

1 **DOCKET # 10-00189**

2 **Tennessee American Water Company**

3 **AMENDED Testimony of John Hughes**

4 **March 1, 2011**

5

6 **Q. Please state your name for the record.**

7 A. My name is John Hughes.

8

9 **Q. By whom are you employed and what is your position?**

10 A. I am employed by the Consumer Advocate and Protection
11 Division ("Consumer Advocate" or "CAPD") in the office of the
12 Attorney General for the State Of Tennessee ("Office") as a Financial
13 Regulatory Analyst.

14

15 **Q. How long have you been employed in conjunction with the**
16 **Financial accounting industry?**

17 A. I have been a Certified Public Accountant for eighteen years,
18 practicing in both Tennessee and Florida. Before my current
19 employment with the Office, I was employed in many phases of Public
20 Accounting. I have performed duties as a Staff Accountant, Auditor,
21 Audit Manager, Accounting Manager, Financial Planner and Analyst,
22 Corporate Controller, and Tax Consultant. My most in depth area of

1 concentration and experience over my career is corporate auditing and
2 taxation.

3
4 **Q. What is your educational background and what degrees do you**
5 **hold?**

6 A. I hold a Bachelors Degree in Business Administration from the
7 University of Pittsburgh, Pennsylvania, with a major in Accounting. I
8 also hold a Master of Business Administration Degree in Finance
9 from Dowling College, Oakdale, New York. I am a current, licensed
10 Tennessee Certified Public Accountant. Further, I hold a license as a
11 Certified Financial Planner, valid in all states.

12
13 **Q. Would you briefly describe your responsibilities as a Financial**
14 **Regulatory Analyst with the Consumer Advocate?**

15 A. I review tariffs filed by Tennessee public utilities that are subject
16 to the jurisdiction of the Tennessee Regulatory Authority ("TRA").
17 Additionally, I prepare testimony and financial exhibits in rate
18 proceedings as an employee with the Consumer Advocate.

19
20 **Q. What is the purpose of your testimony?**

21 A. The purpose of my testimony is to forecast the Operating
22 Revenues of Tennessee American Water Company ("TAWC") using

1 my work papers (“work papers of the CAPD”) for the attrition year
2 ending December 31, 2011.

3

4

SUMMARY OF RESULTS

5 **Q. Please summarize the results of the CAPD forecast of TAWC**
6 **Revenues for the attrition year.**

7 A. Based on TAWC’s **current water rates**, those tariffs set by the
8 TRA in Docket #08-00039, TAWC calculates its total attrition year
9 revenues at \$37,296,457.¹ The CAPD, however, calculates TWAC’s
10 attrition year revenues, using **current water rates**, at \$38,251,266.²
11 This difference of \$954,809 represents an **increase** over TAWC’s
12 revenue estimate, before even considering TAWC’s requested rate
13 increase.

14

15 **Q. Please summarize the reasons why the CAPD projects \$954,809**
16 **more in operating revenues than TAWC, using current water**
17 **rates.**

18 A. There are two areas where the CAPD disagrees with TAWC’s
19 calculations of operating revenue: First, TAWC includes in its
20 revenue forecast a Weather Normalization Adjustment (“WNA”) that
21 the CAPD believes should be disregarded in calculating operating
22 revenue. The total WNA adjustment calculated for the year ending

¹ TAWC Docket 10-00189, Exhibit 4, Schedule 1, Page 1.

² CAPD R-Revenue Comparative Summary

1 December 31, 2011, is (\$318,523).³ TAWC reduces its operating
2 income by **subtracting** the WNA adjustment from its operating
3 revenue estimates, greatly reducing the company's calculation of
4 income. The CAPD disagrees with this treatment and objected to this
5 same issue during the previous TAWC rate case, #08-00039.⁴ As
6 explained by CAPD witness William Hal Novak, the WNA model
7 used by TAWC, is not appropriate because it does not reflect actual
8 water use. Please refer to Mr. Novak's testimony in order to view a
9 more detailed analysis of Mr. Novak's objections to TAWC's WNA
10 model.⁵

11 Second, the CAPD's revenue forecast includes approximately
12 \$636,286 due to an increased number of water meters and an increase
13 in water volumes during the attrition year ending December 31,
14 2011⁶, derived by the CAPD's growth forecast. This growth forecast
15 is supported by nearly seven years of historical trends and a later test
16 period, neither of which is considered by TAWC in making their
17 forecast. The CAPD uses trend analysis, which is "a statistical
18 analysis method which refers to the concept of collecting information
19 and attempting to spot a pattern in the information. In statistics, trend
20 analysis often refers to techniques for extracting an underlying pattern
21 of behavior in a time series which would otherwise be partly or nearly
22 completely hidden by statistical noise."⁷ The Direct Testimony of

³ TRA-01-Q013-Revenues Page 2 of 55.

⁴ CAPD Buckner Direct Testimony, #08-00039, Page 23, Line 19.

⁵ CAPD Novak Direct Testimony, #10-00189, pages 6 through 14.

⁶ CAPD Work Paper R-Revenue Comparative Summary, Line 10.

⁷ Wordnetweb home page.Princeton.edu, glossary.

1 TAWC does not indicate what forecasting method is used to
2 determine Operating Revenues.

3

4

OPERATING REVENUES

5 **Q. Please describe the components of your forecast for Operating**
6 **Revenues.**

7 A. CAPD's formula for forecasting Operating Revenues is to
8 multiply monthly water rates by annualized volumes. The monthly
9 rates are established by the TRA as set forth in TAWC's present tariff,
10 as established in Docket #08-00039. The annualized volumes consist
11 of two components: the *number* of water meters and the *volume* of
12 water usage. Monthly water meter rates depend on the *size* of the
13 water meter. The size of the water meter is defined by the diameter of
14 the pipe supplying the meter, for example: 1.5 inches, 2.5 inches, etc.
15 The monthly rates for water usage depend on the billed volume of
16 cubic feet. There are several usage rates in the present tariff based on
17 cubic feet, such as: the first 400 cf, the next 800 cf. etc., which are
18 then applied to volumetric blocks as described above. These "billing
19 determinants" determine most of TAWC's operating revenue.
20 Additionally, there are six 'classes' of service: 1) residential, 2)
21 commercial, 3) industrial, 4) other public authority, 5) other water
22 utility, and 6) public and private fire service.

23 To add to the complexity of the calculations, within the
24 residential and commercial service areas, there are five different
25 locations: 1) Chattanooga, 2) Lookout Mountain, 3) Lakeview, 4)

1 Suck Creek, and 5) Lone Oak. The industrial class area is limited to
2 Chattanooga. The Other Public Authority includes the residential
3 locations, less the community of Lone Oak.

4 TAWC also sells water to four other Water Utilities: Fort
5 Oglethorpe (Georgia), Catoosa Utility District (Georgia), Signal
6 Mountain, and Walden's Ridge, both in Tennessee. The Fire Service
7 category is not broken down by location.

8 The final revenue category, Other Operating Revenues, is
9 comprised of new service fees, late payment penalties, rent, sewer
10 revenues, connection fees, and other miscellaneous fees. The CAPD
11 has not calculated other miscellaneous revenues and, therefore, adopts
12 the TAWC attrition year estimates for Other Operating Revenues.

13
14 **Q. Please describe the forecasting methods for the category**
15 **Residential Operating Revenues.**

16 A. The CAPD has adopted the test period for the year ending
17 September 30, 2010 in order to forecast residential revenues and all
18 other revenue categories. Utilizing a more recent test period produces
19 less stale data and is more reflective of current trends. This is in
20 contrast to the test period chosen by TAWC, ending March 31, 2010.

21 In order to forecast residential operating revenues, billing
22 determinants were compiled monthly for the residential class. Then,
23 those billing determinants were combined with data from previous
24 TAWC rate cases filed in 2004 (04-00288), 2006 (06-00290), and

1 2008 (08-00039). This previous data provides an excellent continuum
2 of billing determinants for use in trend analysis. The residential billing
3 determinants were calculated by trending the number of meters and
4 water usage history from the twelve month period ending December
5 2004 through the twelve months ending September 2010. These
6 billing determinants were used for the locations of Chattanooga,
7 Lookout Mountain, Lakeview, and Suck Creek. For the community
8 of Lone Oak, billing determinants from the period August, 2006
9 through September 2010 were used because earlier data was not
10 available. Then, the trended billing determinants for the past years
11 ending with the test year ending September 2010 were applied to
12 present rates. This calculation yielded the billing determinants for the
13 attrition year ending December 31, 2011. Those billing determinants
14 were then multiplied by current water rates to calculate an attrition
15 year total of \$15,925,215 in Residential Operating Revenue.

16
17 **Q. What is the difference in the calculation of Residential Operating**
18 **Revenues used by TAWC and the CAPD?**

19 A. TAWC adopted the test year ending March 31, 2010 in
20 forecasting its Residential Operating Revenues. As a result, TAWC is
21 forecasting Residential Operating Revenues of \$15,243,199 at present
22 rates for the attrition year. TAWC's attrition year Residential
23 Operating Revenues are restricted to minimal growth due to TAWC's
24 Weather Normalization Adjustment ("WNA"). TAWC uses the
25 WNA to **decrease** its attrition year Residential Operating Revenues

1 by \$318,523.⁸ As discussed previously, CAPD witness, Mr. Novak,
2 has concluded that TAWC's WNA is not appropriate and should be
3 disallowed. The CAPD, in contrast, does not use the WNA and
4 calculates that attrition year Residential Operating Revenues will be
5 \$15,925,215⁹. The resulting difference between TAWC and the
6 CAPD's Residential Operating Revenues is \$682,016.¹⁰

7

8 **Q. Please explain the CAPD's forecasting methods for the category**
9 **Commercial Operating Revenues.**

10 A. The CAPD adopted the test period ending September 30, 2010
11 for its forecast of Commercial Operating Revenues. The billing
12 determinants were calculated using trend analysis of the number of
13 water meters and volume usage from the twelve month period
14 beginning January 2004 through the twelve month period ending
15 September 2010, for the billing regions of Chattanooga, Lookout
16 Mountain, Lakeview and Suck Creek. The billing determinants were
17 calculated using trend analysis of the number of water meters and
18 volume usage from the twelve month period beginning August 2006
19 for the billing region of Lone Oak. The blended billing determinants
20 of the CAPD test year were used and trend analysis applied to the
21 attrition year using **current rates**, resulting in a CAPD calculation of
22 \$11,737,629¹¹ for Commercial Operating Revenues.

⁸ TRA-01-Q013-Revenues, Page 2 of 55.

⁹ CAPD Work Paper R-Revenue Comparative Summary, Line 1.

¹⁰ CAPD Work Paper R-Revenue Comparative Summary, Line 1.

¹¹ CAPD Work Paper R-Revenue Comparative Summary, line 2.

1 **Q. What is the difference in the calculation of Commercial Operating**
2 **Revenue used by TAWC and the CAPD?**

3 A. TAWC again adopted the older test year ending March 31,
4 2010 and has forecasted Commercial Operating Revenues for the
5 attrition year at \$11,534,347.¹² Again, as in Residential calculations,
6 TAWC Commercial Operating Revenues are reduced mainly by
7 TAWC's Weather Normalization Adjustment (WNA). In contrast,
8 the CAPD calculates the attrition year Commercial Operating
9 Revenues to be \$11,737,629¹³, resulting in a difference of \$203,282.

10

11 **Q. Please describe the forecasting methods for the category**
12 **Industrial Operating Revenues.**

A3 This revenue category includes only the Chattanooga billing
14 region. As with the residential and commercial categories in
15 Chattanooga, billing determinants were available as far back as
16 January 2004, detailing a significant history. Those determinants
17 were calculated using the CAPD test year ending September 30, 2010.
18 Then those billing determinants were multiplied by **current** industrial
19 class water rates and the result was the attrition year calculated
20 Industrial Operating Revenues of \$3,520,697.¹⁴ TAWC's use of the
21 older, more stale, test year data ending March 31, 2010, results in a

¹² CAPD Work Paper R-Revenue Comparative Summary, Line 2.

¹³ CAPD Work Paper R-Revenue Comparative Summary, Line 2.

¹⁴ CAPD Work Paper R-Revenue Comparative Summary, line 3.

1 calculation of Industrial Operating Revenue of \$3,401,964¹⁵.
2 TAWC's calculation is a **Zero Percent** increase over its test year.

3 Per CAPD calculations, volume increased by 11% percent in
4 just the six month period between April 1, 2010 and September 30,
5 2010, the most recent monthly data available. Again, this six month
6 period was not included in TAWC's test year. Since industrial use is
7 dependent on volume and not the number of meters for growth,
8 TAWC has not captured the increasing growth of this class. TAWC's
9 calculation of Industrial Operating Revenue for their test period was
10 \$3,401,964.¹⁶ Using updated test year data, CAPD revenue estimates
11 exceed TAWC's estimates by \$118,733¹⁷.

12

13 **Q. Please describe the forecast methods for the category Other**
14 **Public Authority Operating Revenues.**

15 A. The CAPD used the updated test year billing determinants
16 ending September 30, 2010. When applied to current rates, the
17 CAPD's forecast of Other Public Authority Operating Revenues is
18 \$2,530,872.¹⁸ TAWC factored in **no increase** to their older test year
19 projection for the attrition year, resulting in \$2,556,253¹⁹ in Other
20 Public Authority Operating Revenues. Using trend analysis statistical
21 techniques, CAPD estimates that this category's revenues will decline

¹⁵ CAPD Work Paper R-Revenue Comparative Summary, line 3.

¹⁶ TAWC, Exhibit 4, Schedule 2, Page 7 of 13

¹⁷ CAPD Work Paper R-Revenue Comparative Summary, line 3.

¹⁸ CAPD Work Paper R-Revenue Comparative Summary, Line 4.

¹⁹ TRA-01-Q013-Revenues.

1 by \$25,381.²⁰ For example, Other Public Authority Operating
2 Revenues volumetric billing determinants for the Chattanooga billing
3 district have declined by calendar year beginning in 2004 from
4 1,216,889 cubic feet to 1,025,432 cubic feet in 2009.²¹ This decline
5 has been steady over the full calendar years 2004 through 2009. By
6 using trend analysis on the historical billing determinants, the CAPD
7 was able to detect a probable decline in volumes and a resulting
8 decline in revenues.

9

10 **Q. Please describe the forecasting methods for the category Other**
11 **Water Utility Operating Revenues.**

12 A. The CAPD again used the more recent test year data from the
13 year ending September 30, 2010. The class Other Water Utility
14 Operating Revenues includes the utility districts of Fort Oglethorpe,
15 Catoosa, Signal Mountain, and Walden's Ridge.

16 TAWC predicts that revenues in this class will remain constant
17 from the older test year through the attrition year at \$1,308,493.²² The
18 CAPD, however, in contrast, predicts an increase in revenues during
19 the attrition year to \$1,293,805.²³

20 Once again, as in the previous example of Other Public
21 Authority Operating Revenues, a change in volumetric usage by

²⁰ CAPD Work Paper R-Revenue Comparative Summary, Line 4.

²¹ CAPD Work Paper R-Public Authority History; CAPD Work Paper R-OPA Trend.

²² CAPD Work Paper R-Revenue Comparative Summary, Line 5.

²³ CAPD Work Paper R-Revenue Comparative Summary, Line 5.

1 Catoosa County during the CAPD newer test year ending September
2 30, 2010. The loss of business from Catoosa County, Georgia, is cited
3 in testimony by TAWC witness John S. Watson.²⁴ Catoosa Utility
4 District Authority stopped purchasing water from TAWC in 2008
5 when it's contract expired. Catoosa's current water source is a spring.
6 It is not known at this time if a subsequent contract will be negotiated
7 due to drought conditions in the future.

8 Since Catoosa Utility District Authority had been purchasing
9 416,111 cubic feet of water annually, as recently as 2008, it's loss
10 may exceed that predicted by the CAPD's trend analysis. On the
11 opposite side of the equation, this loss frees up that much more
12 existing capacity for TAWC to resell, without expanding production
13 and its ensuing associated costs.

14

15 **Q. Please describe the forecasting methods for the category Private**
16 **Fire Service Operating Revenues.**

17 A. The CAPD used the historical billing determinants, as with
18 other classes of service. In this particular class, the CAPD used the
19 trend analysis technique on each meter pipe size to determine if any
20 attrition year estimates should be changed. As a result, the CAPD
21 determined that, although the **total** billing determinants were the same
22 as the TAWC's forecast, different meter pipe sizes produced different
23 forecast revenues. TAWC calculates that Private Fire Service

²⁴ TAWC Direct Testimony of witness John S. Watson, Q 33, Page 36, Line 25.

1 Operating Revenues will total \$1,735,066.²⁵ The CAPD calculates the
2 amount to be \$1,725,873.²⁶ Therefore, the CAPD's trend analysis of
3 Private Fire Service Operating Revenues is less than that of TAWC by
4 \$9,193.²⁷ Again, this demonstrates the forward looking value of trend
5 analysis.

6

7

SUMMARY

8 **Q. Please summarize the CAPD's overall forecasts of comparative**
9 **Operating Revenues.**

10 A. The CAPD's forecast of overall Operating Revenues totals
11 \$38,251,266²⁸, which is \$954,809²⁹ greater than TAWC's forecast of
12 \$37,296,457³⁰.

13 Based on what is reported in TAWC's exhibits, there are
14 several obvious differences between the CAPD and TAWC forecasts.
15 First, when forecasting Residential Revenues, TAWC has only used
16 growth/shrinkage factors on one meter size per revenue class. This
17 does not capture what has historically occurred with the other meter
18 sizes. The CAPD, in comparison, applied growth and/or shrinkage
19 factors to **all** meter sizes in the residential class. This same difference
20 continued in the volumetric calculations in the residential class where
21 TAWC considered only two categories, whereas the CAPD

²⁵ CAPD Work Paper R-Revenue Comparative Summary, Line 6.

²⁶ CAPD Work Paper R-Revenue Comparative Summary, Line 6.

²⁷ CAPD Work Paper R-Revenue Comparative Summary, Line 6.

²⁸ CAPD Work Paper R-Revenue Comparative Summary, Line 10.

²⁹ CAPD Work Paper R-Revenue Comparative Summary, Line 10.

³⁰ CAPD Work Paper R-Revenue Comparative Summary, Line 10

1 considered **all** cubic feet calculations in the volumetric calculations.

2 The CAPD has examined the ‘bill analysis’ referred to by
3 TAWC witness Sheila A. Miller³¹ and cannot determine any statistical
4 method that was used to calculate future billing determinants, other
5 than those few that were just discussed above.

6 Second, as discussed by CAPD expert witness William H. (Hal)
7 Novak, TAWC’s Weather Normalization Adjustment, unrealistically
8 reduces TAWC’s revenues. The CAPD holds that this reduction is
9 not correct.

10 Third, the CAPD’s use of trend analysis captures the likelihood
11 of increases and decreases to billing determinants better than other
12 statistical analysis techniques that *do not use past data*. Averaging, as
13 is often used, does not foresee *future* changes. Trend analysis is a
14 method that uses the benefit of historical information (which exists
15 since 2003 to present for most of TAWC’s billing determinate data) to
16 spot future outcomes. The CAPD feels that this statistical technique is
17 the best one suited to this docket and calculating attrition year values.

18

19 **Q. Does this conclude your testimony on Operating Revenues?**

20 A. Yes it does.

21

22

³¹ TAWC Docket 10-00189 Direct testimony of Sheila A. Miller, page 5, Q. 12.

1 **DOCKET # 10-00189**

2 **Tennessee American Water Company**

3 **AMENDMENT TO AMENDED Testimony of John Hughes**

4 **March 1, 2011**

5

6 **Q. Please state your name for the record.**

7 A. My name is John Hughes.

8

9 **Q. By whom are you employed and what is your position?**

10 A. I am employed by the Consumer Advocate and Protection
11 Division ("Consumer Advocate" or "CAPD") in the office of the
12 Attorney General for the State Of Tennessee ("Office") as a Financial
13 Regulatory Analyst.

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15 **Q. How long have you been employed in conjunction with the**
16 **Financial accounting industry?**

17 A. I have been a Certified Public Accountant for eighteen years,
18 practicing in both Tennessee and Florida. Before my current
19 employment with the Office, I was employed in many phases of Public
20 Accounting. I have performed duties as a Staff Accountant, Auditor,
21 Audit Manager, Accounting Manager, Financial Planner and Analyst,
22 Corporate Controller, and Tax Consultant. My most in depth area of

1 concentration and experience over my career is corporate auditing and
2 taxation.

3
4 **Q. What is your educational background and what degrees do you**
5 **hold?**

6 A. I hold a Bachelors Degree in Business Administration from the
7 University of Pittsburgh, Pennsylvania, with a major in Accounting. I
8 also hold a Master of Business Administration Degree in Finance
9 from Dowling College, Oakdale, New York. I am a current, licensed
10 Tennessee Certified Public Accountant. Further, I hold a license as a
11 Certified Financial Planner, valid in all states.

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13 **Q. Would you briefly describe your responsibilities as a Financial**
14 **Regulatory Analyst with the Consumer Advocate?**

15 A. I review tariffs filed by Tennessee public utilities that are subject
16 to the jurisdiction of the Tennessee Regulatory Authority ("TRA").
17 Additionally, I prepare testimony and financial exhibits in rate
18 proceedings as an employee with the Consumer Advocate.

19
20 **Q. What is the purpose of your testimony?**

21 A. The purpose of my testimony is to forecast the Operating
22 Revenues of Tennessee American Water Company ("TAWC") using

1 my work papers (“work papers of the CAPD”) for the attrition year
2 ending December 31, 2011.

3 **Q. Are you the John Hughes who previously filed direct testimony on**
4 **January 5, 2011 and amended direct testimony on February 24,**
5 **2011?**

6 A. Yes, I am.

7 **Q. What is the purpose of your testimony?**

8 A. The purpose of my testimony is to amend my pre-filed amended direct
9 testimony, filed on February 24, 2011, the forecasted financial
10 exhibits (Exhibits of the Consumer Advocate) and certain work papers
11 (work papers of John Hughes) for Commercial Operating Income,
12 Industrial Operating Income, and Other Water Utility Operating
13 Income for the attrition year ending December 31, 2011.

14 **Q. Please describe the first amendment.**

15 A. The Commercial History Volumetric Determinants involving
16 Lakeview was found to have an error. As a result, this error was
17 corrected, and the resulting commercial trend analysis and
18 commercial summary work papers were corrected to incorporate the
19 changes to the volumetric data. The summary attrition year revenue
20 computations were corrected accordingly.

21 **Q. Please describe the second amendment.**

22 A. The Industrial Class was not trended and the testimony was corrected
23 to reflect this change.

1 **Q. Please describe the final amendment.**

2 A. The Other Water Utility Class was not trended and the testimony was
3 corrected to reflect this change.

4 **Q. What are the required corrections to your testimony due to the**
5 **amendments?**

6 A. Page 3, Line 10 should be \$38,251,266 , not \$38,229,488.

7 Page 3, Line 11 should be \$954,809, not\$933,031.

8 Page 3, Line 15 should be \$954,809, not \$933,031.

9 Page 4, Line 12 should be \$636,286, not \$614,508.

10 Page 8, Line 22 should be \$11,737,629, not \$11,715,851.

11 Page 9, Line 9 should be \$11,737,629, not \$11,715,851.

12 Page 9, Line 9 should be \$203,282, not \$181,504.

13

14 This concludes the amendments to my amended testimony filed on
15 February 24, 2011. Attached is my 2nd amended testimony.

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE AND PROTECTION DIVISION
SUMMARY ATTRITION YEAR REVENUE COMPARATIVE
TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #10-00189

R-REVENUE COMPARATIVE SUMMARY

Line No.	Class of Service	3/31/2010	3/31/2010	Tennessee American Water Company		Consumer Advocate and Protection Division		Over (Under) CAPD Forecast Revenues
		Per Book Total Revenues	Normalized Total Revenues	Attrition Year @ Present Rates		Attrition Year @ Present Rates		
				12/31/2011 Total Revenues	Percent Increase Over 3/31/2010	12/31/2011 Total Revenues	Percent Increase Over 3/31/2010	
1	Residential	\$ 15,613,436	\$ 15,159,653	\$ 15,243,199	0.55% A/	\$ 15,925,215	5.05%	\$ (682,016)
2	Commercial	11,512,840	11,403,023	11,534,347	1.15% B/	11,737,629	2.93%	(203,282)
3	Industrial	3,400,242	3,401,964	3,401,964	0.00% C/	3,520,697	3.49%	(118,733)
4	Other Public Authority	2,556,475	2,556,253	2,556,253	0.00% D/	2,530,872	-0.99%	25,381
5	Other Water Utility	1,248,931	1,308,493	1,308,493	0.00% E/	1,293,805	-1.12%	14,688
6	Private Fire Service	1,721,772	1,721,772	1,735,066	0.77% F/	1,725,873	0.24%	9,193
7	Public Fire Service	(66)	-	-		40		(40)
8	Subtotal	\$ 36,053,630	\$ 35,551,158	\$ 35,779,322	0.64%	\$ 36,734,131	3.33%	\$ (954,809)
9	Other Operating Revenues	1,517,219	1,512,788	1,517,135	0.29% G/	1,517,135	0.29%	-
10	Total Revenue	\$ 37,570,849	\$ 37,063,946	\$ 37,296,457	0.63%	\$ 38,251,266		\$ (954,809)

A/ CAPD Work Paper R-RES SUMMARY
B/ CAPD Work Paper R-COMM SUMMARY
C/ CAPD Work Paper R-IND SUMMARY
D/ CAPD Work Paper R-OPA SUMMARY

E/ CAPD Work Paper R-OTHER UTIL SUMMARY
F/ TAWC response to CAPD Part IV, #7.
G/ TAWC Other Operating Revenues -Attritopm Yr at Present Rates

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
 CONSUMER ADVOCATE AND PROTECTION DIVISION
 SUMMARY ATTRITION YEAR REVENUE COMPARATIVE
 Suck Creek

R-RESIDENTIAL HIST

Residential Class	Billing Determinants - 2010												Total	12 MTD
	January	February	March	April	May	June	July	August	September	October	November	December		
Meter Size														
5/8"	208	213	209	210	212	211	209	213	212	-	-	-	1,896	2,530
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	1	1	1	1	1	1	1	1	1	-	-	-	9	12
1 1/2"													-	-
2"													-	-
3"													-	-
4"													-	-
6"													-	-
8"													-	-
Total Meters	209	214	210	211	213	212	210	214	213	-	-	-	1,905	2,542
Volumetric Rates														
First 100 Cubic Feet	386	392	386	387	389	395	395	408	399	-	-	-	3,536	4,690
Next 100 Cubic Feet	767	709	661	685	739	887	840	957	804	-	-	-	7,049	8,990
In Excess of 200 Cubic Feet	104	85	64	92	577	222	168	225	204	-	-	-	1,741	2,007
													-	-
Total Volumetric	1,256	1,186	1,111	1,164	1,706	1,503	1,403	1,590	1,407	-	-	-	12,326	15,687

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ORNEY GENERAL - STATE OF TENNESSEE
 STATE AND PROTECTION DIVISION
 12 YEAR REVENUE COMPARATIVE

R-COMMERCIAL HIST

	Billing Determinants - 2010												Total	12 MTD
	January	February	March	April	May	June	July	August	September	October	November	December		
	5,098	4,831	5,686	4,718	4,820	5,344	5,076	5,350	4,768	-	-	-	45,690	61,071
	137	123	152	128	121	144	132	139	125	-	-	-	1,199	1,604
	1,394	1,312	1,514	1,341	1,323	1,496	1,412	1,470	1,372	-	-	-	12,633	16,830
	355	339	374	346	343	371	355	361	349	-	-	-	3,191	4,259
	1,058	1,013	1,110	1,039	1,015	1,096	1,059	1,077	1,044	-	-	-	9,511	12,708
	35	33	31	31	35	36	34	36	39	-	-	-	309	429
	24	24	24	24	24	25	25	25	25	-	-	-	220	292
	12	12	12	12	14	13	13	13	13	-	-	-	114	150
	2	2	2	2	2	2	2	2	2	-	-	-	18	24
	8,115	7,688	8,905	7,640	7,696	8,526	8,108	8,473	7,736	-	-	-	72,887	97,368
Rates														
	20,562	19,298	22,538	20,307	20,649	23,070	22,305	23,191	21,674	-	-	-	193,593	258,654
	90,337	81,810	94,685	91,892	94,403	109,399	109,880	112,697	111,137	-	-	-	896,240	1,184,138
at	122,549	109,913	118,874	128,567	125,351	145,068	156,107	159,202	160,041	-	-	-	1,225,672	1,597,510
et	62,953	56,914	55,517	70,584	67,640	71,881	88,287	83,613	93,258	-	-	-	650,647	843,789
Feet	434	3,993	576	-	-	-	832	1,168	3,074	-	-	-	10,077	10,141
bic Feet													-	-
	296,836	271,928	292,190	311,350	308,042	349,418	377,410	379,871	389,184	-	-	-	2,976,229	3,894,232

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OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE AND PROTECTION DIVISION
SUMMARY ATTRITION YEAR REVENUE COMPARATIVE
Chattanooga

R-INDUSTRIAL HIST

Industrial Class	Billing Determinants - 2010												Total	12 MTD
	January	February	March	April	May	June	July	August	September	October	November	December		
Meter Size														
5/8"	22	21	27	18	21	23	22	26	18	-	-	-	198	264
3/4"	2	2	3	1	2	2	2	3	1	-	-	-	18	24
1"	23	21	25	20	20	22	21	23	19	-	-	-	194	263
1 1/2"	6	6	7	5	6	6	6	7	5	-	-	-	54	72
2"	82	81	87	79	81	84	82	86	78	-	-	-	739	985
3"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4"	17	17	17	17	17	17	17	17	17	-	-	-	153	204
6"	5	5	5	5	5	5	5	5	5	-	-	-	45	60
8"													-	-
Total Meters	157	153	171	145	152	159	155	167	143	-	-	-	1,402	1,874
Volumetric Rates														
First 400 Cubic Feet	404	393	458	375	398	415	410	457	385	-	-	-	3,695	4,927
Next 6,100 Cubic Feet	4,143	4,118	4,209	4,091	4,081	4,155	4,264	4,251	4,156	-	-	-	37,469	49,783
Next 43,500 Cubic Feet	19,147	19,184	18,834	19,873	19,656	19,827	19,564	19,622	19,807	-	-	-	175,514	230,927
Next 450,000 Cubic Feet	68,677	67,945	68,752	71,896	72,528	73,093	76,695	78,058	82,153	-	-	-	659,797	872,926
Next 1,000,000 Cubic Feet	53,508	57,265	58,224	63,550	62,202	62,452	66,558	65,472	68,749	-	-	-	557,980	729,312
All Over 1,500,000 Cubic Feet	52,750	50,760	53,918	69,545	72,280	70,039	74,937	74,744	82,995	-	-	-	601,968	775,046
Total Volumetric	198,629	199,665	204,395	229,331	231,145	229,981	242,428	242,604	258,245	-	-	-	2,036,423	2,662,922

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE & PROTECTION DIVISION
OTHER PUBLIC AUTHORITY BILLING DETERMINANTS HISTORY
TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-00189
Lakeview

R-PUBLIC AUTHORITY HIST

Billing Determinants - 2009													
Other Public Authority	January	February	March	April	May	June	July	August	September	October	November	December	Total
Meter Size													
5/8"	5	5	5	5	5	5	5	5	5	5	5	5	60
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	1	1	1	1	1	1	1	1	1	1	1	1	12
1 1/2"	1	1	1	1	1	1	1	1	1	1	1	1	12
2"	2	2	2	2	2	2	2	2	2	2	2	2	24
3"													-
4"													-
6"													-
8"													-
Total Meters	9	9	9	9	9	9	9	9	9	9	9	9	108
Volumetric Rates													
First 400 Cubic Feet	12	16	20	17	18	16	17	17	17	16	16	14	196
Next 6,100 Cubic Feet	118	131	177	138	128	122	63	76	134	144	164	133	1,528
Next 43,500 Cubic Feet	131	77	29	39	79	77	-	10	116	33	161	104	856
Next 450,000 Cubic Feet													-
Next 1,000,000 Cubic Feet													-
All Over 1,500,000 Cubic Feet													-
Total Volumetric	261	224	226	194	225	215	80	103	267	193	341	251	2,580

Lakeview	Billing Determinants - 2010													
Other Public Authority	January	February	March	April	May	June	July	August	September	October	November	December	Total	12 MTD
Meter Size														
5/8"	5	5	5	5	5	5	5	5	5	-	-	-	45	60
3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1"	1	1	1	1	1	1	1	1	1	-	-	-	9	12
1 1/2"	1	1	1	1	1	1	1	1	1	-	-	-	9	12
2"	2	2	2	2	2	2	2	2	2	-	-	-	18	24
3"													-	
4"													-	
6"													-	
8"													-	
Total Meters	9	9	9	9	9	9	9	9	9	-	-	-	81	108
Volumetric Rates														
First 400 Cubic Feet	13	15	13	17	11	14	17	13	19	-	-	-	132	178
Next 6,100 Cubic Feet	130	137	142	134	113	148	141	157	185	-	-	-	1,287	1,728
Next 43,500 Cubic Feet	57	32	36	37	33	36	103	168	223	-	-	-	725	1,023
Next 450,000 Cubic Feet														
Next 1,000,000 Cubic Feet														
All Over 1,500,000 Cubic Feet														
Total Volumetric	200	184	191	188	157	198	261	338	427	-	-	-	2,144	2,929

TENNESSEE AMERICAN WATER COMPANY
TRA DOCKET #10-00189

OTHER WATER UTILITY BILLING DETERMINANTS HISTORY

R-OTHER WATER UTILITY HIST

Chattanooga Other Water Utility Class	January	February	March	April	May	Billing Determinants - 2010 June	July	August	September	October	November	December	Total	12 MTD
Meter Size														
5/8"													-	
3/4"													-	
1"													-	
1 1/2"													-	
2"													-	
3"													-	
4"													-	
6"													-	
8"													-	
Total Meters	-	-	-	-	-	-	-	-	-	-	-	-	-	
Volumetric Rates														
Ft. Oglethorpe	44,288	35,241	33,462	37,409	33,378	36,723	41,485	36,056	39,630	-	-	-	337,672	452,871
Catoosa	-	1,300	2,081	-	2,085	105	4,140	2,575	1,115	-	-	-	13,401	29,430
Signal Mountain	31,110	30,349	27,467	34,149	36,085	35,108	48,755	49,259	53,465	-	-	-	345,747	429,050
Walden's Ridge	36,335	33,561	30,437	30,222	32,716	40,392	43,220	44,023	47,864	-	-	-	338,770	421,330
Total Volumetric	111,733	100,451	93,447	101,780	104,264	112,328	137,600	131,913	142,074	-	-	-	1,035,590	1,332,681

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
 CONSUMER ADVOCATE AND PROTECTION DIVISION
 SUMMARY ATTRITION YEAR REVENUE COMPARATIVE
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #10-00189

Chattanooga Private Fire Service							Billing Determination
		January	February	March	April	May	June
Meter							
Size							
	1"						
	1 1/2"						
	2"						
	2 1/2"						
	3"						
	4"						
	6"						
	8"						
	10"						
	12"						
Total Meters							

Chattanooga Private Fire Service							Billing Determination
		January	February	March	April	May	June
Meter							
Size							
	1"						
	1 1/2"						
	2"						
	2 1/2"						
	3"						
	4"						
	6"						
	8"						
	10"						
	12"						
Total Meters							

Chattanooga Private Fire Service							Billing Determination
		January	February	March	April	May	June
Meter							
Size							
	1"						
	1 1/2"						
	2"						
	2 1/2"						
	3"						
	4"						
	6"						
	8"						

10"
12"
Total Meters

**Chattanooga
Private Fire Service**

January February March April May Billing Determination June

Meter
Size
1"
1 1/2"
2"
2 1/2"
3"
4"
6"
8"
10"
12"
Total Meters

**Chattanooga
Private Fire Service**

January February March April May Billing Determination June

Meter
Size
1"
1 1/2"
2"
2 1/2"
3"
4"
6"
8"
10"
12"
Total Meters

**Chattanooga
Private Fire Service**

April May June July August Billing Determination September

Meter
Size
1"
1 1/2"
2"
2 1/2"
3"
4"
6"
8"
10"

12"
Total Meters

R-PRIVATE FIRE SERVICE HIST

minants - 2003

July	August	September	October	November	December	Total
------	--------	-----------	---------	----------	----------	-------

minants - 2004

July	August	September	October	November	December	Total
------	--------	-----------	---------	----------	----------	-------

minants - 2005

July	August	September	October	November	December	Total
------	--------	-----------	---------	----------	----------	-------

1
13
1
2
80
730
292

15
19
1,153

minants - 2006

July	August	September	October	November	December	Total
------	--------	-----------	---------	----------	----------	-------

2
14
2
4
80
814
292
15
19
1,242

minants - 2007

July	August	September	October	November	December	Total
------	--------	-----------	---------	----------	----------	-------

minants - March 2008

October	November	December	January	February	March	Total
---------	----------	----------	---------	----------	-------	-------

1
14
1
2
87
780
301
15

19
1,220

OFFICE OF TENNESSEE AMERICAN WATER COMPANY
 CONSUMER TRA DOCKET #10-00189
 RESIDENTIAL BILLING DETERMINANTS COMPARATIVE
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-00189

BILLING DETERMINANTS
 TREND ANALYSIS

R-RESIDENTIAL TREND

		12/31/2011							
		Lakeview							
		A/ 12/31/2004	A/ 12/31/2005	A/ 12/31/2006	A/ 12/31/2007	A/ 12/31/2008	A/ 12/31/2009	A/ 9/30/2010	B/ 12/31/2011 TAWC
Meter Size	5/8"	32,896	32,805	33,015	33,555	33,806	33,560	33,077	33,684
	3/4"	12	18	12	3	-	-	-	-
	1"	46	48	48	48	48	41	37	39
	1 1/2"								
	2"								
	3"								
	4"								
	6"								
	8"								
Total Meters		32,954	32,871	33,075	33,606	33,854	33,602	33,114	33,723
Volumetric Rates									
First 400 Cubic Feet		108,308	108,914	108,632	109,270	108,863	107,601	106,934	107,424
Next 6,100 Cubic Feet		87,364	88,005	84,165	85,138	82,482	77,981	76,461	75,063
Next 43,500 Cubic Feet		2,111	1,510	1,251	814	838	1,172	627	368
Next 450,000 Cubic Feet		-							
Next 1,000,000 Cubic Feet									
All Over 1,500,000 Cubic Feet									
Total Volumetric		197,783	198,429	194,048	195,222	192,183	186,754	184,022	182,855

A/ CAPD Work Papers R-RESIDENTIAL HIST, 9/30/10 normalized per TAWC response to Consumer Advocate DR #12 (exclusive of WNA).

B/ TAWC Exhibit No. 4, Schedule 2, Page 2 of 13, Lines 15 and 24

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
 CONSUMER ADVOCATE & PROTECTIVE DIVISION
 COMMERCIAL BILLING DETERMINANTS COMPARATIVE
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-00189

BILLING DETERMINANTS
 TREND ANALYSIS

AMENDED R-COMMERCIAL TREND

	12/31/2011								
	Lakeview								
Meter Size	A/ 12/31/2004	A/ 12/31/2005	A/ 12/31/2006	A/ 12/31/2007	A/ 12/31/2008	A/ 12/31/2009	A/ 9/30/2010	12/31/2011	B/ TAWC
5/8"	1,957	1,833	1,839	1,707	1,676	1,231	1,639	1,639	1,641
3/4"	-	-	-	-	-	-	-	-	-
1"	218	216	228	229	222	162	213	213	234
1 1/2"	-	-	-	-	-	-	-	-	-
2"	106	96	88	92	84	63	84	84	84
3"					-	-	-	0	
4"					-	-	-	0	
6"					-	-	-	0	
8"					-	-	-	0	
Total Meters	2,281	2,145	2,155	2,028	1,982	1,456	1,936	1,939	1,959
Volumetric Rates									
First 400 Cubic Feet	6,207	5,650	5,455	5,350	5,216	3,733	4,831	4,831	5,034
Next 6,100 Cubic Feet	17,322	16,414	15,068	13,817	12,385	8,446	11,951	11,951	11,542
Next 43,500 Cubic Feet	10,616	7,296	7,917	7,954	6,661	5,021	6,827	6,827	6,164
Next 450,000 Cubic Feet	134	84	228	167	157	-	240	240	-
Next 1,000,000 Cubic Feet					-	-	-		
All Over 1,500,000 Cubic Feet					-	-	-		
Total Volumetric	34,279	29,444	28,668	27,288	24,419	17,200	23,849	23,849	22,740

A/ CAPD Work Papers R-COMERCIAL HIST, 9/30/10 normalized per TAWC response to Consumer Advocate DR #12 (exclusive of WNA).

B/ TAWC Exhibit No. 4, Schedule 2, Page 5 of 13, Lines 15 and 24

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE & PROTECTION DIVISION
INDUSTRIAL BILLING DETERMINANTS COMPARATIVE
TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-00189

BILLING DETERMINANTS
TREND ANALYSIS

R-INDUSTRIAL TREND

12/31/2011

	Chattanooga								
Meter Size	A/ 12/31/2004	A/ 12/31/2005	A/ 12/31/2006	A/ 12/31/2007	A/ 12/31/2008	A/ 12/31/2009	A/ 9/30/2010	12/31/2011	B/ TAWC
5/8"	301	276	283	280	270	264	264	255	268
3/4"	36	34	23	24	24	24	24	19	25
1"	348	329	304	302	294	306	263	261	271
1 1/2"	72	83	84	84	84	81	72	80	79
2"	1,108	1,059	1,013	1,021	988	987	985	943	979
3"	1	2	-	-	-	-	-	(1)	-
4"	299	292	276	267	230	209	204	181	203
6"	60	59	63	68	84	67	60	72	61
8"	-	-	-	-	-	-	-	-	-
Total Meters	2,225	2,134	2,046	2,046	1,975	1,938	1,874	1,809	1,886

Volumetric Rates

First 400 Cubic Feet	5,838	5,663	5,588	5,400	5,332	5,073	4,927	4,788	4,987
Next 6,100 Cubic Feet	59,048	56,337	56,123	54,943	54,268	50,073	49,783	48,131	48,999
Next 43,500 Cubic Feet	260,422	254,468	255,560	250,126	235,631	223,316	230,927	218,908	220,492
Next 450,000 Cubic Feet	1,012,009	1,000,627	1,021,497	1,036,716	984,772	865,244	872,925	864,087	856,123
Next 1,000,000 Cubic Feet	794,066	791,350	873,991	907,244	884,704	696,181	729,312	757,248	691,165
All Over 1,500,000 Cubic Feet	551,378	869,307	1,065,096	976,976	815,058	646,326	775,046	811,784	741,482
Total Volumetric	2,682,761	2,977,752	3,277,855	3,231,405	2,979,765	2,486,213	2,662,921	2,704,946	2,563,248

A/ CAPD Work Papers R-INDUSTRIAL HIST

B/ TAWC Exhibit No. 4, Schedule 2, Page 7 of 13, Lines 15 and 24

OFFICE OF TENNESSEE AMERICAN WATER COMPANY
 CONSUMER TRA DOCKET #10-00189
 COMMERCIAL OTHER PUBLIC AUTHORITY BILLING DETERMINANTS COMPARATIVE
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-00189

BILLING DETERMINANTS
 TREND ANALYSIS

R-OPA TREND

	12/31/2011								
	Lookout Mountain								
Meter Size	A/ 12/31/2004	A/ 12/31/2005	A/ 12/31/2006	A/ 12/31/2007	A/ 12/31/2008	A/ 12/31/2009	A/ 9/30/2010	12/31/2011	B/ TAWC
5/8"	132	137	149	158	144	156	164	168	158
3/4"	-	-	4	12	11	15	16	21	16
1"	108	108	127	121	110	127	132	133	130
1 1/2"	12	12	11	12	11	12	12	12	12
2"	83	83	75	72	66	72	72	65	72
3"									
4"									
6"									
8"									
Total Meters	335	340	366	375	343	382	397	398	388
Volumetric Rates									
First 400 Cubic Feet	739	757	835	967	813	845	892	926	861
Next 6,100 Cubic Feet	4,796	4,974	5,683	6,794	5,095	5,495	5,160	5,673	5,226
Next 43,500 Cubic Feet	2,196	3,834	3,624	5,311	3,371	3,424	2,476	3,464	3,172
Next 450,000 Cubic Feet	-	-	-	-	-	648	648	660	648
Next 1,000,000 Cubic Feet									
All Over 1,500,000 Cubic Feet									
Total Volumetric	7,731	9,565	10,142	13,072	9,279	10,411	9,176	10,723	9,907

A/ CAPD Work Papers R-PUBLIC AUTHORITY HIST

B/ TAWC Exhibit No. 4, Schedule 2, Page 9 of 13, Lines 36 and 45

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
 CONSUMER ADVOCATE & PROTECTION DIVISION
 OTHER WATER UTILITY BILLING DETERMINANTS COMPARATIVE
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-00189

BILLING DETERMINANTS
 TREND ANALYSIS

AMENDED R-OTHER WATER UTILITY TREND

12/31/2011

Chattanooga

Chattanooga
 Other Water Utility Class

	A/ <u>12/31/2004</u>	A/ <u>12/31/2005</u>	A/ <u>12/31/2006</u>	A/ <u>12/31/2007</u>	A/ <u>12/31/2008</u>	A/ <u>12/31/2009</u>	A/ <u>9/30/2010</u>	<u>12/31/2011</u>	B/ <u>TAWC</u>
Meter Size									
5/8"									
3/4"									
1"									
1 1/2"									
2"							12	12	12
3"								-	-
4"							36	36	36
6"									
8"	-	-	-	-	-			-	-
Total Meters	-	-	-	-	-		48	48	48

Volumetric Rates

First 400 Cubic Feet									
Next 6,100 Cubic Feet									
Ft. Oglethorpe	-	107,906	483,455	497,607	506,108	436,299	452,871	452,871	469,025
Catoosa	-	35,411	369,170	508,501	403,962	45,745	29,430	29,430	27,241
Signal Mountain	-	81,561	467,096	520,258	486,872	369,265	429,050	429,050	415,455
Walden's Ridge	-	-	376,073	470,456	505,226	384,981	421,330	421,330	434,358
SFR	1,337,767	1,046,319	-	-					
Total Volumetric	1,337,767	1,271,197	1,695,794	1,996,822	1,902,168	1,236,290	1,332,681	1,332,681	1,346,079

A/ CAPD Work Papers R-OTHER WATER UTILITY HIST

B/ TAWC Exhibit No. 4, Schedule 2, Page 11 of 13, Lines 15 and 28

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE & PROTECTIVE DIVISION
RESIDENTIAL REVENUE FORECAST COMPARATIVE
TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-00189

RESIDENTIAL REVENUE FORECAST COMPARATIVE

Meter Charges

Meter Size	Present Rates	TAWC Billing Determinates A/	TAWC Revenue Forecast	CAPD Billing Determinates B/	CAPD Revenue Forecast	TAWC Over (Under) CAPD Revenue Forecast
5/8"	\$ 10.88	724,498	\$ 7,882,538	728,218	\$ 7,923,012	\$ (40,474)
3/4"	18.28	1,089	19,907	1,183	21,629	(1,722)
1"	30.41	1,949	59,269	2,055	62,490	(3,221)
1 1/2"	60.85	207	12,596	224	13,633	(1,037)
2"	97.35	114	11,098	89	8,694	2,404
3"	182.53	1	183	1	183	-
4"	-	-	-	-	-	-
6"	-	-	-	-	-	-
8"	-	-	-	-	-	-
Total		727,858	\$ 7,985,591	731,770	\$ 8,029,639	\$ (44,048)

Volumetric Rates

	Present Rates	TAWC Billing Determinates	TAWC Revenue Forecast	CAPD Billing Determinates	CAPD Revenue Forecast	TAWC Over (Under) CAPD Revenue Forecast
First 400 Cubic Feet	\$ 0.202	2,294,987	\$ 463,587	2,276,511	\$ 459,855	\$ 3,732
Next 6,100 Cubic Feet	3.207	1,546,547	4,959,776	1,661,355	5,327,965	(368,189)
Next 43,500 Cubic Feet	2.015	62,450	125,837	74,312	149,739	(23,902)
Next 450,000 Cubic Feet	1.506	2,540	3,825	5,916	8,909	(5,084)
Next 1,000,000 Cubic Feet	1.151	-	-	-	-	-
All Over 1,500,000 Cubic Feet	0.684	-	-	-	-	-
Total		3,906,524	\$ 5,553,026	4,018,094	\$ 5,946,469	\$ (393,443)
Total Residential			\$13,538,616		\$ 13,976,108	\$ (437,492)

A/ TAWC Exhibit No. 4, Schedule 2, Page 1 of 13, Lines 15 and 24.

B/ CAPD Work Paper, R-RESIDENTIAL TREND

**CONSUMER ADVOCATE & PROTECTION DIVISION
COMMERCIAL REVENUE FORECAST COMPARATIVE
TENNESSEE AMERICAN WATER COMPANY - TRA DOCI**

R-COMM COMPARATIVE

Suck Creek

Meter Charges		Present Rates	TAWC Billing Determinates A/	TAWC Revenue Forecast	CAPD Billing Determinates B/	CAPD Revenue Forecast	TAWC Over (Under) CAPD Revenue Forecast
Meter Size							
5/8"		\$ 23.70	49	\$ 1,161	48	\$ 1,138	\$ 24
3/4"		23.70	-	-	-	-	-
1"		23.70	-	-	-	-	-
1 1/2"		23.70	-	-	-	-	-
2"		23.70	-	-	-	-	-
3"		23.70	-	-	-	-	-
4"		23.70	-	-	-	-	-
6"		23.70	-	-	-	-	-
8"		23.70	-	-	-	-	-
Total			49	\$ 1,161	48	\$ 1,138	\$ 24
Volumetric Rates		Present Rates	TAWC Billing Determinates	TAWC Revenue Forecast	CAPD Billing Determinates	CAPD Revenue Forecast	TAWC Over (Under) CAPD Revenue Forecast
First 100 Cubic Feet		\$ -	39	\$ -	27	\$ -	\$ -
Ocer 100 Cubic Feet		3.423	58	199	23	78	121
		2.567	49	126	48	124	2
First 400 Cubic Feet		-	-	-	-	-	-
Next 6,100 Cubic Feet		-	-	-	-	-	-
Next 43,500 Cubic Feet		-	-	-	-	-	-
Total			146	\$ 324	98	\$ 202	\$ 123
Total Commercial				\$ 1,486		\$ 1,339	\$ 146

A/ TAWC Exhibit No. 4, Schedule 2, Page 5 of 13, Lines 15 and 26.

B/ CAPD Work Paper, R-COMMERCIAL TREND

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE & PROTECTION DIVISION
INDUSTRIAL REVENUE FORECAST COMPARATIVE
TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-00189

R-IND COMPARATIVE

Meter Charges			Chattanooga			
Meter Size	Present Rates	TAWC Billing Determinates A/	TAWC Revenue Forecast	CAPD Billing Determinates B/	CAPD Revenue Forecast	TAWC Over (Under) CAPD Revenue Forecast
5/8"	\$ 10.88	268	\$ 2,916	255	\$ 2,774	\$ 141
3/4"	18.28	25	457	19	347	110
1"	30.41	271	8,241	261	7,937	304
1 1/2"	60.85	79	4,807	80	4,868	(61)
2"	97.35	979	95,306	943	91,801	3,505
3"	182.53	-	-	(1)	(183)	183
4"	304.23	203	61,759	181	55,066	6,693
6"	608.47	61	37,117	72	43,810	(6,693)
8"	973.63	-	-	-	-	-
Total		1,886	\$ 210,602	1,810	\$ 206,421	\$ 4,181
Volumetric Rates						
	Present Rates	TAWC Billing Determinates	TAWC Revenue Forecast	CAPD Billing Determinates	CAPD Revenue Forecast	TAWC Over (Under) CAPD Revenue Forecast
First 400 Cubic Feet	\$ 0.202	4,987	\$ 1,007	4,788	\$ 967	\$ 40
Next 6,100 Cubic Feet	3.207	48,999	157,140	48,131	154,356	2,784
Next 43,500 Cubic Feet	2.015	220,492	444,291	218,908	441,100	3,192
Next 450,000 Cubic Feet	1.506	856,123	1,289,321	864,087	1,301,315	(11,994)
Next 1,000,000 Cubic Feet	1.151	691,165	795,531	757,248	871,592	(76,062)
All Over 1,500,000 Cubic Feet	0.684	741,482	507,174	811,784	555,260	(48,087)
Total		2,563,248	\$ 3,194,464	2,704,946	\$ 3,324,591	\$ (130,126)
Total Industrial			\$ 3,405,066		\$ 3,531,011	\$ (125,945)

A/ TAWC Exhibit No. 4, Schedule 2, Page 7 of 13, Lines 15 and 24.

B/ CAPD Work Paper, R-INDUSTRIAL TREND

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE & PROTECTION DIVISION
COMMERCIAL REVENUE FORECAST COMPARATIVE
TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-001

R-OPA COMPARATIVE
Lookout Mountain

Meter Charges		Present	TAWC Billing Determinates A/	TAWC Revenue Forecast	CAPD Billing Determinates B/	CAPD Revenue Forecast	TAWC Over (Under) CAPD Revenue Forecast
Meter Size		Rates					
5/8"		\$12.21	158	\$ 1,929	168	\$ 2,051	\$ (122)
3/4"		18.28	16	292	21	386	(93)
1"		30.41	130	3,953	133	4,036	(83)
1 1/2"		60.85	12	730	12	712	18
2"		97.35	72	7,009	65	6,341	668
3"		-	-	-	-	-	-
4"		-	-	-	-	-	-
6"		-	-	-	-	-	-
8"		-	-	-	-	-	-
Total			388	\$ 13,914	399	\$ 13,527	\$ 387

Volumetric Rates		Present	TAWC Billing Determinates	TAWC Revenue Forecast	CAPD Billing Determinates	CAPD Revenue Forecast	TAWC Over (Under) CAPD Revenue Forecast
		Rates					
First 400 Cubic Feet		\$0.753	861	\$ 648	926	\$ 697	\$ (49)
Next 6,100 Cubic Feet		4.131	5,226	21,589	5,673	23,435	(1,846)
Next 43,500 Cubic Feet		2.939	3,172	9,323	3,464	10,181	(858)
Next 450,000 Cubic Feet		2.055	648	1,332	660	1,356	(25)
Next 1,000,000 Cubic Feet		-	-	-	-	-	-
All Over 1,500,000 Cubic Feet		-	-	-	-	-	-
Total			9,907	\$ 32,891	10,723	\$ 35,670	\$ (2,778)
Total Other Public Authority				\$ 46,805		\$ 49,197	\$ (2,391)

A/ TAWC Exhibit No. 4, Schedule 2, Page 10 of 13, Lines 15 and 24.

B/ CAPD Work Paper, R-OPA TREND

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE & PROTECTION DIVISION
OTHER WATER UTILITY REVENUE FORECAST COMPARATIVE
TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-00189

AMENDED R-OTHER WATER UTIL COMPARATIVE

Chattanooga

Meter Charges

Meter Size	Present Rates	TAWC Billing Determinates A/	TAWC Revenue Forecast	CAPD Billing Determinates B/	CAPD Revenue Forecast	TAWC Over (Under) CAPD Revenue Forecast
5/8"	\$ 10.88	-	\$ -	-	\$ -	\$ -
3/4"	18.28	-	-	-	-	-
1"	30.41	-	-	-	-	-
1 1/2"	60.85	-	-	-	-	-
2"	97.35	12	1,181	12	1,168	13
3"	182.53	-	-	-	-	-
4"	304.23	36	10,993	36	10,952	41
6"	608.47	-	-	-	-	-
8"	973.53	-	-	-	-	-
Total		48	\$ 12,174	48	\$ 12,120	\$ 54

Volumetric Rates

	Present Rates	TAWC Billing Determinates	TAWC Revenue Forecast	CAPD Billing Determinates	CAPD Revenue Forecast	TAWC Over (Under) CAPD Revenue Forecast
First 400 Cubic Feet	\$ 0.202	5	\$ 1	-	\$ -	\$ 1
Next 6,100 Cubic Feet	3.207	1	3	-	-	3
Next 43,500 Cubic Feet	2.015	-	-	-	-	-
Next 450,000 Cubic Feet	1.506	-	-	-	-	-
Next 1,000,000 Cubic Feet	1.151	-	-	-	-	-
All Over 1,500,000 Cubic Feet	0.684	-	-	-	-	-
Fort Oglethorpe	0.9353	469,025	438,679	452,871	423,570	15,109
Catoosa County	0.9353	27,241	25,479	29,430	27,526	(2,047)
Signal Mountain	0.8977	415,455	372,954	429,050	385,158	(12,204)
Walden Ridge	1.0572	434,358	459,203	421,330	445,430	13,773
Total		1,346,079	1,296,319	1,332,681	\$1,281,684	\$ 14,635
Total Other Water Utility			\$1,308,493		\$1,293,805	\$ 14,688

A/ TAWC Exhibit No. 4, Schedule 2, Page 11 of 13, Lines 15 and 28

B/ CAPD Work Paper, R-OTHER WATER UTILITY TREND

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
 CONSUMER ADVOCATE & PROTECTION DIVISION
 PRIVATE FIRE REVENUE FORECAST COMPARATIVE
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET # 10-00189

R-PRIVATE FIRE SERVICE COMPARATIVE

		Chattanooga					TAWC Over (Under) CAPD Revenue Forecast
Meter Charges		Present Rates	TAWC Billing Determinates	TAWC Revenue Forecast	CAPD Billing Determinates	CAPD Revenue Forecast	
Meter Size							
1"	\$	28.34	-	\$ -	-	\$ -	\$ -
1 1/2"		63.92	1	64	1	64	-
2"		113.88	16	1,822	14	1,594	228
2 1/2"		173.35	1	173	1	169	
3"		255.53	2	511	1	256	256
4"		511.71	107	54,753	108	55,265	(512)
6"		1,022.61	891	911,146	904	924,439	(13,294)
8"		2,046.96	307	628,417	299	612,041	16,376
10"		3,070.65	17	52,201	15	46,060	6,141
12"		4,094.54	21	85,985	21	85,985	-
Total			1,363	\$ 1,735,072	1,364	\$ 1,725,873	\$ 9,195

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
 CONSUMER ADVOCATE AND PROTECTION DIVISION
 RESIDENTIAL REVENUE FORECAST COMPARATIVE
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #10-00189

R-RES SUMMARY

	<u>TAWC</u>	<u>CAPD</u>	<u>Difference</u>
Chattanooga	\$ 13,538,616 A/	\$ 13,976,108 A/	\$ (437,492)
Lookout Mountain	942,636 A/	1,065,011 A/	(122,375)
Lakeview	715,044 A/	720,212 A/	(5,168)
Lone Oak	64,618 A/	67,113 A/	(2,495)
Suck Creek	95,003 A/	96,771 A/	(1,768)
Total Residential	\$ 15,355,918	\$ 15,925,215	\$ (569,298)
Corrections and Allowances	(113,625)		(113,625)
Tolerance Factor/Rounding	906		906
Total Net Residential Revenues	\$ 15,243,199 B/	\$ 15,925,215	\$ (682,017)

A/ CAPD Work Papers, R-RES COMPARATIVE

B/ TAWC Exhibit No. 4, Schedule 1, Page 1 of 1, Line 5

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
 CONSUMER ADVOCATE AND PROTECTION DIVISION
 COMMERCIAL REVENUE FORECAST COMPARATIVE
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #10-00189

R-COMM SUMMARY

	<u>TAWC</u>	<u>CAPD</u>	<u>Difference</u>
Chattanooga	\$ 11,294,808 A/	\$ 11,456,567 A/	\$ (161,759)
Lookout Mountain	145,078 A/	184,052 A/	(38,974)
Lakeview	91,862 A/	94,727 A/	(2,865)
Lone Oak	562 A/	944 A/	(382)
Suck Creek	1,486 A/	1,339 A/	147
Total Commercial	\$ 11,533,796	\$ 11,737,629	\$ (203,834)
Corrections and Allowances	416		416
Tolerance Factor	135		135
Total Net Commercial Revenues	\$ 11,534,347 B/	\$ 11,737,629	\$ (203,283)

A/ CAPD Work Papers, R-COMM COMPARATIVE
 B/ TAWC Exhibit No. 4, Schedule 1, Page 1 of 1, Line 6

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE AND PROTECTION DIVISION
INDUSTRIAL REVENUE FORECAST COMPARATIVE
TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #10-00189

R-IND SUMMARY

	<u>TAWC</u>	<u>CAPD</u>	<u>Difference</u>
Chattanooga	\$ 3,405,066 A/	\$ 3,520,697 A/	\$ (115,631)
Total Industrial	\$ 3,405,066	\$ 3,520,697	\$ (115,631)
Corrections and Allowances	(3,032)		(3,032)
Tolerance Factor	(70)		(70)
Total Net Industrial Revenues	\$ 3,401,964 B/	\$ 3,520,697	\$ (118,733)

A/ CAPD Work Papers, R-IND COMPARATIVE

B/ TAWC Exhibit No. 4, Schedule 1, Page 1 of 1, Line 7

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
 CONSUMER ADVOCATE AND PROTECTION DIVISION
 OTHER PUBLIC AUTHORITY REVENUE FORECAST COMPARATIVE
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #10-00189

R-OPA SUMMARY

	<u>TAWC</u>	<u>CAPD</u>	<u>Difference</u>
Chattanooga	\$ 2,503,703 A/	\$ 2,469,996 A/	\$ 33,707
Lookout Mountain	46,805 A/	49,197 A/	(2,392)
Lakeview	11,317 A/	11,679 A/	(362)
Total Other Public Authority	\$ 2,561,826	\$ 2,530,872	\$ 30,954
Corrections and Allowances	(5,599)		(5,599)
Tolerance Factor	26		26
Total Net Other Public Authority Revenues	\$ 2,556,253 B/	\$ 2,530,872	\$ 25,381

A/ CAPD Work Papers, R-OPA COMPARATIVE

B/ TAWC Exhibit No. 4, Schedule 1, Page 1 of 1, Line 8

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
 CONSUMER ADVOCATE AND PROTECTION DIVISION
 OTHER WATER UTILITY REVENUE FORECAST COMPARATIVE
 TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #10-00189

R-OTHER WATER UTIL SUMMARY

	<u>TAWC</u>	<u>CAPD</u>	<u>Difference</u>
Chattanooga	\$ 1,308,493 A/	\$ 1,293,805 A/	\$ 14,688
Total Other Utility	\$ 1,308,493	\$ 1,293,805	\$ 14,688
Corrections and Allowances	-		-
Tolerance Factor	-		-
Total Net Other Utility Revenues	\$ 1,308,493 B/	\$ 1,293,805	\$ 14,688

A/ CAPD Work Papers, R-OTHER WATER UTIL COMPARATIVE

B/ TAWC Exhibit No. 4, Schedule 1, Page 1 of 1, Line 9

**OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE AND PROTECTION DIVISION
OTHER WATER UTILITY REVENUE FORECAST COMPARATIVE
TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #10-00189**

Year Ending	Residential	Commercial	Total
September 2010	783,435	101,247	884,682
December 2011	793,052	100,909	893,961

R-CUSTOMER GROWTH

**Annual
Growth %**

1.05%

OFFICE OF THE ATTORNEY GENERAL - STATE OF TENNESSEE
CONSUMER ADVOCATE AND PROTECTION DIVISION
SUMMARY OF VOLUMETRIC FORECAST
TENNESSEE AMERICAN WATER COMPANY - TRA DOCKET #10-00189

R-VOLUMETRIC HISTORY

	CAPD Forecasted <u>12/31/2011</u>
Residential	4,474,815
Commercial	4,030,663
Industrial	2,662,922
Other Pub. Auth.	1,007,255
Other Wtr. Util.	1,332,681
Private Fire Service	
Public Fire Service	
Total	13,508,335