## COMMONWEALTH OF KENTUCKY

#### BEFORE THE PUBLIC SERVICE COMMISSION

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

## ORDER

By Order dated December 18, 2018, the Commission initiated this proceeding to investigate the adequacy of the methods used by Kentucky's jurisdictional water utilities to measure, record, and report their water loss.<sup>1</sup> The December 18, 2018 Order stated that the Commission was aware that some jurisdictional water utilities were having difficulty properly measuring and reporting their water loss, as required by statute and regulation.<sup>2</sup> Due to these issues, the Commission is providing guidance to jurisdictional water utilities regarding the reporting of water loss and, in order to assist in proper measurement and recording, is providing an updated water loss form for measuring and tracking this loss.

The December 18, 2018 Order included a proposed revised Water Use & Loss Calculation Form (the Commission Form) in Appendix A,<sup>3</sup> detailed usage instructions on how to use the updated Commission Form in Appendix B,<sup>4</sup> and, in Appendix C the

<sup>&</sup>lt;sup>1</sup> Dec. 18, 2018 Order (Ky. PSC Dec. 18, 2018) at 1.

<sup>2</sup> Id. at 5.

<sup>&</sup>lt;sup>3</sup> Dec. 18, 2018 Order, Appendix A at 1 of 1.

<sup>&</sup>lt;sup>4</sup> Dec. 18, 2018 Order, Appendix B at 1-3.

Commission attached questions for each jurisdictional water utility to respond to, including but not limited to, the following: identify how each utility measures, calculates, and tracks water loss; whether the utility had questions, concerns, or suggested improvements for either the updated Commission Form or how the information in the updated Commission Form would be incorporated into future annual reports; and, whether the utilities thought it was reasonable, proper, and appropriate for the Commission to require jurisdictional water utilities to maintain and use the updated Commission Form.<sup>5</sup> Approximately 137 jurisdictional water utilities filed responses and suggestions in the pending case between January 7, 2019, and January 23, 2019.<sup>6</sup>

The Attorney General of the Commonwealth of Kentucky, by and through the Office of Rate Intervention (Attorney General), filed a motion to intervene in the pending case on January 3, 2019, and the Commission issued an Order granting the intervention on January 11, 2019. The Attorney General did not file any further pleadings or comments in the pending case.

The Commission issued an Order on February 21, 2019, providing for any intervenor or utility to file final comments or to request a formal conference to discuss any issues or questions concerning the pending case by March 25, 2019. The February 21, 2019 Order further stated that if there were no requests to conduct a formal conference, then the case would be submitted to the Commission for a decision on the record. No intervenor or utility filed comments or requested a formal conference.

<sup>&</sup>lt;sup>5</sup> Dec. 18, 2018 Order, Appendix C at 1-2.

<sup>&</sup>lt;sup>6</sup> See https://www.psc.ky.gov/PSC\_WebNet/ViewCaseFilings.aspx?case=2018-00394.

On June 12, 2019, the Executive Director submitted a letter into the record asserting that the Commission had received written comments from the American Water Works Association (AWWA). The letter attached a copy of the written comments and further stated that if any party to the case was interested in filing a response to these comments, then the Commission would allow responses to be filed into the record within ten days of receipt of the letter. No party filed a response to the comments. On July 22, 2019, the Executive Director submitted a clarifying letter into the record stating that it had been advised that the prior written comments that had been filed into the record on June 12, 2019, were not officially approved by the AWWA, but instead were drafted by Mr. William Jernigan, P.E., independent of his affiliation with AWWA. The letter further stated that if any party to the case was interested in filing a response to Mr. Jernigan's comments, then the Commission would allow responses to be filed into the record within ten days of receipt of the letter. No party filed a response to the comments. The Commission finds that the case record is complete, and the matter now stands for a decision.

## DISCUSSION

As the Commission stated in the December 18, 2018 Order, the Commission has plenary authority under KRS 278.040 to regulate the rates and services of jurisdictional utilities and to enforce the provisions of KRS Chapter 278. KRS 278.030 requires every utility to furnish "adequate, efficient and reasonable" service. KRS 278.260 permits the Commission, on its own motion, to investigate any act or practice of a utility that affects or is related to the service of a utility. KRS 278.280(1) further permits the Commission, after conducting such investigation and finding that a practice is unreasonable, unsafe,

improper, or inadequate to determine the reasonable, safe, proper, or adequate practice or methods to be observed and to fix the same by order, rule, or regulation. KRS 278.230 permits the Commission to inspect the books and records of any jurisdictional utility, provides that jurisdictional utilities' books and records shall be available to the Commission, and permits the Commission to require jurisdictional utilities to file "reports . . . or other information" that the Commission reasonably requires.

KRS 278.280(2) directs the Commission to prescribe rules for the performance of services by utilities. Pursuant to this authority, the Commission promulgated 807 KAR 5:006, Section 4(2), which includes a requirement that each jurisdictional utility file an annual report using the reporting forms available on the Commission's website at <a href="http://psc.ky.gov/">http://psc.ky.gov/</a>. This annual report requires jurisdictional water utilities to provide information regarding their total line loss, including "unaccounted-for" water.<sup>7</sup>

The Commission has defined "unaccounted for water," pursuant to 807 KAR 5:067, Section 1(7) as:

"Unaccounted for water" means the volumetric sum of all water purchased and produced by the utility less the volume of water:

- (a) Sold;
- (b) Provided to customers without charge as authorized by the utility's tariff; and

<sup>&</sup>lt;sup>7</sup> See generally Application of Graves County Water District for Approval of Construction and Issuance of a Certificate of Convenience and Necessity for the Purchase and Installation of Automated Meter Reading Equipment, Case No. 2011-00233 (Ky. PSC Nov. 3, 2011), Order at 2 n.5. The information provided can also be used to calculate other important information, such as nonrevenue water. See Id. Nonrevenue water is defined as "those components of system input volume that are not billed and produce no revenue; equal to unbilled authorized consumption plus apparent losses plus real losses." Id. (citing American Water Works Association, Water Audits and Loss Control Programs (3d ed. 2009) at 271).

(c) Used by the utility to conduct the daily operation and maintenance of its treatment, transmission, and distribution systems.

Thus, unaccounted-for water loss is "the difference of the total amount of water produced and purchased and the sum of water sold, water used for fire protection purposes,<sup>8</sup> and water used in treatment and distribution operations (e.g., backwashing filters, line flushing)."<sup>9</sup> Generally speaking, the unaccounted-for water loss is the result of line breaks and leaks, inaccurate meters, tank overflows, excavation damages, and theft.<sup>10</sup>

Pursuant to KRS 278.280(2), the Commission also promulgated 807 KAR 5:066, Section 6(3), which states in part:

Except for purchased water rate adjustments for water districts and water associations, and rate adjustments pursuant to KRS 278.023(4), for rate making purposes a utility's unaccounted-for water loss shall not exceed fifteen

<sup>&</sup>lt;sup>8</sup> When provided without charge pursuant to the utility's tariff.

<sup>&</sup>lt;sup>9</sup> Application of Cannonsburg Water District for (1) Approval of Emergency Rate Relief and (2) Approval of the Increase in Nonrecurring Charges, Case No. 2011-00217 (Ky. PSC Feb. 27, 2012), Order at 5 n.12.

<sup>&</sup>lt;sup>10</sup> See, e.g., Application of Ledbetter Water District for an Alternative Rate Adjustment, Case No. 2018-00117 (Ky. PSC Sept. 10, 2018), Order at 3 (excessive water loss caused by large leak); Electronic Application of Hardin County Water District No. 2 for a Declaratory Order that Sample Testing Satisfies the Testing Requirements of 807 KAR 5:066, Section 16(1) or, in the Alternative, for an Order Granting a Deviation [There]From, Case No. 2016-00432 (Ky. PSC March 22, 2018), Order at 7-8 n.28 (noting potential loss from defective meters); Electronic Application of McCreary County Water District for Authorization to Execute Lease-Purchase Agreement and Related Relief, Case No. 2018-00038 (Ky. PSC June 28, 2018), Order at 5 (granting Certificate of Pubic Convenience and Necessity (CPCN) based, in part, on project "reduc[ing] unaccounted-for water loss because of quicker detection of water leaks, meter tampering, and theft"); Application of Cumberland Falls Highway Water District for Approval of Financing and Issuance of a Certificate of Convenience and Necessity, Case No. 2017-00268 (Ky. PSC Aug. 14, 2017), Order at 2 (approving CPCN based, in part, on finding that project will lower water loss by replacing leak-prone lines); Application of Mountain Water District for an Adjustment of Water and Sewer Rates, Case No. 2014-00342 (Ky. PSC Oct. 9, 2015), Order at 11 (noting utility representation that excessive water loss was attributable to "inaccurate meters, theft of service, and infrastructure failure"); Alternative Rate Filing of Eastern Rockcastle Water Association, Inc., Case No. 2014-00385 (Ky. PSC May 15, 2015), Order at 6-7 (noting loss from inaccurate meter); Application of Hardin County Water District No. 1 to Modify Water Utility Tariff of Master Meters for Billing Multi-Unit Residential Properties, Case No. 2009-00113 (Ky. PSC Oct. 22, 2010), Order at 2 (noting that stolen water contributes to water loss); Hardin County Water District No. 1's Proposed Tariff Allowing the Use of Master Meters in Manufactured Housing Communities, Case No. 2007-00461 (Ky. PSC Aug. 14, 2008), Order at 2 (same).

(15) percent of total water produced and purchased, excluding water used by a utility in its own operations. Upon application by a utility in a rate case filing or by separate filing, or upon motion by the commission, an alternative level of reasonable unaccounted-for water loss may be established by the commission. A utility proposing an alternative level shall have the burden of demonstrating that the alternative level is more reasonable than the level prescribed in this section.

The policy implemented by this regulation is "intended to serve as an incentive to promote efficient management." Excessive water loss is a potential warning sign of the deteriorating financial health and well-being of a jurisdictional water utility. Water loss is lost potential revenue, and excessive water loss can have many negative effects, from higher rates for consumers to the ultimate failure of a water utility. Moreover, to the extent excessive water loss is the result of poor infrastructure, it may reflect the potential for health risks from contaminants infiltrating the water system. The annual reporting form for jurisdictional water utilities, filed pursuant to 807 KAR 5:006, Section

<sup>&</sup>lt;sup>11</sup> In the matter of the Notice by Lake Village Water Association, Inc., of a Tariff Amendment Adjusting Rates and Imposing Construction Surcharge, Case No. 89-075 (Ky. PSC Jan. 29, 1990), Order at 5.

<sup>&</sup>lt;sup>12</sup> See generally Electronic Application of Estill County Water District No. 1 for Rate Adjustment Pursuant to 807 KAR 5:076, Case No. 2017-00176 (Ky. PSC Dec. 20, 2017), Order at 4.

<sup>&</sup>lt;sup>13</sup> Electronic Application of Hardin County Water District No. 2 for a Declaratory Order that Sample Testing Satisfies the Testing Requirements of 807 KAR 5:066, Section 16(1) or, in the Alternative, for an Order Granting a Deviation [There]From, Case No. 2016-00432 (Ky. PSC March 22, 2018), Order at 7-8 n.28 (noting that water loss can decrease revenue, which is "ultimately borne by the consumer in the form of higher rates.").

<sup>14</sup> Id.

<sup>&</sup>lt;sup>15</sup> See Lovelaceville Water Company Request to Abandon, Case No. 2014-00136 (Ky. PSC Oct. 31, 2014), Order at 5 (citing a "significant water loss rate," along with poor infrastructure and low customer count as causes for the water utility being unable to continue operations).

<sup>&</sup>lt;sup>16</sup> Application of Hardin County Water District No. 1 to Modify Water Utility Tariff of Master Meters for Billing Multi-Unit Residential Properties, Case No. 2009-00113 (Ky. PSC Oct. 22, 2010), Order at 2; see also Hardin County Water District No. 1's Proposed Tariff Allowing the Use of Master Meters in Manufactured Housing Communities, Case No. 2007-00461 (Ky. PSC Aug. 14, 2008), Order at 2 (noting health risks from inadequate infrastructure and stolen water).

4(2), specifically seeks information regarding water loss in order to implement 807 KAR 5:066 and its underlying policies.

The Commission has thoroughly reviewed and taken into consideration the approximately 137 jurisdictional water utility responses and suggested improvements<sup>17</sup> when finalizing the updated Commission Form and written instructions, attached as Appendix A and B, respectively. According to the responses, the vast majority of jurisdictional water utilities find it reasonable to use and maintain the updated Commission Form to measure, record, and report water loss.<sup>18</sup> Furthermore, a substantial portion of the jurisdictional water utilities agree that knowing the actual water loss is vital to running an efficient water district because water loss can have detrimental effects such as higher rates to consumers, health risks, and potentially the ultimate failure

<sup>&</sup>lt;sup>17</sup> See https://www.psc.ky.gov/PSC\_WebNet/ViewCaseFilings.aspx?case=2018-00394.

<sup>&</sup>lt;sup>18</sup> See, e.g., Fleming County Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 8, 2019); Boone County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 8, 2019); Judy Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 8, 2019); West Shelby Water District's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Muhlenberg County Water District #3's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Whitley County Water District #1's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); North McLean County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 10, 2019); East Daviess County Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 10, 2019); Cawood Water District's Response to the Dec. 18, 2018 Order (filed Jan. 10, 2019); Farmdale Water District's Response to the Dec. 18, 2018 Order (filed Jan. 10, 2019); Laurel County Water District #2's Response to the Dec. 18, 2018 Order (filed Jan. 11, 2019); Adair County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 14, 2019); East Logan Water District's Response to the Dec. 18, 2018 Order (filed Jan. 14, 2019); Monroe County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 15, 2019); Peaks Mill Water District's Response to the Dec. 18, 2018 Order (filed Jan. 15, 2019); West McCracken Water District's Response to the Dec. 18, 2018 Order (filed Jan. 16, 2019); Jackson County Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 16, 2019); Kentucky American Water's Response to the Dec. 18, 2018 Order (filed Jan. 17, 2019); See also: https://www.psc.ky.gov/PSC\_WebNet/ViewCaseFilings.aspx?case=2018-00394.

of a water utility.<sup>19</sup> Finally, many of the jurisdictional water utilities emphasized that it would be reasonable for all jurisdictional water utilities to use the updated Commission Form because it would bring consistency to how water loss is measured, recorded, and reported across the state of Kentucky.<sup>20</sup>

The Commission would note that there are numerous jurisdictional water utilities that proposed for other factors to be considered when reviewing water loss percentages including but not limited to the following: miles, age, and type of pipeline; amount of infrastructure; topography of the service area; meter and billing system accuracy; whether the jurisdictional water utility is a producer or purchaser of water; operating pressures;

<sup>&</sup>lt;sup>19</sup> See, e.g., Parksville Water District's Response to the Dec. 18, 2018 Order (filed Jan. 8, 2019); West Shelby Water District's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Reid Village Water District's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Farmdale Water District's Response to the Dec. 18, 2018 Order (filed Jan. 10, 2019); Cumberland Falls Highway Water District's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Montgomery County Water District #1's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Farmdale Water District's Response to the Dec. 18, 2018 Order (filed Jan. 10, 2019); Symsonia Water District's Response to the Dec. 18, 2018 Order (filed Jan. 10, 2019); Laurel County Water District #2's Response to the Dec. 18, 2018 Order (filed Jan. 11, 2019); Knox County Utility Commission's Response to the Dec. 18, 2018 Order (filed Jan. 14, 2019); Monroe County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 15, 2019); West McCracken Water District's Response to the Dec. 18, 2018 Order (filed Jan. 16, 2019); Jackson County Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 16, 2019); Kentucky American Water's Response to the Dec. 18, 2018 Order (filed Jan. 17, 2019); See Also: <a href="https://www.psc.ky.gov/PSC\_WebNet/ViewCaseFilings.aspx?case=2018-00394">https://www.psc.ky.gov/PSC\_WebNet/ViewCaseFilings.aspx?case=2018-00394</a>.

<sup>&</sup>lt;sup>20</sup> See, e.g., Boone County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 8, 2019); Whitley County Water District #1's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Cannonsburg Water District's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Whitley County Water District #1's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); East Daviess County Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Kirksville Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Rowan Water, Inc.'s Response to the Dec. 18, 2018 Order (filed Jan. 9, 2019); Jessamine County Water District #1's Response to the Dec. 18, 2018 Order (filed Jan. 10, 2019); East Daviess County Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 10, 2019); North Shelby Water Company's Response to the Dec. 18, 2018 Order (filed Jan. 11, 2019); South Logan Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 14, 2019); Western Rockcastle Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 14, 2019); Breathitt County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 14, 2019); Peaks Mill Water District's Response to the Dec. 18, 2018 Order (filed Jan. 15, 2019); Jessamine-South Elkhorn Water District's Response the Dec. 18. 2018 Order (filed Jan. 17, 2019); See also: to https://www.psc.ky.gov/PSC WebNet/ViewCaseFilings.aspx?case=2018-00394.

number of customers; etc.<sup>21</sup> The Commission intends to continue adhering to 807 KAR 5:066, Section 6(3), which states that for ratemaking proposes a utility's unaccounted-for water loss shall not exceed fifteen (15) percent. With that said, the Commission would direct these jurisdictional water utilities to 807 KAR 5:066, Section 6(3), in which a jurisdictional water utility can file an application or motion that requests an alternative level of reasonable unaccounted-for water loss to be established by the Commission. However, under this regulation, a utility proposing an alternative level of water loss shall have the burden of demonstrating that the alternative level is more reasonable than the required 15 percent.<sup>22</sup>

The Commission is optimistic that the updated Commission Form, coupled with the detailed written instructions, will provide the guidance to better allow jurisdictional water utilities to properly measure, record, and report its water loss. The Commission will incorporate additional training on the updated Commission Form into the water training seminars that are conducted by the Commission periodically throughout the year, as well as post an educational video tutorial on the Commission's website next to the updated Commission Form.<sup>23</sup> Furthermore, in order to achieve efficiency, the Commission will update the Water Statistics page of the annual report that must be filed pursuant to 807

<sup>&</sup>lt;sup>21</sup> See, e.g., Mountain Water District's Response to the Dec. 18, 2019 Order (filed Jan. 9, 2019); Oldham County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 11, 2019); Levee Road Water Association's Response to the Dec. 18, 2018 Order (filed Jan. 11, 2019); Carroll County Water District #1's Response to the Dec. 18, 2018 Order (filed Jan. 11, 2019); Southern Water and Sewer District's Response to the Dec. 18, 2019 (filed Jan. 11, 2019); Henry County Water District #2's Response to the Dec. 18, 2018 Order (filed Jan. 14, 2019); Simpson County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 15, 2019); Warren County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 15, 2019); Martin County Water District's Response to the Dec. 18, 2018 Order (filed Jan. 16, 2019).

<sup>&</sup>lt;sup>22</sup> 807 KAR 5:066, Section 6(3).

<sup>&</sup>lt;sup>23</sup> See https://www.psc.ky.gov/Home/UtilForms.

KAR 5:006, Section 4(2), to be identical to the updated Commission Form. This will allow for the easy transfer of required information by the jurisdictional water utilities.

Finally, the Commission, pursuant to KRS Chapter 13A, will promulgate regulations that require jurisdictional water utilities to use the updated Commission Form to properly measure, record, and report water loss. The Commission strongly encourages the jurisdictional water utilities, prior to the promulgation of regulations adopting the Commission Form, to utilize the updated Commission Form to measure, record, and report water loss in the interim. At this time, the Commission will not require all jurisdictional water utilities to file the updated Commission Form with the Commission unless it has been directly ordered to do so pursuant to an Order or inspection report. Therefore, all jurisdictional water utilities that have been ordered to submit water loss reports to the Commission will need to use the revised Commission Form.<sup>24</sup> The Commission will also revise the annual report to be identical to the updated Commission Form pursuant to KRS 13A.

Having reviewed the evidentiary record and being otherwise sufficiently advised, the Commission finds that the updated Commission Form and instructions will provide assistance to jurisdictional water utilities in measuring, recording, and reporting water

<sup>&</sup>lt;sup>24</sup> Including but not limited to the following: Big Sandy Water District, Black Mountain Utility District, Cannonsburg Water District, Cawood Water District, Christian County Water District, Cumberland Falls Highway Water District, Edmonson County Water District, Elkhorn Water District, Estill County Water District, Farmdale Water District, Henderson County Water District, Hyden-Leslie County Water District, Jonathon Creek Water District, Knox County Utility Commission, Madison County Utilities District, Martin County Water District, Morgan County Water District, Muhlenberg County Water District, Parksville Water District, Peaks Mill Water District, Rattlesnake Ridge Water District, Southern Water and Sewer District, West Carroll Water District, Bronston Water Association, Kentucky-American Water Company (Southern Division), Jackson County Water Association, Kirksville Water Association, Inc., and North Manchester Water Association, Inc.,

loss, and also provide consistency as to how water loss is measured, recorded, and reported across the state of Kentucky.

#### IT IS HEREBY ORDERED that:

- The updated Commission Form and the written instructions for jurisdictional water utilities to utilize are attached to this Order as Appendix A and B, respectively.
- The jurisdictional water utilities shall collect and maintain all records necessary to accurately measure, record, and report its water loss.
- The jurisdictional water utilities, as listed in footnote 24 above, that are under the requirement to submit water loss reports to the Commission shall use the updated Commission Form as set forth in Appendix A.
- 4. The investigation of the measurement, recording, and reporting of water loss of Kentucky's jurisdictional water utilities is hereby closed and will be removed from the Commission's docket.
- Nothing contained herein shall prevent the Commission from entering further Orders in this matter.

## By the Commission

**ENTERED** 

NOV 22 2019

KENTUCKY PUBLIC SERVICE COMMISSION

ATTEST:

Executive Director

## APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2018-00394 DATED NOV 2 2 2019

## **PUBLIC SERVICE COMMISSION**

## **Monthly Water Loss Report**

Water L	Jtility:		
For the	Month of:	Year:	
LINE #		ITEM	GALLONS (Omit 000's)
1	WATER PRODUCED	AND PURCHASED	
2	Water Produced		
3	Water Purchased		
4		TOTAL PRODUCED AND PURCHASED	
5			
6	WATER SALES		
7	Residential		
8	Commercial		
9	Industrial		
10	<b>Bulk Loading Stations</b>		
11	Wholesale		
12	Public Authorities		
13	Other Sales (explain)		
14		TOTAL WATER SALES	
15			
16	OTHER WATER USE	D	
17	Utility and/or Water Tre	eatment Plant	
18	Wastewater Plant		
19	System Flushing		
20	Fire Department		
21	Other Usage (explain)		
22		TOTAL OTHER WATER USED	
23			
24	WATER LOSS		
25	Tank Overflows		
26	Line Breaks		
27	Line Leaks		
28	Excavation Damages		
29	Theft		
30	Other Loss		
31		TOTAL WATER LOSS	
32			
33			
34		22 + Line 31 MUST Equal Line 4	
35	WATER LOSS PERC	ENTAGE	
26	/Line 21 divided by Lie		0.000/

### APPENDIX B

# APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2018-00394 DATED NOV 2 2 2019

Instructions for the Public Service Commission Updated Commission Form

## Water Produced and Purchased

All Lines: Omit the last three zeros into the cell.

Line 2: Provide the number of thousands of gallons of water produced by the utility for the corresponding month.

Line 3: Provide the number of thousands of gallons of water purchased by the utility from third-parties for the corresponding month.

Line 4: The total of Water Produced and Water Purchased. This row will automatically calculate if the preceding lines are correctly filled out.

## Water Sales

Lines 7-13: Provide the number of thousands of gallons of water sold for each category listed.

Line 12: Sales to Public Authorities are typically sold under a special contract or tariff (e.g., fire department or other governmental entity.)

Line 13: If there are water sales for categories other than the ones listed in Lines 7-12 above, provide the thousands of gallons of water sold for "Other Sales" and an explanation that details the water sale. If an explanation is not given, the form will not calculate Line 14, and instead, will give an error message. The majority of the water sales should fall into the categories in Lines 7-12, such that most utilities will enter "0" into the "Other Sales" line.

Line 14: The sum of Lines 7-13 should match the amount of "Total Water Sales" in this row. This row will automatically calculate if the preceding lines are correctly filled out.

## Other Water Used

Lines 17-21: These categories include water that is properly used but not sold and, therefore, does not generate revenue for the utility. All gallons of water that are reported in these categories should be supported by records to be kept at the utility's office, which will be subject to examination by the Division of Inspections.

- Line 17: Provide the thousands of gallons of water used solely for the purpose of the utility and/or water treatment use. This would include, for example, backwashing the filtration system of the water treatment plant.
- Line 18: Provide the thousands of gallons of water used for wastewater use. This would include, but would not be limited to, for example, water used to wash down/clean the wastewater plant.
- Line 19: Provide the thousands of gallons of water used for system flushing, which is typically water used to keep water fresh and chlorine residuals up, and water used to flush lines to protect from Total Trihalomethanes (known as TTHM) and Haleacetic acids (known as HAA).
- Line 20: Provide the thousands of gallons of water used by the Fire Department that are not provided in "Sales to Public Authorities" in Line 12. Only enter gallons for "Fire Department" use if the water is provided at no cost pursuant to the utility's tariff. All sales to fire departments should be entered in the sales category above. Pursuant to the requirements of KRS 278.170(3) and 807 KAR 5:095, Section 9(1), a utility that permits a fire department to use water at no charge or at reduced rates shall require the fire department to submit quarterly reports demonstrating its water usage. 807 KAR 5:095, Section 9(2), further requires a utility to include a penalty in its tariff for any fire department's failure to submit the required reports.
- Line 21: Any water provided without charge as authorized by the utility's tariff or used by the utility to conduct the daily operation and maintenance of its treatment, transmission, and distribution systems that is not listed in Lines 17-20 above should be reported and explained as "Other Usage" on this line. If an explanation is not given, the form will not calculate Line 22, and instead, will give an error message. The majority of legitimate usage should fall into the categories on Lines 17-20, such that most utilities will enter "0" into the "Other Usage" line.
- Line 22: The sum of Lines 17-21 should match the amount of "Total Other Water Used" in this row. This row will automatically calculate if the preceding lines are correctly filled out.

## Water Loss

Lines 25-30: All gallons of water reported for these lines represent all other water that is not billed or used in the production and transmission of water to customers. Any amounts included in these lines are part of the calculation of the Water Loss Percentage below. The utility should be prepared to support any amounts that appear in Lines 25-29 with records kept at the utility's office, which will be subject to examination by the Division of Inspections.

Line 28: Water reported in this category only includes water lost for excavation damages for which the water was neither billed, nor collected from the customer. If the amounts for excavation damages are recovered from the customer, these amounts should be reported in water sales.

Line 29: Water reported in this category only includes water lost for theft that was neither billed, nor collected from the customer. The water loss can be estimated by using the average monthly use for each class of customers. If amounts for water theft are recovered from the customer, these amounts should be reported in water sales.

Line 30: If there is water loss for categories other than those listed in Lines 25-29 above, provide the thousands of gallons of water loss for "Other Loss" and an explanation that details the specific water loss. If an explanation is not given, the form will not calculate Line 22, and instead, will give an error message. This would include, but not be limited to, malfunctioning meters, unknown loss, etc. The majority of the water loss should fall into the categories in Lines 25-29, such that most utilities will enter "0" into the "Other Loss" line.

Line 31: The sum of Lines 25-30 should match the amount of "Total Water Loss" in this row. This row will automatically calculate if the preceding lines are correctly filled out.

## Water Loss Percentage

Line 36: The "Water Loss Percentage" in Line 36 will automatically calculate if all other lines on the form are filled out correctly. If the sum of Lines 14, 22, and 31 do not equal Line 4, the form will return an error in red that the Lines do not equal.

\*Estill County Water District #1 Estill County Water District #1 76 Cedar Grove Road Irvine, KY 40336 \*Big Sandy Water District Big Sandy Water District 18200 Kentucky Route #3 Catlettsburg, KY 41129 \*Breathitt County Water District Breathitt County Water District 1137 Main Street, Suite 305 Jackson, KY 41339

\*Allen County Water District Allen County Water District 330 New Gallatin Road P. O. Box 58 Scottsville, KY 42164 \*Beech Grove Water System, Inc. Beech Grove Water System, Inc. 445 State Route 56 North Calhoun, KY 42327 \*Judy Water Association, Inc. Judy Water Association, Inc. 2010 Maysville Road P. O. Box 781 Mt. Sterling, KY 40353-0781

\*East Daviess County Water Associatio East Daviess County Water Association, Inc. 9210 Highway Route 144 Knottsville, KY 42366 \*Center Ridge Water District No. 2 Center Ridge Water District No. 2 1980 Buffalo Road New Concord, KY 42076 \*Murray #2 Water District Murray #2 Water District 201 New Providence Road Murray, KY 42071

\*East Casey County Water District East Casey County Water District 690 S Wallace Wilkinson Blvd P. O. Box 56 Liberty, KY 42539 \*Black Mountain Utility District Black Mountain Utility District 609 Four Mile Road Baxter, KY 40806-8437 \*Bronston Water Association, Inc. Bronston Water Association, Inc. 2013 Highway 90 P. O. Box 243 Bronston, KY 42518

\*Bullock Pen Water District Bullock Pen Water District One Farrell Drive P. O. Box 188 Crittenden, KY 41030 \*Barkley Lake Water District Barkley Lake Water District 1420 Canton Road P. O. Box 308 Cadiz, KY 42211 \*Buffalo Trail Water Association, Inc Buffalo Trail Water Association, Inc. 41135 Highway 62 Mayslick, KY 41055

\*McKinney Water District McKinney Water District 2900 KY HWY 198 Stanford, KY 40484 \*North Marshall Water District North Marshall Water District 96 Carroll Road Benton, KY 42025 \*Cumberland County Water District Cumberland County Water District 133 Lower River Street Burkesville, KY 42717-9622

\*Bath County Water District Bath County Water District 21 Church Street P. O. Box 369 Salt Lick, KY 40371 \*Boone County Water District Boone County Water District 2475 Burlington Pike P. O. Box 18 Burlington, KY 41005 \*Cumberland Falls Highway Water Distr Cumberland Falls Highway Water District 6926 Cumberland Falls Highway Corbin, KY 40701-8637 \*Francis Water Company, Inc. Francis Water Company, Inc. 29 Water Street Garrett, KY 41630 \*Wood Creek Water District Wood Creek Water District 1670 Hal Rogers Parkway P. O. Box 726 London, KY 40743 \*Farmdale Water District Farmdale Water District 100 Highwood Drive, Route 8 Frankfort, KY 40601

\*Corinth Water District Corinth Water District 215 Thomas Lane P. O. Box 218 Corinth, KY 41010 \*West Laurel Water Association, Inc. West Laurel Water Association, Inc. 1670 Hal Rogers Parkway P. O. Box 726 London, KY 40741 \*Fountain Run Water District #1 Fountain Run Water District #1 226 Main Street P.O. Box 118 Fountain Run, KY 42133

\*Cunningham Water District Cunningham Water District 7506 US Highway 52 P. O. Box 644 Cunningham, KY 42035 \*Muhlenberg County Water District Muhlenberg County Water District 301 Dean Road P. O. Box 348 Greenville, KY 42345 \*Gary Larimore
Education Services Director
Kentucky Rural Water Association
Post Office Box 1424
1151 Old Porter Pike
Bowling Green, KENTUCKY 42102-1424

\*Bracken County Water District Bracken County Water District 1324 Brooksville Germantown Road P. O. Box 201 Brooksville, KY 41004 \*South Anderson Water District South Anderson Water District 142 South Main Street P. O. Box 17 Lawrenceburg, KY 40342 \*Gallatin County Water District Gallatin County Water District 4500 Highway 455 Sparta, KY 41086

\*Dexter-Almo Heights Water District Dexter-Almo Heights Water District 351 Almo Road Almo, KY 42020 \*Kentucky-American Water Company Kentucky-American Water Company 2300 Richmond Road Lexington, KY 40502 \*Garrison-Quincy-Ky-O-Heights Water D Garrison-Quincy-Ky-O-Heights Water District 279 Robins Lane P. O. Box 279 Garrison, KY 41141

\*Southern Water & Sewer District Southern Water & Sewer District 245 Kentucky Route 680 P. O. Box 610 McDowell, KY 41647 \*Elkhorn Water District Elkhorn Water District 7165 US 127 North P. O. Box 67 Frankfort, KY 40602 \*Sharpsburg Water District Sharpsburg Water District 16 East Mill Street P. O. Box 248 Sharpsburg, KY 40374

\*East Laurel Water District East Laurel Water District 1670 Hal Rogers Parkway P. O. Box 726 London, KY 40743 \*Eastern Rockcastle Water Association Eastern Rockcastle Water Association, Inc. 9246 Main Street Livingston, KY 40445 \*Milburn Water District Milburn Water District 7731 State Route 80 East Arlington, KY 42021 \*Cawood Water District Cawood Water District 54 Plant Road P. O. Box 429 Cawood, KY 40815 \*Madison County Utilities District Madison County Utilities District 297 Michelle Drive P. O. Box 670 Richmond, KY 40476-0670 \*Butler County Water System, Inc. Butler County Water System, Inc. 1118 S Main Street, Suite 1 Morgantown, KY 42261

\*Martin County Water District Martin County Water District 387 East Main Street, Suite 140 Inez, KY 41224 \*Christian County Water District Christian County Water District 1940 Dawson Springs Road P. O. Box 7 Hopkinsville, KY 42241-0007 \*Simpson County Water District Simpson County Water District 523 US Highway 31W Bypass P. O. Box 10180 Bowling Green, KY 42102

\*Green River Valley Water District Green River Valley Water District 1180 E Main Street P. O. Box 460 Horse Cave, KY 42749 \*Jackson County Water Association, In Jackson County Water Association, Inc. U. S. Highway 421 South P. O. Box 232 Tyner, KY 40486 \*Warren County Water District Warren County Water District 523 US Highway 31W Bypass P. O. Box 10180 Bowling Green, KY 42102-4780

\*Green-Taylor Water District Green-Taylor Water District 250 Industrial Park Road P. O. Box 168 Greensburg, KY 42743 \*Jessamine-South Elkhorn Water Distri Jessamine-South Elkhorn Water District 802 S Main Street P. O. Box 731 Nicholasville, KY 40356 \*Jonathan Creek Water District Jonathan Creek Water District 7564 U. S. Highway 68E P. O. Box 414 Benton, KY 42025

\*West Carroll Water District West Carroll Water District 900 Clay Street P. O. Box 45 Carrollton, KY 41008 \*Symsonia Water District Symsonia Water District 11105 State Rt. 131 P. O. Box 99 Symsonia, KY 42082-9801 \*Pendleton County Water District Pendleton County Water District 331 Highway 330 W P. O. Box 232 Falmouth, KY 41040

\*Hyden-Leslie County Water District Hyden-Leslie County Water District 356 Wendover Road Hyden, KY 41749 \*Caldwell County Water District Caldwell County Water District 118 West Market Street Princeton, KY 42445 \*Justin M. McNeil Office of the Attorney General Office of Rate 700 Capitol Avenue Suite 20 Frankfort, KENTUCKY 40601-8204

\*Kirksville Water Association, Inc. Kirksville Water Association, Inc. 297 Michelle Drive P. O. Box 670 Richmond, KY 40476-0670 \*Graves County Water District Graves County Water District P. O. Box 329 301 East Broadway Mayfield, KY 42066 \*Jessamine County Water District #1 Jessamine County Water District #1 2225 Lexington Road Nicholasville, KY 40356-9702 \*Grayson County Water District Grayson County Water District 21 Shull White Road P. O. Box 217 Leitchfield, KY 42754 \*Larry Cook Assistant Attorney General Office of the Attorney General Office of Rate 700 Capitol Avenue Suite 20 Frankfort, KENTUCKY 40601-8204 \*Lyon County Water District Lyon County Water District 5464 U. S. Highway 62 West P. O. Box 489 Kuttawa, KY 42055

\*Fleming County Water Association, In Fleming County Water Association, Inc. 2772 Morehead Road P. O. Box 327 Flemingsburg, KY 41041 \*Larue County Water District #1 Larue County Water District #1 6215 L & N Turnpike Buffalo, KY 42716 \*Edmonson County Water District Edmonson County Water District 1128 Highway 259N P. O. Box 208 Brownsville, KY 42210

\*Kent Chandler Assistant Attorney General Office of the Attorney General Office of Rate 700 Capitol Avenue Suite 20 Frankfort, KENTUCKY 40601-8204 \*Ledbetter Water District Ledbetter Water District 1483 US Highway 60W P. O. Box 123 Ledbetter, KY 42058-0123 \*Northern Kentucky Water District Northern Kentucky Water District 2835 Crescent Springs Road P. O. Box 18640 Erlanger, KY 41018-0640

\*Henry County Water District #2 Henry County Water District #2 8955 Main Street P. O. Box 219 Campbellsburg, KY 40011 \*Levee Road Water Association, Inc. Levee Road Water Association, Inc. 4969 Levee Road P. O. Box 770 Mt. Sterling, KY 40353 \*Harrison County Water Association, I Harrison County Water Association, Inc. 2167 US 27 South Cynthiana, KY 41031

\*Knox County Utility Commission Knox County Utility Commission 1905 Highway 930 Barbourville, KY 40906 \*East Logan Water District, Inc. East Logan Water District, Inc. 333 S Franklin Street Russellville, KY 42276 \*Letcher County Water and Sewer Distr Letcher County Water and Sewer District 3443 US 119 North Mayking, KY 41837

\*Knott County Water & Sewer District Knott County Water & Sewer District 7777 Big Branch Road Vicco, KY 41773 \*West Shelby Water District West Shelby Water District 7101 Shelbyville Road P. O. Box 39 Simpsonville, KY 40067 \*Meade County Water District Meade County Water District 1003 Armory Place P. O. Box 367 Brandenburg, KY 40108

\*Lindsey Ingram STOLL KEENON OGDEN PLLC 300 West Vine Street Suite 2100 Lexington, KENTUCKY 40507-1801 \*Lake Village Water Association, Inc. Lake Village Water Association, Inc. 801 Pleasant Hill Drive P. O. Box 303 Burgin, KY 40310 \*McCreary County Water District McCreary County Water District Highway 27 P. O. Box 488 Whitley City, KY 42653 \*Magoffin County Water District Magoffin County Water District 749 Parkway Road P. O. Box 490 Salyersville, KY 41465 \*Muhlenberg County Water District #3 Muhlenberg County Water District #3 4789 Main Street P. O. Box 67 Bremen, KY 42325 \*North Hopkins Water District North Hopkins Water District 316 Liberty Church Loop Madisonville, KY 42431

\*Montgomery County Water District #1 Montgomery County Water District #1 4412 Camargo Road Mt. Sterling, KY 40353 \*South Woodford Water District South Woodford Water District 117-D Crossfield Drive Versailles, KY 40383 \*North Logan Water District #1 North Logan Water District #1 3118 Lewisburg Road Russellville, KY 42276

\*Marion County Water District Marion County Water District 1835 Campbellsville Road P. O. Box 528 Lebanon, KY 40033 \*Nicholas County Water District Nicholas County Water District 1639 Old Paris Road Carlisle, KY 40311 \*North Nelson Water District North Nelson Water District 5555 Louisville Road P. O. Box 25 Cox's Creek, KY 40013

\*Monroe County Water District Monroe County Water District 205 Capp Harlan Road Tompkinsville, KY 42167 \*Trimble County Water District #1 Trimble County Water District #1 P. O. Box 63 34 E Morgan Drive Bedford, KY 40006-0063 \*North Shelby Water Company North Shelby Water Company 4596 Bagdad Road P. O. Box 97 Bagdad, KY 40003

\*North Mercer Water District North Mercer Water District 4795 Louisville Road P. O. Box 79 Salvisa, KY 40372 \*North McLean County Water District North McLean County Water District 217 Hill Street P. O. Box 68 Livermore, KY 42352 \*Nebo Water District Nebo Water District 45 North Bernard Street Nebo, KY 42441

\*Monica Braun STOLL KEENON OGDEN PLLC 300 West Vine Street Suite 2100 Lexington, KENTUCKY 40507-1801 \*North Manchester Water Association, North Manchester Water Association, Inc. 7362 N Highway 421 Manchester, KY 40962 \*Carroll County Water District #1 Carroll County Water District #1 205 Main Cross Street P. O. Box 350 Ghent, KY 41045

\*Morgan County Water District Morgan County Water District 1009 Hwy 172 West Liberty, KY 41472 \*Northeast Woodford County Water Dist Northeast Woodford County Water District 225A South Main Street Versailles, KY 40383 \*Powell's Valley Water District Powell's Valley Water District 31 Adams Ridge Road P. O. Box 550 Clay City, KY 40312 \*Henderson County Water District Henderson County Water District 655 South Main Street P. O. Box 655 Henderson, KY 42419-0655 \*Oldham County Water District Oldham County Water District 2160 Spencer Court La Grange, KY 40031 \*Sandy Hook Water District Sandy Hook Water District 1000 Howard's Creek Road P. O. Box 726 Sandy Hook, KY 41171

\*Western Rockcastle Water Association Western Rockcastle Water Association, Inc. 371 New Brodhead Road P. O. Box 627 Mt. Vernon, KY 40456 \*Rattlesnake Ridge Water District Rattlesnake Ridge Water District 3563 State Highway 1661 P. O. Box 475 Grayson, KY 41143-0475 \*Crittenden-Livingston County Water D Crittenden-Livingston County Water District 620 East Main Street P. O. Box 495 Salem, KY 42078

\*U. S. 60 Water District of Shelby an U. S. 60 Water District of Shelby and Franklin 4596 Bagdad Road P. O. Box 97 Bagdad, KY 40003 \*Mountain Water District Mountain Water District 6332 Zebulon Highway P. O. Box 3157 Pikeville, KY 41502-3157

\*South Logan Water Association, Inc. South Logan Water Association, Inc. 114 S Main Street Adairville, KY 42202

\*Peaks Mill Water District Peaks Mill Water District 7165 US 127 North Frankfort, KY 40601 \*Reid Village Water District Reid Village Water District 903 Winchester Road P. O. Box 610 Mt. Sterling, KY 40353 \*Southern Madison Water District Southern Madison Water District 207 North Dogwood Drive P. O. Box 220 Berea, KY 40403

\*Parksville Water District Parksville Water District 10711 Lebanon Road P. O. Box 9 Parksville, KY 40464 \*Fern Lake Company Fern Lake Company 34 Appolo Fuels Road Middlesboro, KY 40965 \*South 641 Water District South 641 Water District 207 Main Street P. O. Box 126 Hazel, KY 42047

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\*Rowan Water, Inc. Rowan Water, Inc. 1765 Christy Creek Road Morehead, KY 40351 \*Hardin County Water District #1 Hardin County Water District #1 1400 Rogersville Road Radcliff, KY 40159-0489 \*Water Service Corporation of Kentuck Water Service Corporation of Kentucky c/o Water Service Corp 500 West Monroe Street, Suite 3600 Chicago, IL 60661-3779 \*Garrard County Water Association, In Garrard County Water Association, Inc. 315 Lexington Road P. O. Box 670 Lancaster, KY 40444 \*Laurel County Water District #2 Laurel County Water District #2 3910 South Laurel Road London, KY 40744 \*Southeast Daviess County Water Distr Southeast Daviess County Water District 3400 Bittel Road Owensboro, KY 42301

\*Hardin County Water District #2 Hardin County Water District #2 360 Ring Road P. O. Box 970 Elizabethtown, KY 42702-0970 \*East Pendleton Water District East Pendleton Water District 601 Woodson Road Falmouth, KY 41040 \*Whitley County Water District #1 Whitley County Water District #1 19 S Highway 25W Williamsburg, KY 40769

\*Todd County Water District Todd County Water District 2201 New Highway 68 West P. O. Box 520 Elkton, KY 42220 \*Webster County Water District Webster County Water District 478 US HWY 41-A South P. O. Box 320 Dixon, KY 42409-0320 \*Western Lewis-Rectorville Water and Western Lewis-Rectorville Water and Gas District 8044 KY 3161 Maysville, KY 41056-9344

\*Cannonsburg Water District Cannonsburg Water District 1606 Cannonsburg Road Ashland, KY 41102 \*East Clark County Water District East Clark County Water District 118 Hopkins Lane P. O. Box 112 Winchester, KY 40391 \*Western Mason County Water District Western Mason County Water District 2573 Mary Ingles Highway P. O. Box 49 Dover, KY 41034-0049

\*Union County Water District Union County Water District 409 North Court Street P. O. Box 146 Morganfield, KY 42437 \*West McCracken County Water District West McCracken County Water District 8020 Ogden Landing Road West Paducah, KY 42086 \*Western Pulaski County Water District Western Pulaski County Water District 2128 West Highway 80 Somerset, KY 42503

\*Adair County Water District Adair County Water District 109 Grant Lane P. O. Box 567 Columbia, KY 42728 \*Western Fleming County Water District Western Fleming County Water District 1500 Ewing Road P. O. Box 16 Ewing, KY 41039

\*Ohio County Water District Ohio County Water District 124 E Washington Street P. O. Box 207 Hartford, KY 42347 \*West Daviess County Water District West Daviess County Water District 3400 Bittel Road Owensboro, KY 42301