

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

In the Matter of:

**APPLICATION OF HARDIN COUNTY)
WATER DISTRICT NO. 2 FOR A)
DECLARATORY ORDER THAT)
SAMPLE TESTING SATISFIES THE)
TESTING REQUIREMENTS OF 807) CASE NO. 2016-00432
KAR 5:066, SECTION 16(1) OR, IN)
THE ALTERNATIVE, FOR AN)
ORDER GRANTING A DEVIATION)
FROM 807 KAR 5:066, SECTION 16(1))**

**SUPPLEMENTAL RESPONSE OF
HARDIN COUNTY WATER DISTRICT NO. 2
TO
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION
DATED MAY 11, 2017**

FILED: August 3, 2017

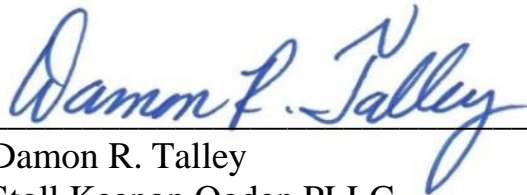
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**SUPPLEMENTAL RESPONSE OF APPLICANT TO
COMMISSION STAFF’S SECOND REQUEST FOR INFORMATION**

Comes the Applicant, Hardin County Water District No. 2, for its Supplemental Response to Question No. 10 of the Commission Staff’s Second Request for Information, and states as shown on the following pages.



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*

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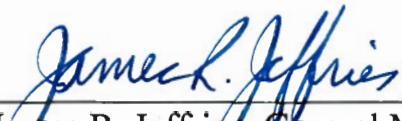
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**CERTIFICATION OF SUPPLEMENTAL RESPONSE OF APPLICANT TO
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION**

This is to certify that I have supervised the preparation of the Applicant's Supplemental Response to the Commission Staff's Second Information Request. 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: 8-2-17



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

HARDIN COUNTY WATER DISTRICT NO. 2

CASE NO. 2016-00432

Response to Commission Staff's Second Request for Information

Question No. 10

Responding Witness: James R. Jeffries

Q-10. During the IC, Hardin No. 2 representatives stated that the system's line loss had increased in 2015 due to the acquisition of the city of Elizabethtown's ("Elizabethtown") system.

- a. Describe the condition of Elizabethtown's system when acquired.
- b. Provide a detailed description of Hardin No. 2's efforts to reduce line loss.

A-10. Original Response:

- a. Prior to the acquisition of the Elizabethtown System on October 31, 2014, Hardin No. 2 had a very enviable low percentage of line loss for a large water distribution system. Its line loss was as follows:

2013 – 11.6%

2012 – 14.8%

2011 – 12.4%

2010 – 12.7%

Hardin No. 2's 12-month rolling average line loss percentage was 14.7% at the end of October 2014. The distribution system had approximately 860 miles of water mains at the time. The acquisition of the Elizabethtown system occurred October 31, 2014. This system

had approximately 140 miles of mains. The combined systems were immediately considered in the monthly line loss percentage calculation. The rolling average line loss percentage peaked at 21.2% in August 2015. Considering there were no significant distribution changes in this period, Hardin No. 2 estimates that the Elizabethtown system had over 50% unaccounted for water. The causes of this unaccounted for water are numerous:

- (1) Elizabethtown did not meter water usage at properties that were owned by Elizabethtown. There were over twenty (20) of these locations including the irrigation systems at the Sports Park, Carroll Soccer Complex, and Freeman Lake Park.
- (2) Because Elizabethtown was not subject to Commission meter testing and change out regulations, many of the customer meters were not registering. The customers in these cases were charged a minimum bill or a flat fee based on past usage that was no longer accurate. There were approximately 200 “dead” (inoperable) meters found in the Elizabethtown system.
- (3) Elizabethtown had approximately 400 fire services that did not have usage monitoring integrated into the connection. In the event that domestic usage was occurring on these connections, the water would not be metered nor charged to the customer.
- (4) Leak detection was not a priority for Elizabethtown because they were not subject to the Commission’s target of 15%. As a result, leaks that did not result in pressure drops did not get the attention of Elizabethtown personnel. Only a pressure drop at the customer or a failure to maintain tank levels would result in a response.

- b. Hardin No. 2 immediately made efforts to reduce line loss and unaccounted for water after acquiring the Elizabethtown system. From 2014 to 2016, Hardin No. 2 addressed customer connections for water usage. All stopped meters were immediately targeted for change out. Simultaneously, the Distribution Department began installing meters at Elizabethtown's properties to account for usage at those locations. Also, a meter change out program was implemented to update every customer connection in the Elizabethtown system. At the end of 2016, all domestic usage points had a new meter installed.

Hardin No. 2's leak detection processes immediately began to apply to the Elizabethtown system. Suspected leaks identified by meter readers, 811 line location efforts, and other Hardin No. 2 personnel were immediately addressed by Distribution Department repair crews. Fire connections are still in the process of being addressed. The effort of installing usage detection meters continues. Several locations have been identified where domestic usage was occurring on a fire service line. Those locations were addressed immediately.

In addition to completing the fire service upgrades, Hardin No. 2 is identifying potential professional leak detection service providers

to assist with leak detection and will include this activity in the 2018 budget. On several occasions, Hardin No. 2 crews have identified and repaired “legacy” leaks (i.e., those leaks that have been ongoing for years). It is Hardin No. 2’s belief that other legacy leaks are driving the high leak percentage. These legacy leaks are often under roads and sidewalks, do not affect tank trends or system pressures, and find their way into the storm drain system and never come to the surface.

In 2016, Hardin No. 2’s line loss percentage was 17.9%. This is not Hardin No. 2’s goal and additional efforts are needed, but it does represent significant improvement from the 21.2% line loss percentage in August 2015. All obvious contributors to line loss have been addressed or are in the process of being addressed. Hardin No. 2 will begin using professional assistance to help identify where in the 100-year-old Elizabethtown system it must focus next.

Supplemental Response:

- b. Hardin No. 2 has increased its efforts to combat line loss with additional focus on both the distribution and transmission mains. At the June 20, 2017 board meeting, the Board of Commissioners authorized Hardin No. 2 staff to hire a line loss consultant for a pilot

leak detection project. As discussed above, the acquisition of the Elizabethtown system added approximately 140 miles of water main to Hardin No. 2's system. The pilot project will focus on a geographical area in the oldest part of the former Elizabethtown system. Approximately 27 miles of water main will be mapped and assessed by the consultant to locate water loss points. Hardin No. 2 staff will then prioritize the leaks and make the necessary repairs or line replacements. If successful, this pilot project will be expanded and the 2018 budget will include funds to complete the entire Elizabethtown distribution system.

In addition, master meters were installed in May and June at Hardin No. 2's pumping stations. Each month, Hardin No. 2 will compare the pump station volumes with the volumes of water leaving the water treatment plant to determine if any transmission mains are showing a loss.

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 Supplemental 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 August 3, 2017; 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 Supplemental Response will be delivered to the Public Service Commission on or before August 7, 2017.


Damon R. Talley