COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC INVESTIGATION INTO THE MEASURING, RECORDING, AND REPORTING OF WATER LOSS BY KENTUCKY’S JURISDICTIONAL WATER UTILITIES

CASE NO. 2018-00394

RESPONSE OF HARDIN COUNTY WATER DISTRICT NO. 2 TO COMMISSION’S REQUEST FOR INFORMATION DATED DECEMBER 18, 2018

FILED: January 15, 2019
COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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ELECTRONIC INVESTIGATION
INTO THE MEASURING,
RECORDING, AND REPORTING OF
WATER LOSS BY KENTUCKY’S
JURISDICTIONAL WATER
UTILITIES

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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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Counsel for Hardin County Water District
No. 2
COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC INVESTIGATION
INTO THE MEASURING,
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CASE NO. 2018-00394

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.
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.


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 (line 28) divided by Total Produced and Purchased (line 4)
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.
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.
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
EXHIBIT A
### Water Statistics (PSC Annual Report)

<table>
<thead>
<tr>
<th></th>
<th>Gallons (Omit 000's)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Water Produced, Purchased and Distributed</td>
<td>2,669,307</td>
</tr>
<tr>
<td>2</td>
<td>Water Produced</td>
<td>2,512,019</td>
</tr>
<tr>
<td>3</td>
<td>Water Purchased</td>
<td>157,288</td>
</tr>
<tr>
<td>4</td>
<td>Total Produced and Purchased</td>
<td>2,669,307</td>
</tr>
<tr>
<td>6</td>
<td>Water Sales:</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Residential</td>
<td>1,156,077</td>
</tr>
<tr>
<td>8</td>
<td>Commercial</td>
<td>538,387</td>
</tr>
<tr>
<td>9</td>
<td>Industrial</td>
<td>428,358</td>
</tr>
<tr>
<td>10</td>
<td>Bulk Loading Stations</td>
<td>492</td>
</tr>
<tr>
<td>11</td>
<td>Resale</td>
<td>18,479</td>
</tr>
<tr>
<td>12</td>
<td>Other Sales</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Total Water Sales</td>
<td>2,141,793</td>
</tr>
<tr>
<td>15</td>
<td>Other Water Used</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Utility/water treatment plant</td>
<td>20,600</td>
</tr>
<tr>
<td>17</td>
<td>Wastewater plant</td>
<td>2,512</td>
</tr>
<tr>
<td>18</td>
<td>System flushing</td>
<td>48,111</td>
</tr>
<tr>
<td>19</td>
<td>Fire department</td>
<td>20,600</td>
</tr>
<tr>
<td>20</td>
<td>Other</td>
<td>20,600</td>
</tr>
<tr>
<td>21</td>
<td>Total Other Water Used</td>
<td>71,223</td>
</tr>
<tr>
<td>23</td>
<td>Water Loss:</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Tank Overflows</td>
<td>456,291</td>
</tr>
<tr>
<td>25</td>
<td>Line Breaks</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Line Leaks</td>
<td>456,291</td>
</tr>
<tr>
<td>27</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Total Line Loss</td>
<td>456,291</td>
</tr>
</tbody>
</table>

Note: Line 13 + Line 21 + Line 28 must equal Line 4

| 32| Water Loss Percentage   | 17.0940% |
|   | Line 28 divided by Line 4 |         |