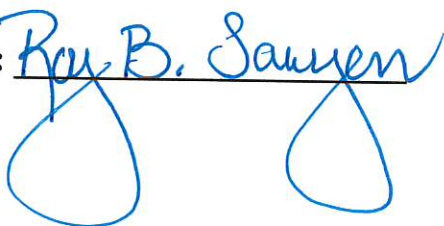


**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**ELECTRONIC INVESTIGATION            )  
INTO THE MEASURING,                    )  
RECORDING, AND REPORTING OF        ) CASE NO. 2018-00394  
WATER LOSS BY KENTUCKY'S            )  
JURISDICTIONAL WATER                )  
UTILITIES                                 )**

**RESPONSE OF  
MOUNTAIN WATER DISTRICT  
TO  
COMMISSION'S REQUEST FOR INFORMATION  
DATED DECEMBER 18, 2018**

**FILED:** Roy B. Sawyer  


**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**


**In the Matter of:**

<b>ELECTRONIC INVESTIGATION</b>	)	
<b>INTO THE MEASURING,</b>	)	
<b>RECORDING, AND REPORTING OF</b>	)	<b>CASE NO. 2018-00394</b>
<b>WATER LOSS BY KENTUCKY'S</b>	)	
<b>JURISDICTIONAL WATER</b>	)	
<b>UTILITIES</b>	)	

**CERTIFICATION OF RESPONSE OF MOUNTAIN WATER DISTRICT  
TO  
COMMISSION'S REQUEST FOR INFORMATION**

**This is to certify that I have supervised the preparation of MOUNTAIN WATER DISTRICT's Response to the Commission's Request for Information. The response submitted on behalf of MOUNTAIN WATER DISTRICT is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.**

**Date:** JANUARY 9, 2019

  
\_\_\_\_\_  
**Roy B. Sawyers, District Manager  
Mountain Water District**

**MOUNTAIN WATER DISTRICT  
RESPONSE TO COMMISSION'S REQUEST FOR INFORMATION  
CASE NO. 2018-00394**

**Question No. 1**

**Responding Witness: Roy Sawyers, District Manager**

**Q-1. Explain in detail the manner in which you measure, calculate, and track water loss, and:**

- a. Identify whether you use any manual form (including Excel spreadsheet) or electric or mechanized system to calculate and track water loss.**
- b. Provide a copy of any form used (including Excel spreadsheet).**
- c. Identify the source of any form or system used.**

**A-1. Historically the Mountain Water District has calculated water loss by Accounted For Water Loss VS. Unaccounted For Water Loss method. Total Water Sold is subtracted from Total Water Produced and Purchased and that amount is the total water loss gallons. Of that total, the District subtracts gallons accounted for through leaks and breaks repaired, hydrant flushing, tank overflows, water treatment plant use, fire department use, water written off for customer adjustments and illegal usage found, and other water used such as known water withdrawn from hydrants and water used by the District in daily operations. That total is the Accounted For water. The remaining gallons are the Unaccounted For Water and that number is divided into the Total Water Produced and Purchased, then multiplied by 100 to get the calculated percentage of Unaccounted For Water Loss.**

**A-1a. The District uses an Excel Spreadsheet to calculate its water loss percentage each month.**

**A-1b. See copy of spreadsheet attached.**

**A-1c. The District utilizes a Monthly Water Loss Report form which originated from the Kentucky Rural Water Association.**

**MOUNTAIN WATER DISTRICT  
RESPONSE TO COMMISSION'S REQUEST FOR INFORMATION  
CASE NO. 2018-00394**

**Question No. 2**

**Responding Witness: Roy Sawyers, District Manager**

- Q-2. Explain in detail your understanding of the information to be provided in each of the categories on the Water Statistics page (reference page 30) of the annual report required of jurisdictional water utilities, accessed through the Commission's website.**
- A-2. Item 2 – Water Produced – Includes all water produced by the utility**  
**Item 3 – Water Purchased – Includes all water purchased by the utility from another utility or source**  
**Item 4 – Total Produced & Purchased – Total of all water produced and purchased by the utility for distribution into the system**  
**Item 7 – Residential – Includes all water sold to customers under the residential rate code**  
**Item 8 – Commercial – Includes all water sold to customers under the commercial rate code**  
**Item 9 – Industrial – Includes all water sold to customers under the industrial rate code**  
**Item 10 – Bulk Loading Stations – Includes all water distributed at bulk loading stations which the District does not have**  
**Item 11 – Resale – Includes all water sold by MWD to other utilities or entities for resale (Wholesale customers)**  
**Item 12 – Other Sales – Includes water sold to any other entity not listed above**  
**Item 13 – Total Water Sales – Total of all water sold by the utility during the year**  
**Item 16 – Utility Water Treatment Plant – Includes water used by the utility for producing potable water at the treatment plant**

**Item 17 – Wastewater Plant – Includes any water used for treatment of wastewater at the utility’s WWTPs**

**Item 18 – System Flushing – Includes all water used for flushing within the system**

**Item 19 - Fire Department – Includes reported water from county fire departments including calculated water for non-reporting fire departments as .3% of gallons sold for the month.**

**Item 20 – Other – Includes water written off for customer adjustments, illegal usage, non-metered customer usage, MWD water used in daily operations.**

**Item 21 – Total Other Water Used – Total of water from lines 16 thru 20**

**Item 24 – Tank Overflows – Includes water from tank overflows**

**Item 25 – Line Breaks – Includes water from line breaks due to outside force, material failure or improper installation (on rock, etc.)**

**Item 26 – Line Leaks – Includes water from leak repairs**

**Item 27 – Other – Includes water not listed in items 24 thru 26**

**Item 28 – Total Line Loss – Total of items 24 thru 27**

**Item 33 – Line 28 Divided by Line 4 = Calculated Water Loss Percentage**

**MOUNTAIN WATER DISTRICT  
RESPONSE TO COMMISSION'S REQUEST FOR INFORMATION  
CASE NO. 2018-00394**

**Question No. 3**

**Responding Witness: Roy Sawyers, District Manager**

**Q-3. State any questions you have regarding how to use the updated Commission Form described and attached as Appendix A to this Order.**

- A-3. 1. Will unmetered hydrant sales be included in Line 21?  
2. Will illegal usage paid to the utility be included in Line 21?  
3. Will usage written off for customer adjustments be included in Line 21?**

**MOUNTAIN WATER DISTRICT  
RESPONSE TO COMMISSION'S REQUEST FOR INFORMATION  
CASE NO. 2018-00394**

**Question No. 4**

**Responding Witness: Roy Sawyers, District Manager**

**Q-4. State any suggestions or improvements you have for the updated Commission Form described and attached as Appendix A to this Order.**

**A-4. 1. MWD suggests Excavation Damages and Illegal usage found (Theft) be included in "Other Water Used" due to the loss being of no fault of the utility and out of their control, therefore the utility would not be penalized for this type of loss.**

**2. Include a section for Multi-Users in water sales. This would include apartment complexes and shopping mall developments.**

**MOUNTAIN WATER DISTRICT  
RESPONSE TO COMMISSION'S REQUEST FOR INFORMATION  
CASE NO. 2018-00394**

**Question No. 5**

**Responding Witness: Roy Sawyers, District Manager**

- Q-5. State any questions you have regarding how the information in the updated Commission Form described and attached as Appendix A to this Order is to be incorporated into annual reports.**
- A-5. Will the Water Statistics page (Ref Page: 30) of the annual report be updated to reflect the exact categories of the new PSC Monthly Water Loss Report form?**



**MOUNTAIN WATER DISTRICT  
RESPONSE TO COMMISSION'S REQUEST FOR INFORMATION  
CASE NO. 2018-00394**

**Question No. 6**

**Responding Witness: Roy Sawyers, District Manager**

**Q-6. State any concerns you have regarding the use of the updated Commission Form described and attached as Appendix A to this Order.**

**A-6. 1. While it is good that the Commission has made Excavation Damages and Theft as separate categories, the District would like to see those included in "OTHER WATER USED" and not in the "WATER LOSS" section where it is calculated into the total line loss number, essentially penalizing the utility for loss that is beyond its control. Both categories can be invoiced and the utility reimbursed for this loss.**

**MOUNTAIN WATER DISTRICT  
RESPONSE TO COMMISSION'S REQUEST FOR INFORMATION  
CASE NO. 2018-00394**

**Question No. 7**

**Responding Witness: Roy Sawyers, District Manager**

**Q-7. State whether you believe it is reasonable, proper, and appropriate for the Commission to require jurisdictional water utilities to maintain and use the updated Commission Form described and attached as Appendix A to this Order. Fully explain your answer.**

**A-7. Mountain Water District believes that it is reasonable, proper, and appropriate for the Commission to require jurisdictional water utilities to maintain and use the updated Commission Form described and attached as Appendix A to this Order, with the understanding that concerns raised by the District and other water utilities in the responses to this Order will be considered by the Commission. The District believes that the purpose of this investigation is to bring all water utilities into the same understanding of water loss calculation as "Revenue vs. Non-Revenue" water loss as opposed to the "Accounted For vs. Unaccounted For" method of water loss calculation. The transition to the "Revenue vs. Non-Revenue" water loss calculation will possibly increase the percentage of water loss for water utilities currently using the "Accounted For vs. Unaccounted For" method due to the inability to "account for" leak and break usage, tank overflow usage, and any other water that is "accounted for", but not within the parameters of utility usage for daily operations or fire department reported usage.**

**Mountain Water District understands the potential correlation between water loss percentage and the overall health of a water utility; however,**

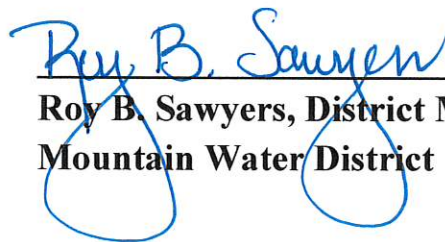
the District would suggest that a utility's water loss percentage is merely one important factor in determining the future health and longevity of a water system. The District would also request that the Commission take into consideration the size of the utility, the amount of infrastructure, operating pressures and the topography of the utility's service area when determining the percentage of allowed water loss. *We believe that 15% water loss should be a benchmark, not a regulatory standard.* For example, a water utility in the central part of the state may have the same approximate number of customers that Mountain Water District has, but may only have six (6) water storage tanks, three (3) booster pumping stations, and no pressure reducing valves because their system is located in an area of the state that is practically free of mountainous terrain. However, Mountain Water District is held to the same fifteen percent (15%) standard of water loss when our system is comprised of over one thousand (1,000) miles of water line, one hundred and eight (108) water storage tanks, one hundred and thirty-six (136) booster pumping stations, and forty-two (42) pressure reducing valves due to the topography of the eastern Kentucky region. The Mountain Water District must contend with mountainous terrain which creates multiple high pressure zones within the system, as well as maintaining lines under creek beds and river beds. The central Kentucky area's utility revenue may be comparable due to the number of customers; however, the Mountain Water District must operate and maintain a much larger and more elaborate amount of infrastructure while making sure to maintain customer rates that are both comparable to other utilities in the state and not overly burdensome for their customers in an already economically depressed area.

The Mountain Water District does not deny that a utility's water loss percentage is an indicator of the health of the system, but would also suggest that there are additional factors that should be considered when determining the amount of water loss that is acceptable on a case by case basis due to the size of the water system, the amount of infrastructure to be maintained, and the topography that must be overcome in order to

***produce and distribute potable water service to customers. The District would also suggest that utilities be allowed to complete the AWWA's water system audit to determine a rating or score by which a prorated percentage schedule is administered for water loss, or that the Commission collaborate with the Kentucky Rural Water Association to develop a rating and percentage system for water loss based upon factors such as utility size, infrastructure and regions with topographical challenges.***

## CERTIFICATE OF SERVICE

In accordance with 807 KAR 5:001, Section 8, I certify that Mountain Water District's electronic filing of this Response is a true and accurate copy of the same document being filed in paper medium; that the electronic filing was transmitted to the Public Service Commission on January 9, 2019; that there are currently no parties that the Public Service Commission has excused from participation by electronic means in the this proceeding; and that an original paper medium of this Response will be delivered to the Public Service Commission within two business days

  
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Roy B. Sawyers, District Manager  
Mountain Water District

# Monthly Water Loss Report

Water Company: MOUNTAIN WATER DISTRICT

For the Month of:    

Water Produced this Month:		gallons*
Water Purchased this Month:		gallons*
<b>A: Total Water Produced and Purchased =</b>	-	gallons*
Sold: Residential		gallons*
Commercial		gallons*
Industrial		gallons*
Multi-User		gallons*
Public Authority		gallons*
Water Salesman		gallons*
<b>Total Sold =</b>	-	gallons*
<b>B: Difference: (Produced + Purchased)- Sold =</b>	-	gallons*
<b>%Difference =</b>	#DIV/0!	<i>% total water loss</i>
<b>Gallons of Water Accounted For:</b>		
Breaks (Estimated Total)		gallons*
Hydrant Flushing		gallons*
Storage Tank Overflow		gallons*
Water Treatment Plant Use		gallons*
Wastewater Treatment Plant Use**		gallons*
Fire Department Use		gallons*
Net Computer Adjustment +/-		gallons*
Other		gallons*
<b>C: Total Gallons Accounted For =</b>	-	gallons*
Loss: Unaccounted-for Water: (B-C) =	-	gallons*
<b>% Loss: Unaccounted-for Water: (B-C)/A%=</b>	#DIV/0!	<i>% unaccounted for loss</i>
<b>Gallons / Day Loss =</b>	30	Days in A Month
<b>Gallons / Min Loss =</b>	-	gallons/day
	-	gallons/min.

\* 1 Unit = 1,000 gallons

\*\* Wastewater Treatment Plant water usage is metered