

**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  
HARDIN COUNTY WATER DISTRICT NO. 2  
TO  
COMMISSION'S REQUEST FOR INFORMATION  
DATED DECEMBER 18, 2018**

**FILED: January 15, 2019**

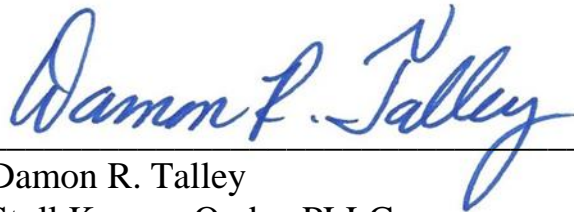
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**RESPONSE OF HARDIN COUNTY WATER DISTRICT NO. 2 TO  
COMMISSION'S REQUEST FOR INFORMATION**

Comes Hardin County Water District No. 2, for its Response to the Commission's Request for Information, and states as shown on the following pages.



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Damon R. Talley  
Stoll Keenon Ogden PLLC  
P.O. Box 150  
Hodgenville, KY 42748-0150  
Telephone: (270) 358-3187  
Fax: (270) 358-9560  
damon.talley@skofirm.com

*Counsel for Hardin County Water District  
No. 2*

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


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**CERTIFICATION OF RESPONSE OF HARDIN COUNTY WATER  
DISTRICT NO. 2 TO  
COMMISSION'S REQUEST FOR INFORMATION**

This is to certify that I have supervised the preparation of Hardin County Water District No. 2's Response to the Commission's Request for Information. The response submitted on behalf of Hardin County Water District No. 2 is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

Date: January 15, 2019

  
\_\_\_\_\_  
James R. Jeffries, General Manager  
Hardin County Water District No. 2

**HARDIN COUNTY WATER DISTRICT NO. 2**

**CASE NO. 2018-00394**

**Response to Commission's Request for Information**

**Question No. 1**

**Responding Witness: James R. Jeffries**

**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 electronic 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. The first meter for water loss is the raw pump meters at the treatment plants.**

These meters measure how much water is taken from the raw source and is noted on the first day of the month. From this volume, measurements of backwash usage, plant process usage, and plant potable usage are subtracted to obtain the total water delivered into the distribution system each month.

We have two water treatment plants that use this method to calculate total water produced and delivered into the distribution system. These two values are added to the total water purchased through our wholesale connection.

The master meter at the wholesale connection is also read on a monthly

basis. Currently, we purchase water from Louisville Water Company on a regular basis. Thus, we have three independent volumes that represent the total water entering the distribution system each month.

Usage in the distribution system that is accounted for include: (1) Shop Usage, which is water used by the customer service center and distribution shop; (2) Fire Department Usage, which is estimated to be 0.1% of delivered water (The reporting from our multiple fire departments is inconsistent month to month. Our experience suggests to us that a 0.1% estimate is “in the ball park”); (3) Water Theft has traditionally been estimated based on each occurrence; (4) Meter Testing that occurs in our meter shop is accounted for each month; and (5) Water used for flushing and new mains put in service are accounted for each month.

Gallons sold is the sum of our four (4) retail billing cycles and any wholesale volumes. The meters for these billing cycles are not read on a calendar month, but are read during each week of the month. As a result, actual customer usage within any given month is not accurate because all billing cycles overlap month ends and month beginnings.

Given all the volume readings and estimates, we “back into” the volume of water that is not accounted for and identify that as our monthly leak volume. This number is divided by the total water entering the distribution system to calculate the monthly leak percentage.

As suggested, due to the fact that all meters are not read on the same day, we calculate a rolling average annual leak percentage to better understand the month-to-month trend.

- a. We use Excel to track our monthly water volumes.
- b. See attached **Exhibit A**.
- c. We developed this form.

## **HARDIN COUNTY WATER DISTRICT NO. 2**

**CASE NO. 2018-00394**

### **Response to Commission's Request for Information**

#### **Question No. 2**

**Responding Witness: James R. Jeffries**

**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. The Water Statistics page mirrors the Excel spreadsheet currently in use.

1. Water Produced, Purchased and Distributed
2. Water Produced – HCWD2 produces water at two water treatment plants
3. Water Purchased – HCWD2 purchases water from Louisville Water
4. Total Produced and Purchased
5. (blank)
6. Water Sales
7. Residential – Total gallons sold to residential customers
8. Commercial – Total gallons sold to commercial customers
9. Industrial – Total gallons sold to industrial customers
10. Bulk Loading Stations – Total gallons sold at two HCWD2 bulk stations
11. Resale – (Wholesale)
12. Other Sales – HCWD2 has no other sales
13. Total Water Sales – Total sales to all customers
14. (blank)
15. Other Water Used
16. Utility/water treatment plant – (process water used at treatment plants)
17. Wastewater plant – HCWD2 has no wastewater plant
18. System flushing – HCWD2 accounts for all gallons from the flushing program
19. Fire Department – All water used for firefighting and training
20. Other – Water used by the HCWD2 office and shop meter testing
21. Total Other Water Used – Total of all known water used

22. (blank)
23. Water Loss – Unknown water loss
24. Tank Overflows – Estimated gallons from overflow events
25. Line Breaks – Estimated gallons from water main breaks
26. Line Leaks – Estimated gallons from leaks
27. Other – Other known losses
28. Total Line Loss – Total of all water losses (lines 24 through 27)
29. (blank)
30. (blank)
31. (blank)
32. Water Loss Percentage
33. Loss Percentage – Total Line Loss (line28) divided by Total Produced and Purchased (line 4)



**HARDIN COUNTY WATER DISTRICT NO. 2**

**CASE NO. 2018-00394**

**Response to Commission's Request for Information**

**Question No. 3**

**Responding Witness: James R. Jeffries**

**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. None.

**HARDIN COUNTY WATER DISTRICT NO. 2**

**CASE NO. 2018-00394**

**Response to Commission's Request for Information**

**Question No. 4**

**Responding Witness: James R. Jeffries**

**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. We do not have any suggested improvements to the updated Commission Form.

**HARDIN COUNTY WATER DISTRICT NO. 2**

**CASE NO. 2018-00394**

**Response to Commission's Request for Information**

**Question No. 5**

**Responding Witness: James R. Jeffries**

**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. Appendix A, which is the updated PSC Form, uses the term **“Wholesale”** on Line 11. On the other hand, Line 11 of the Water Statistics Page (Reference Page 30) of the existing Annual Report uses the term **“Resale.”** This is confusing. Line 11 of the Annual Report should be changed from **“Resale”** to **“Wholesale.”** Wholesale is more easily understood and more accurately describes this water sale category.

**HARDIN COUNTY WATER DISTRICT NO. 2**

**CASE NO. 2018-00394**

**Response to Commission's Request for Information**

**Question No. 6**

**Responding Witness: James R. Jeffries**

**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. We know that any single monthly calculation has error inherent in the method due to the fact that not all meters are read on the same date of the month. Over the course of the year, these errors are absorbed by the yearly average. We would be concerned if a single month of data raised alarm.

**HARDIN COUNTY WATER DISTRICT NO. 2**

**CASE NO. 2018-00394**

**Response to Commission's Request for Information**

**Question No. 7**

**Responding Witness: James R. Jeffries**

**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. It is reasonable for all water utilities to use the same method. We are happy to standardize. The updated Commission Form adds two new categories (excavation damages and theft) to the Water Loss section. Otherwise, the updated Commission Form is almost identical to the old Commission Form.

## CERTIFICATE OF SERVICE

In accordance with 807 KAR 5:001, Section 8, I certify that Hardin County Water District No. 2'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 15, 2019; that there are currently no parties that the Public Service Commission has excused from participation by electronic means in this proceeding; and that an original paper medium of this Response will be delivered to the Public Service Commission within two business days.



Damon R. Talley

Damon R. Talley

# EXHIBIT A

Water Statistics (PSC Annual Report)

	Gallons (Omit 000's)	Percent
1 Water Produced, Purchased and Distributed		
2 Water Produced	2,512,019	Manual records from WTP
3 Water Purchased	157,288	Master Meter from LWC
4 Total Produced and Purchased	2,669,307	
6 Water Sales:		
7 Residential	1,156,077	Billing software reports
8 Commercial	538,387	Billing software reports
9 Industrial	428,358	Billing software reports
10 Bulk Loading Stations	492	Loading station data
11 Resale	18,479	Emergency back up for others
12 Other Sales		
13 Total Water Sales	2,141,793	
15 Other Water Used		
16 Utility/water treatment plant		
17 Wastewater plant		
18 System flushing	20,600	Manual records from T&D Department
19 Fire department	2,512	Estimated and reported monthly usage from FD
20 Other	48,111	Shop usage, meter testing, all others
21 Total Other Water Used	71,223	
23 Water Loss:		
24 Tank Overflows		
25 Line Breaks		
26 Line Leaks	456,291	Balance of unaccounted water assumed as leaks
27 Other		
28 Total Line Loss	456,291	
Note: Line 13 + Line 21 + Line 28 must equal Line 4		
32 Water Loss Percentage		
33 Line 28 divided by Line 4		17.0940%