

February 21, 2024

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**VIA ELECTRONIC FILING**

Hon. Herbert H. Hilliard, Chairman  
c/o Ectory Lawless, Docket Room Manager  
Tennessee Public Utility Commission  
502 Deaderick Street, 4<sup>th</sup> Floor  
Nashville, TN 37243  
[TPUC.DocketRoom@tn.gov](mailto:TPUC.DocketRoom@tn.gov)

**RE: *Petition of Tennessee-American Water Company Regarding The 2024 Production Costs and Other Pass-Throughs Rider*, TPUC Docket No. 24-00002**

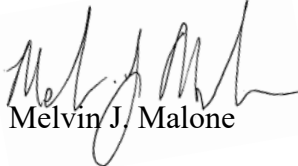
Dear Chairman Hilliard:

Attached for filing please find *Tennessee-American Water Company's Responses to First Discovery Requests of the Consumer Advocate* in the above-captioned matter.

As required, the original plus four (4) hard copies will be mailed to your office. Should you have any questions concerning this filing, or require additional information, please do not hesitate to contact me.

Very truly yours,

BUTLER SNOW LLP



Melvin J. Malone

clw

Attachments

cc: Bob Lane, TAWC

Victoria Glover, Consumer Advocate Division

Alex Bradley, Consumer Advocate Division

**BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION  
NASHVILLE, TENNESSEE**

<b>IN RE:</b>	)	
	)	
<b>PETITION OF TENNESSEE-AMERICAN</b>	)	
<b>WATER COMPANY REGARDING THE</b>	)	<b>DOCKET NO. 24-00002</b>
<b>2024 PRODUCTION COSTS AND OTHER</b>	)	
<b>PASS-THROUGHS RIDER</b>	)	

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**TENNESSEE-AMERICAN WATER COMPANY’S RESPONSES  
TO FIRST DISCOVERY REQUESTS OF THE CONSUMER ADVOCATE**

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Tennessee-American Water Company (“TAWC”), by and through counsel, hereby submits its Responses to the First Discovery Requests propounded by the Consumer Advocate Division of the Attorney General’s Office (“Consumer Advocate”).

**GENERAL OBJECTIONS**

1. TAWC objects to all requests that seek information protected by the attorney-client privilege, the work-product doctrine and/or any other applicable privilege or restriction on disclosure.
2. TAWC objects to the definitions and instructions accompanying the requests to the extent the definitions and instructions contradict, are inconsistent with, or impose any obligations beyond those required by applicable provisions of the Tennessee Rules of Civil Procedure or the rules, regulations, or orders of the Tennessee Public Utility Commission (“TPUC” or “Commission”).
3. The specific responses set forth below are based on information now available to TAWC, and TAWC reserves the right at any time to revise, correct, add to or clarify the objections or responses and supplement the information produced.

4. TAWC objects to each request to the extent that it is unreasonably cumulative or duplicative, speculative, unduly burdensome, irrelevant or seeks information obtainable from some other source that is more convenient, less burdensome or less expensive.

5. TAWC objects to each request to the extent it seeks information outside TAWC's custody or control.

6. TAWC's decision, now or in the future, to provide information or documents notwithstanding the objectionable nature of any of the definitions or instructions, or the requests themselves, should not be construed as: (a) a stipulation that the material is relevant or admissible, (b) a waiver of TAWC's General Objections or the objections asserted in response to specific discovery requests, or (c) an agreement that requests for similar information will be treated in a similar manner.

7. TAWC objects to those requests that seek the identification of "any" or "all" documents or witnesses (or similar language) related to a particular subject matter on the grounds that they are overbroad and unduly burdensome and exceed the scope of permissible discovery.

8. TAWC objects to those requests that constitute a "fishing expedition," seeking information that is not relevant or reasonably calculated to lead to the discovery of admissible evidence and is not limited to this matter.

9. TAWC does not waive any previously submitted objections to the Consumer Advocate's discovery requests.

### **RESPONSES TO FIRST SET OF DISCOVERY REQUESTS**

**1-1. Source & Support.** Refer to the < Workpaper\_Usage – 2023> spreadsheet filed with the Company's Petition, specifically the "Dec-22" and "Apr-23" tabs. For ease of comparison the Consumer Advocate has prepared Table 1 below.

Month	System Delivery	Water Sales	Delta	Non-Revenue Water
Dec-22	1,101,828	593,975	507,853	46%
Apr-23	984,023	593,923	390,100	40%
<b>Yearly Average</b>	1,079,309	808,584	270,725	25%

- Has the Company determined the cause(s) of the large spikes in non-revenue water incurred during the Dec-22 and Apr-23 months?
- If yes, provide a brief narrative explanation of the causes(s) of the increase along with any actions the Company has taken to remediate the causes(s).
- If no, provide a brief explanation of the Company's reasoning for declining to explore the large increase in non-revenue water incurred during the Dec-22 and Apr-23 months.

**Responsible Witness: Grady Stout**

**RESPONSE:** The Company established that most of the non-revenue water “spikes” in December of 2022 and April of 2023 were attributed to how the usage in the following month was billed. The billing in the two months depicted above may appear to show “spikes,” but the timing of when bills issue may result in shorter and longer periods of non-revenue water. Annual measurements are more accurate and reconciling the two months - the 46% in December and the 15% in January, and the 40% in April and 14% in May – reveals a more consistent 30% and 27% non-revenue water number for each month.

**1-2. Source & Support and Explanation.** Provide the Company's current non-revenue water strategy.

**Responsible Witness: Grady Stout**

**RESPONSE:** Tennessee American Water Company operates its systems with a goal to improve water efficiency. Improving water efficiency means using improved practices and technologies to deliver water service more efficiently. To help accomplish this, the Company uses appropriate measures to track relevant metrics. There are a number of metrics that could be measured: non-revenue water (NRW), unaccounted for water (UFW) or the Infrastructure Leakage Index (ILI) and while this response will focus on NRW the Company cautions that this metric has limitations and believes other metrics may be more relevant and important. The benchmarking, tracking, and reduction of NRW is essential to improving water efficiency and therefore operational performance. This business objective is aligned with water accountability and loss control processes and practices promulgated by the American Water Works Association (AWWA).

The Company strives to follow industry accepted standards to track and reduce non-revenue water. The key elements are:

**Accurately Measure Water Production, Consumption, and Estimate Known Losses**

*Meter Replacement* – The Company engages in proactive meter replacement and upgrades to metering technology that ensure accurate measurement and billing. In 2023 the Company replaced 15,297 meters. The Company is also transitioning to AMI (Advanced Metering Infrastructure) technology to further solidify accurate measurement and billing.

*System Delivery Meters* – The Company recently upgraded its system delivery meters, going from a Venturi style meter to Electromagnetic Flow Meters on 5 of 7 of the system delivery meters for the Citico Plant, with future upgrades planned. The Company also annually calibrates or upgrades the meters at its water treatment plants in order to ensure that system delivery is accurately measured.

*Reducing Data Handling Errors* – The Company’s use of AMR (Automated Meter Reading) technology and other advanced metering allows for accurate handling of data to ensure data errors do not influence water efficiency. In 2023 the company reached 100% AMR, eliminating manual reads and thus reducing human error when calculating billing.

*Reasonable and Consistent Estimations of Losses* – The Company uses a consistent method to estimate main break losses and works to meter water quality flushing stations and other water used for fire flow testing, backwashing filters and other non-metered usage.

## **Reducing Real Water Loss**

*Main Replacement, Service Line Replacement and Leak Repairs* – The Company engages in a proactive main replacement program that analyzes water mains for replacement and works to proactively address these aging water mains to reduce future failures.

*Proactive Leak Detection* – The Company has a dedicated crew for proactive leak detection. These employees conduct leak detection surveys across the entire system to detect potential leaks.

*System Monitoring* – The Company uses its SCADA (supervisory control and data acquisition) system to monitor the system for indications of leaks. For example, longer run times at booster stations could be a clue to investigate a particular area for hidden leaks. The use of SCADA also provides sight to tank levels to ensure water tanks aren’t “overfilled” to the overflow level.

*District Metering Areas (DMA’s)* – The Company establishes DMA’s to identify specific areas of the system experiencing higher levels of flow and allowing the Company to target its actions to problematic areas.

## **Continuous Improvement**

*Management* – The Company has an established NRW committee that regularly meets to address tactical and strategic approaches to resolve NRW. This committee provide updates on NRW specific projects and reviews data to track any emerging issues.

*KPIs* – The Company establishes Key Performance Indicators and other goals that are directly related to NRW, such as targets for System Delivery, meter reading, and overall NRW % .

*Technological Improvement* – The Company analyzes and deploys technological improvements to reduce NRW, such as variable frequency drives at booster stations that more carefully manage system pressures to avoid spikes that can cause main breaks. The Company has also piloted emerging technology to address NRW such as satellite leak detection and helium-based leak detection.

*Training*- The Company provides employees with training opportunities on NRW-related tasks. Recently, employees were trained on transducer mounted metering technology to be able to measure water flow on large diameter fire services that can be installed temporarily and without disruption to the pipe. This technology can help provide more accurate information on fire service leaks. The Company also has a certified AWWA-qualified water loss auditor that has completed the certified training program.

**1-3. Source & Support.** Refer to the <Workpaper\_Usage – 2023> spreadsheet filed with the Company’s Petition. Provide the monthly accounted for non-revenue usage by the following categories:

- a. Identified leaks;
- b. Hydrant Inspections;
- c. Hydrant Flushing;
- d. Fire Usage; and
- e. Inactive Customer Account Usage.

**Responsible Witness: Grady Stout**

**RESPONSE:**

Please see attachment labeled: TAW\_R\_CADDR3\_022124\_ATTACHMENT\_NRW\_Data.

In the spreadsheet, there are the five categories requested, but, to the extent this request relates to an effort to calculate UFW, please take a look at this additional category of usage that is measured or estimated that could be used to calculate UFW. For convenience of the CAD, we have included the category for metered/not billed which consists of usage for free water stations, flushing stations, fire training centers, etc.

Please note the numbers in the spreadsheet are in total gallons.

**1-4. Explanation.** Refer to the <Workpaper\_Billing Determinants – Dec 2022 – Nov 2023> spreadsheet filed with the Company’s Petition, specifically the “Chattanooga” tab. The

residential customer count shown for April 2023 differs from the preceding and successive months by more than 10%. Provide a narrative explanation for this variance.

**Responsible Witness: Bob Lane**

**RESPONSE:** Similar to the answer to CAD DR-1-1, the customer “dip” in April of 2023 was attributed to how the usage in the following month was billed. The timing of when bills issue may result in fewer customers being billed in a month, thus reducing the number of customers listed. Annual measurements are more accurate. Another contributing factor to the variance indicated above is related to the timing of when the report was pulled from our internal system, causing the meter count to appear less than our other months. The 13-month average for the Company is 66,213. If April is averaged with March, it is 64,430.

**1-5. Explanation.** Refer to the < Workpaper\_Billing Determinants – Dec 2022 – Nov 2023> spreadsheet filed with the Company’s Petition, specifically the “Chattanooga” tab. The commercial customer count shown for April 2023 differs from the preceding and successive months by more than 10%. Provide a narrative explanation for this variance.

**Responsible Witness: Bob Lane**

**RESPONSE:** Please see response to DR 1-4.

# **Attachment to Discovery Response No. 1-3**

**TAW\_R\_CADDR3\_022124\_ATTACHMENT\_NRW\_Data**



Tennessee	Dec-22	Jan-23	Feb-23
Identified leaks	64,664,000	181,876,200	101,037,000
Hydrant Inspections	-	-	-
Hydrant Flushing	254,020	576,231	563,561
Fire Usage	3,442,000	1,085,000	782,000
Inactive Customer Account Usage	9,704,186	22,087,487	7,573,228
Metered/Not Billed	401,636	407,520	903,496

Chattanooga	Dec-22	Jan-23	Feb-23
Identified leaks	63,818,000	180,538,000	94,089,000
Hydrant Inspections	-	-	-
Hydrant Flushing	100,270	354,421	431,696
Fire Usage	3,442,000	1,085,000	782,000
Metered/Not Billed	401,636	173,396	903,496

Whitwell	Dec-22	Jan-23	Feb-23
Identified leaks	810,000	1,338,200	6,498,000
Hydrant Inspections	-	-	-
Hydrant Flushing	92,930	206,440	127,780
Fire Usage	-	-	-
Metered/Not Billed			

Suck Creek	Dec-22	Jan-23	Feb-23
Identified leaks	-	-	450,000
Hydrant Inspections	-	-	-
Hydrant Flushing	-	-	-
Fire Usage	-	-	-
Metered/Not Billed	-	-	-

Jasper Highlands	Dec-22	Jan-23	Feb-23
Identified leaks	36,000	-	-
Hydrant Inspections	-	-	-
Hydrant Flushing	60,820	15,370	4,085
Fire Usage	-	-	-
Metered/Not Billed	-	-	-


Mar-23	Apr-23	May-23	Jun-23	Jul-23
100,328,312	100,480,000	45,305,000	74,461,000	72,134,000
-	-	-	-	-
265,332	758,458	890,116	187,359	314,803
1,215,000	2,289,000	1,477,000	990,000	738,000
9,465,189	6,848,124	9,551,269	6,822,148	7,619,410
1,965,656	2,277,472	2,321,156	2,140,092	580,872

Mar-23	Apr-23	May-23	Jun-23	Jul-23
92,914,000	99,644,000	44,860,000	73,428,000	71,054,000
-	-	-	-	-
176,532	587,093	788,486	115,819	16,488
1,215,000	2,289,000	1,477,000	990,000	738,000
1,965,656	2,277,472	2,320,408	2,139,344	578,628

Mar-23	Apr-23	May-23	Jun-23	Jul-23
7,414,312	836,000	385,000	1,033,000	1,080,000
-	-	-	-	-
61,020	155,810	85,450	-	279,800
-	-	-	-	-
		748	748	2,244

Mar-23	Apr-23	May-23	Jun-23	Jul-23
-	-	-	-	-
-	-	-	-	-
-	3,120	2,210	1,750	-
-	-	-	-	-
-	-	-	-	-

Mar-23	Apr-23	May-23	Jun-23	Jul-23
-	-	60,000	-	-
-	-	-	-	-
27,780	12,435	13,970	69,790	18,515
-	-	-	-	-
-	-	-	-	-

Aug-23	Sep-23	Oct-23	Nov-23
113,798,505	74,719,255	80,990,000	98,186,800
-	-	-	-
1,440,882	840,956	671,627	668,347
2,075,000	751,000	365,000	750,000
10,692,975	10,634,515	8,642,291	6,599,203
1,019,200	359,671	350,999	192,287

Aug-23	Sep-23	Oct-23	Nov-23
113,337,000	74,714,255	80,989,000	96,483,000
-	-	-	-
1,289,747	585,621	591,097	173,462
2,075,000	748,000	365,000	735,000
1,019,200	359,571	350,999	192,287

Aug-23	Sep-23	Oct-23	Nov-23
461,505	5,000	1,000	1,701,800
-	-	-	-
102,165	3,605	42,620	483,840
-	-	-	15,000
-	100	-	-

Aug-23	Sep-23	Oct-23	Nov-23
-	-	-	-
-	-	-	-
-	900	-	-
-	-	-	-
-	-	-	-


Aug-23	Sep-23	Oct-23	Nov-23
-	-	-	2,000
-	-	-	-
48,970	250,830	37,910	11,045
-	3,000	-	-
-	-	-	-

STATE OF Tennessee )

COUNTY OF Hamilton )

BEFORE ME, the undersigned, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Grady Stout, being by me first duly sworn deposed and said that:

He is appearing as a witness on behalf of Tennessee-American Water Company before the Tennessee Public Utility Commission, and duly sworn, verifies that the data requests and discovery responses are accurate to the best of his knowledge.

  
\_\_\_\_\_  
Grady Stout

Sworn to and subscribed before me  
this 21 day of Feb, 2024.

Kathryn Robinson  
Notary Public

My Commission expires: 10-20-2024



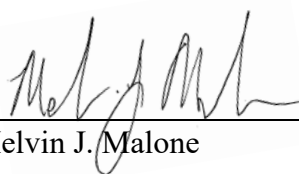
CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served via U.S. Mail or electronic mail upon:

Victoria Glover, Esq.  
Assistant Attorney General  
Office of the Tennessee Attorney General  
Consumer Advocate Division  
P.O. Box 20207  
Nashville, TN 37202-0207  
[Victoria.Glover@ag.tn.gov](mailto:Victoria.Glover@ag.tn.gov)

Alex Bradley, Esq.  
Assistant Attorney General  
Office of the Tennessee Attorney General  
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P.O. Box 20207  
Nashville, TN 37202-0207  
[Alex.Bradley@ag.tn.gov](mailto:Alex.Bradley@ag.tn.gov)

This the 21<sup>st</sup> day of February 2024.



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Melvin J. Malone