

**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
POWELL'S VALLEY WATER DISTRICT
TO
COMMISSION'S REQUEST FOR INFORMATION
DATED DECEMBER 18, 2018**

FILED: January 15, 2019

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

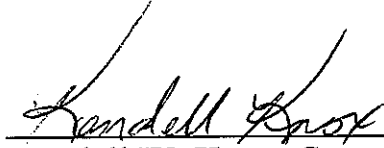
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**CERTIFICATION OF RESPONSE OF POWELL'S VALLEY WATER
DISTRICT TO
COMMISSION'S REQUEST FOR INFORMATION**

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

Date: 1-15-2019



Kendell W. Knox, Superintendent
Powell's Valley Water District

POWELL'S VALLEY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 1

Responding Witness: KENDELL W. KNOX

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. a. First thing we do to track the water loss in the system is to monitor and record the tank levels, read master meter and also read and record some monitor meters that we have in the system. This is done with the SCADA system we have and it is done every day. We also print out a water audit report every month on the water sold on each rout and the tank that feeds that rout in the system, this also helps some on determining as to where we might be losing water in the system.

We use different methods of calculating the water lost due to a line break or a service leak, we sometimes use bypass meters we have in the system if there are close to the leak and we also use a tank draw down late at night to determine the amount of water we are losing on a leak and we do use a calculator spread sheet on the computer that will add the water loss up by putting in the information we gather on the leak and also have some measuring cups we use on meter bottoms and service leaks when can.

b. Copies of the forms and audit reports that Powells Valley Water Distrit Uses to track, measure and calculate its water loss are attached

c. A form used by Powells Valley District to determine its monthly water Loss is the same form that the Public Service Commission has put in this Order.

POWELL'S VALLEY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 2

Responding Witness: Kendell W. Knox

- 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. (#1) Water Produced, Purchased and Distributed
This is potable water that is made (treated), bought and sold
- (#2) Water Produced
Powells Valley Water District is a Distribution system only it does not produce or treat any potable water.
- (#3) Water Purchased
This is the amount of potable water that is bought by Powells Valley Water District for the resale to its customers through the distribution system
- (#4) Total Produced and Purchased
This is the amount of potable water that is made (treated) and bought by the Distribution system added together.
- (#6) Water Sales:
This is the amount of potable water that sold by the Distribution system to its customers.
- (#7) Residential
This is the amount of Potable water that is sold to the households throughout the Distribution system.
- (#8) Commercial
This is the amount of Potable water that is sold by the Distribution system to the businesses throughout the Distribution system.
- (#9) Industrial
This is the amount of Potable water that is sold by the Distribution system for Industrial uses.
- (#10) Bulk Loading Station
This is the amount of Potable water sold through a stationary loading station to fill portable water tanks and tankers.

(#11) Resale

This is the amount of Potable water that is sold by the Distribution system to other water companies that will sell it to their customers.

(#12) Other Sales

This is the amount of Potable water that is sold by the Distribution system that isn't mentioned in numbers 7 through 11 in this report.

(#13) Total Water Sales

This is the total amount of Potable water sold by the Distribution system that is mention in numbers 7 through 12 in this report added together.

(#15) Other Water Used

This is the amount of Potable water used by the Distribution system that is not sold for revenue.

(#16) Utility/Water Treatment Plant

This is the amount of non-revenue Potable water used by the Distribution system to operate on a daily basis, such as meter testing and water used in the office.

(#17) Wastewater Plant

This is the amount of non-revenue Potable water used by the Distribution system to operate its Wastewater Treatment Plant

(#18) System Flushing

This is the amount of non-revenue Potable water used by the Distribution system to flush its water mains so to insure that the Distribution system is supplying safe and adequate Potable water to its customers.

(#19) Fire Department

This is the amount of non-revenue Potable water used by the Fire Departments to fight fires throughout the system.

(#20) Other

This is the amount of non-revenue Potable water used by the Distribution system that is not mention in numbers 16 through 19 in this report.

(#21) Total Other Water Used

This is the amount of non-revenue Potable water used by the Distribution system that is mention in numbers 16 through 20 in this report added together.

(#23) Water Loss

This is Potable water that is purchased by the Distribution system that is unaccounted for due to water leaks, main breaks, theft and bad meters.

(#24) Tank Overflows

This is Potable water that is purchased by the Distribution system that is over flowing from the water tanks due to pumps failing to turn off or valves failing to close.

(#25) Line Breaks

This is Potable water purchased by the District that is lost due to main lines breaking because of contractors or customers digging into them and can also be caused by the ground shifting and breaking the mains into.

(#26) Line Leaks

This is Potable water purchased by the District that is lost through main and service lines leaking due to ground shifting, cracks in lines, and fittings leaking.

(#27) Other

This is Potable water purchased by the District that is lost due to other things that are not mention in numbers 24 through 26 in this report.

(#28) Total Line Lose

This is the total purchased Potable water lost by the District and is totaled up by adding numbers 24 through 27 in this report together.

(#32) Water Loss Percentage

This is the amount of purchased Potable water the District lost that is measured in percent.

(#33) Line 28 divided by Line 4

This is how the percentage it figured up that lets the District know what its unaccounted water loss is.

POWELL'S VALLEY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 3

Responding Witness: Kendell W. Knox

- 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. Powells Valley Water District already uses a form that is similar to the one that is described as Appendix A in this order.

POWELL'S VALLEY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 4

Responding Witness: Kendell W. Knox

- 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. Powells Valley Water District at this time has no suggestions or improvements for the Commissions form described as Appendix A in this Order.

POWELL'S VALLEY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 5

Responding Witness: Kendell W. Knox

- 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. Powells Valley Water District at this time has no questions as to how the information in the updated Commissions Form described as Appendix A to this Order is to be incorporated into annual reports.

POWELL'S VALLEY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 6

Responding Witness: Kendell W. Knox

- 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. Powells Valley Water District at this time has no concerns regarding the use of the updated Commissions Form described as Appendix A to this Order.

POWELL'S VALLEY WATER DISTRICT

CASE NO. 2018-00394

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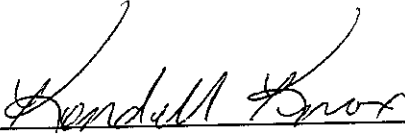
Question No. 7

Responding Witness: Kendell W. Knox

- 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. Powells Valley Water District has been using a similar form as the one that the Commission has attached as Appendix A in this order for the past year or so.

CERTIFICATE OF SERVICE

In accordance with 807 KAR 5:001, Section 8, I certify that Powell's Valley 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 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.



Kendell W. Knox

POWELL'S VALLEY WATER DISTRICT

MONTHLY WATER LOSS REPORT

For the Month of: _____ Year: _____

1	WATER PRODUCED, PURCHASED & DISTRIBUTED	
2	<u>Water Produced</u>	
3	<u>Water Purchased</u>	+
4	TOTAL PRODUCED AND PURCHASED	
5		
6	WATER SALES	
7	<u>Residential</u>	
8	<u>Commercial</u>	
9	<u>Industrial</u>	
10	<u>Bulk Loading Stations</u>	
11	<u>Resale</u>	
12	<u>Other</u>	+
13	TOTAL WATER SALES	
14		
15	OTHER WATER USED	
16	<u>Utility and/or Water Treatment Plant</u>	
17	<u>Wastewater Plant</u>	
18	<u>System Flushing</u>	
19	<u>Fire Department</u>	
20	<u>Other</u>	+
21	TOTAL OTHER WATER USED	
22		
23	WATER LOSS	
24	<u>Tank Overflows</u>	
25	<u>Line Breaks</u>	
26	<u>Line Leaks</u>	
27	<u>Other</u>	+
28	TOTAL LINE LOSS	
29		
30	Note: Line 13, Line 21, Line 28 Must Equal Line 4	
31		
32	WATER LOSS PERCENTAGE	
33	<u>Unaccounted-For Water (Line 28 divided by Line 4)</u>	

LINE BREAK LOGBOOK

*Required by 401 KAR 8:150, Section 4(2)

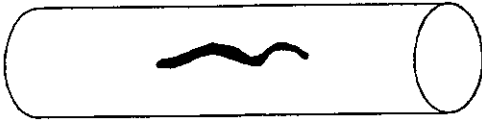
*DATE	1-23-18
*LOCATION OF BREAK	457 Adams hidge
*TIME IT WAS DISCOVERED	
*POPULATION AFFECTED	
*LENGTH OF TIME TO REPAIR	20 minutes
*DATE & TIME CL2 RESIDUALS DETECTED	
*DATE & TIME BACT SAMPLES TAKEN	
TURNED WATER OFF (yes or no)	
BWA REQUIRED (yes or no)	
OTHER COMMENTS	Service leak 62,507 gallons

*DATE	1-26-18
*LOCATION OF BREAK	10150 Win Rd.
*TIME IT WAS DISCOVERED	
*POPULATION AFFECTED	
*LENGTH OF TIME TO REPAIR	30 minutes
*DATE & TIME CL2 RESIDUALS DETECTED	
*DATE & TIME BACT SAMPLES TAKEN	
TURNED WATER OFF (yes or no)	
BWA REQUIRED (yes or no)	
OTHER COMMENTS	Service leak 25,676 Gallons

Rectangular Break

Long Break

Length of break in feet PSI
 Width of break in inches
 Leak Time in hours Area of Hole sq. ft.



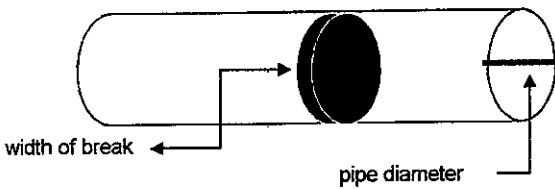
GPM water loss

Total Loss

Circular Break

around whole pipe

Pipe Size (Dia.) in inches
 Width of Break in inches Area of Hole sq. ft.



Leak Time in hours

PSI

GPM

Total loss in gals

Hole in Pipe

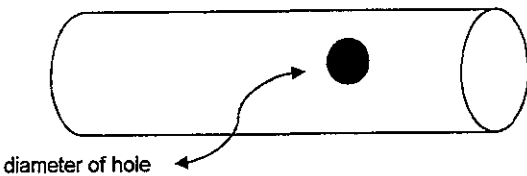
Dia. Of Hole in inches area of hole

Leak Time in hours

PSI

GPM

Total Loss in gals



Rectangular Break

Long Break

Length of break in feet PSI
 Width of break in inches
 Leak Time in hours Area of Hole sq. ft.



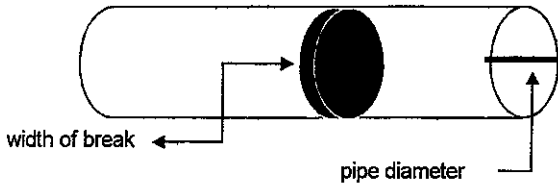
GPM water loss

Total Loss

Circular Break

around whole pipe

Pipe Size (Dia.) in inches
 Width of Break in inches Area of Hole sq. ft.



Leak Time in hours

PSI

GPM

Total loss in gals

Hole in Pipe

Dia. Of Hole in inches area of hole

Leak Time in hours

PSI

GPM

Total Loss in gals

