-Telephone	4.43%	4.21%	\$16,434	4.21%	\$14,840	\$1,594
346190	Remote Control & Instrumentati	4.43%	0.00%	\$0	0.00%	\$0	\$0
346200	Comm Equip Telephone	14.91%	3.51%	\$3,241	3.51%	\$3,229	\$12
347000	Misc Equipment	2.89%	6.33%	\$69,452	6.33%	\$69,537	(\$85)
348000	Other Tangible Property	2.89%	5.10%	\$251	5.10%	\$0	\$251
Total Depreciation Expense				\$4,810,741		\$4,418,214	\$392,527
Amortization of CIAC E/				(\$186,427)			(\$186,427)
Amortization Expense				\$106,033		\$106,033	\$0
Total				\$4,730,347		\$4,366,120	\$364,227

A/ TAWC response to CAPD Part IV, #63, TN-CAPD-01-PART IV-Q063-SECOND SUPPLEMENTAL ATTACHMENT, Page 5 of 5.

B/ TAWC Exhibit No. 2, Schedule 4, Pages 1-2 of 2.

C/ Exhibit of Charles W. King.

D/ CAPD work paper E-DEP.

E/ CAPD work paper E-DEP CIAC.

## Exhibit 18

# Income Tax Comparison

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE  
 CONSUMER ADVOCATE AND PROTECTION DIVISION  
 ANALYSIS OF INCOME TAXES  
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #08-00039

Exhibit 18

	<u>CAPD</u>	<u>TAWC</u>	<u>Difference</u>	<u>TAWC Tax Rates</u>
TAWC Taxable Income	\$ 3,198,677 A/			
Effective State Tax Rate	6.50%			
State Income Taxes	\$ 207,914	\$ 406,685 B/	\$ 198,771	12.71%
TAWC Federal Taxable Income	\$ 2,990,763			
Federal Tax Rate	35.00%			
Federal Income Tax	\$ 1,046,767	\$ 1,438,717 C/	\$ 391,950	48.11%
ITC Amortization	(76,368) D/	(76,368) D/	-	
Total Federal Taxes	\$ 970,399	\$ 1,362,349	\$ 391,950	
Total Income Taxes	\$ 1,178,313	\$ 1,769,034	\$ 590,721	
Revenue Conversion Factor			1.649695 E/	
Revenue			<b>\$ 974,509</b>	

A/ Per TAWC Exhibit No. 2, Schedule 7, Attrition Year, Line 28; TAWC response to CAPD Part IV, #60.

B/ Per TAWC Exhibit No. 2, Schedule 7, Attrition Year, Lines 7-8.

C/ Per TAWC Exhibit No. 2, Schedule 7, Attrition Year, Lines 9-10.

D/ Per TAWC Exhibit No. 2, Schedule 7, Attrition Year, Line 11.

E/ Per CAPD Exhibit, Schedule 8, Line 10.

## Exhibit 19

### Rate Base Comparison



$$RR = (\underline{RB} \times ROR) + O\&M + DEP + TAX$$

# Rate Base

CAPD

\$121.8M

TAWC

\$117.2M

Source: Revised Exhibit CAPD Schedule 2; Amended TAWC Exhibit No. 1, Schedule 1.

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company

## Exhibit 20

### Capital Spending Comparison

Office of the Attorney General - State of Tennessee  
 Consumer Advocate and Protection Division  
 TRA Docket 08-00039  
 Tennessee American Water Company  
 Capital Spending

Capital Additions

Ending CWIP @ 8/31/09

Less: Beg, CWIP @ 11/30/07

Total

TAWC Original Forecast	TAWC 3rd Revised Forecast	CAPD Revised Forecast
\$21,476,752	\$20,778,683	\$24,396,178
\$9,083,000	\$9,182,007	\$6,327,938
\$2,829,032	\$2,829,032	\$2,829,032
\$27,730,720	\$27,131,658	\$27,895,084

D/

E/

B/

TAWC Omission	\$270,000	B/
Actual Net Additions	\$464,785	B/
Adjusted Total	\$27,866,443	\$27,895,032

A/ TAWC response to First TRA Data Request, #13, TN-TRA-01-Q-13-Rate Base Back-up Page 38 of 52.

B/ TAWC response to TRA Data Request dated August 14, 2008, #6.

C/ TAWC response to TRA Data Request dated August 14, 2008, #7.

D/ CAPD work paper RB-PLANT1, Additions.

E/ Revised CAPD work paper RB-CWIP.

## Exhibit 21

### TAWC Capital Spending

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company  
TAWC's 3rd CWIP Forecast

	A/ Beginning Balance	B/ TAWC Delay Spending	C/ Capital Spending	D/ Plant Additions	E/ Total Spending
Less: Beg. CWIP @ 11/30/07	\$2,829,032				
7-Dec	\$1,783,972		\$531,714	\$1,576,774	
8-Jan	\$1,145,044		\$1,044,933	\$1,683,861	
8-Feb	\$1,416,232		\$418,049	\$148,861	
8-Mar	\$1,798,537		\$671,631	\$289,326	
8-Apr	\$1,625,766		\$762,790	\$935,561	
8-May	\$1,714,631		\$1,105,666	\$1,016,801	
8-Jun	\$1,904,723		\$403,919	\$213,827	
8-Jul	\$1,954,425		\$587,709	\$538,007	
8-Aug	\$1,997,350	\$385,000	\$1,333,000	\$1,675,075	
8-Sep	\$3,367,575	\$781,000	\$1,428,100	\$838,875	
8-Oct	\$4,074,313	\$260,000	\$1,306,700	\$859,962	
8-Nov	\$5,542,968	\$260,000	\$1,821,100	\$612,445	
8-Dec	\$4,562,802	\$135,000	\$797,676	\$1,912,842	
9-Jan	\$6,046,267	\$135,000	\$1,664,500	\$316,035	
9-Feb	\$7,175,866		\$1,664,500	\$534,901	
9-Mar	\$8,364,510		\$1,681,166	\$492,522	
9-Apr	\$9,404,490		\$1,681,166	\$641,186	
9-May	\$10,308,372		\$1,706,166	\$802,284	
9-Jun	\$11,049,982		\$1,706,170	\$964,560	
9-Jul	\$11,542,579		\$1,564,500	\$1,071,903	
9-Aug	\$9,452,004		\$1,564,500	\$3,655,075	
13 Month Avg.	\$7,145,314	\$1,956,000	\$25,445,655	\$20,780,683	\$27,401,655
CWIP Increase	\$6,622,972		\$27,401,655		\$270,000
Total Spending					\$27,131,655

A/ Reconcile omitted \$135,000 for the months of December 2008 and January 2009 to TAWC's CWIP Schedule

## Exhibit 22

### Rate of Return Comparison

$$RR = (RB \times \underline{ROR}) + O\&M + DEP + TAX$$

Rate of Return

	<u>CAPD</u>	<u>CMA</u>	<u>TRA</u>	<u>TAWC</u>
ROR	6.65%	7.33%	7.89%	8.51%
REVENUE REQUIREMENT USING CAPD'S FORECAST	(\$1.5M)	(\$.8M)	\$ .8M	
REVENUE REQUIREMENT USING TAWC'S FORECAST			—————→	\$7.8M

Source: Revised Exhibit CAPD, Schedule 1; TAWC Amended Exhibit No. 1, Schedule 1; TRA Docket #06-00290 Order dated 6/10/2008, page 47; CMA Exhibit MPG-8.

Office of the Attorney General - State of Tennessee  
Consumer Advocate and Protection Division  
TRA Docket 08-00039  
Tennessee American Water Company