COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

ELECTRONIC INVESTIGATION INTO	)	
EXCESSIVE WATER LOSS BY KENTUCKY'S	)	**Case No. 2019-00041**
JURISDICTIONAL WATER UTILITIES	)	

CAWOOD WATER DISTRICT'S RESPONSE TO COMMISSION STAFF'S SECOND REQUESTS FOR INFORMATION ISSUED MAY 3, 2019

Filed: May 31, 2019

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

ELECTRONIC INVESTIGATION INTO	)	
EXCESSIVE WATER LOSS BY KENTUCKY'S	)	**CASE NO. 2019-00041**
JURISDICTIONAL WATER UTILITIES	)	

VERIFICATION OF GRANT COOPER

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF HARLAN)

Grant Cooper, being duly sworn, states that hehas supervised the preparation of the response of Cawood Water District to Commission Staff's Request for Information, in the above-styled matter and that the matters and things set forth in that response are true and accurate to the best ofhis knowledge, information and belief, formed after reasonable inquiry.

GRANT COOPER

The foregoing Verification was signed, acknowledged and sworn to before me this 30th day of May, 2019 by Grant Cooper.

NOTARY PUBLIC I.D.# 596357
Commission Expiration: 03-01-2022

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1. State the effective date of the water utility's last rate increase, either through the alternative rate filing procedure, through a general adjustment of rates, or through a purchased water adjustment, and provide the Board Resolution approving the rate increase.

Response:

January 1, 2018 was the last rate increase. This increase was a result of an alternative rate filing.

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2. State whether the water utility's board of commissioners or directors has discussed applying for a rate increase since January 1, 2018, utilizing either the alternative rate filing procedure or through a general adjustment of rates. If the utility can state this affirmatively, provide the board minutes where this was discussed:

Response:

No, the Board has not discussed a rate increase since January 1, 2018.

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3. Provide a list of the top three obstacles the water utility believes are preventing or slowing the progress of the water utility in reducing line loss.

Response:

- Old US highway 421 relocation by state no bedding of line and large objects on lines;
- Old Valves in system preventing from isolating parts; and,
- Old service lines that should and are being replaced.

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4. Provide the utility's most recent monthly water loss report.

Response:

Please see attached.

Monthly Water Use Report

Water Utility:	**Cawood Water**	**PWSID:**	**480565**	
For the Month of:	**APRIL**	**Year:**	**2019**	

1	**PRODUCTION COST PER THOUSAND**	(insert cost)		
2	**PURCHASE COST PER THOUSAND**	(insert cost)		

			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		9,886,557	100.0%
4	Water Purchased			0.0%
5		**TOTAL PRODUCED AND PURCHASED**	9,886,557	
6		**TOTAL COST** #VALUE!		
	WATER SOLD			
7	Residential		5,738,155	
8	Commercial			
9	Industrial			
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)			
13		**TOTAL WATER SOLD**	5,738,155	58.0%
14		**TOTAL WATER NOT SOLD**	4,148,402	**42.0%**
	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plant		170,000	
16	Wastewater Treatment Plant			
17	System Flushing		780,909	#VALUE!
18	Fire Department Usage		0	
19	DBP Flushing	DBP Maintenance	157,399	#VALUE!
20		**TOTAL USAGE**	1,108,308	
21		**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		**30.7%**
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		0	
24	Repaired Line Breaks		1,975,564	#VALUE!
25	Unknown Loss		1,064,530	**10.8%**
26		**TOTAL WATER NOT SOLD OR USED**	**3,040,094**	
27		**COST OF WATER NOT SOLD OR USED**	**#VALUE!**	

	"UNKNOWN LOSS" FLOW RATE AND COST:	
28	"Unknown Loss"	1,064,530
29	% "Unknown Loss"	10.8%
30	Number of Days in Period	30
31	"Unknown Loss" per Day (Gallons per Day)	35,484
32	"Unknown Loss" per Minute (GPM)	24.64
33	"Unknown Loss" Cost for Month	#VALUE!

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5. Provide the name and occupation, if any, of each of the water utility's current commissioners including the highest level of education attained by each.

Response:

Howard Farmer Jr.	Retired	High School Graduate
Tim Rice	Certified welder	High School Graduate
Harold Sellers	Retired	High School Graduate
Tim Engle	Salesperson	High School Graduate
Mike Thomas	Chief of Police	High School Graduate

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6. Provide the following training information:

   a. State whether the water utility allocates funds in its annual operating budget to provide training to its water personnel.

   b. If so, state the amount allocated in the last three calendar years.

   c. Identify any training programs, free of charge or otherwise, that water personnel have taken and individuals, agencies, or suppliers providing the training program.

Response:

   a. Yes there are funds allocated for training purposes.

   b. Although there is money allocated for training purposes, the amount is not broken out into a separate category. Expenses from the prior year are used to determine the budget for the current year. However, in 2018 Cawood spent approximately $5,000 on personnel training.

   c. Cawood had Kentucky Rural Water come and do leak training. This was a week-long training and was completed in April 2019.

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7. Provide the following system information in a formatted and tabulated Excel spreadsheet for each applicable asset:

   a. For transmission and distribution lines, provide the diameter size, length in miles, type of material, and average age of the lines. When PVC is used, provide the specific type of PVC used.

   b. For service connection lines, provide the service connection size, number, type of material, and average age of the lines. When PVC is used, provide the specific type of PVC used.

   c. For customer meters, provide the customer meter size, number, manufacturer/model, and the average age of the customer meters.

Response:

a. 1.67 miles 10" DI 17 years, 1.75 miles 6" DI 17 years, 1.1 miles 4" DI 15 years, .19 miles of 3" DI 10 years, .31 miles 12" SDR21 PVC 29 years, 8.74 miles 8" SDR21 PVC 15 years, 20.79 miles 6" SDR21 PVC 15 years, 13.3 miles 4" SDR17 PVC 15 years, 19.85 miles 3" SDR17 PVC 17 years.

b. Size ¾, number 1663, CPS and blu-max, 18 years: Size 1" number 2, CPS 10 years: Size 1 ½ number 1 SDR17, 15 years: Size 2" number 3 victaulic pipe and SDR17 15 years: Size 3" number 3 SDR17 and DI 17 years.

c. Meter size ¾ 1663 RG3 C-700 – 7 to 8 years.

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8. Proved the water utility's closest approximate number of service lines and transmission and distribution lines that were made with Blu-Max tubing within its distribution system and the dates they were installed.

Response:

Cawood currently has 50 service lines remaining in the system with Blu-Max tubing. These were installed in 1991.

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9. State whether the water utility has considered hiring a consulting firm for leak detection rather than using in-house labor, and if not explain why not.

Response:

Cawood has not considered hiring a consulting firm to assist in leak detection. Cawood has its employees look for leaks daily when they are out doing work orders reading meters and general maintenance on the system. Cawood has been able to reduce its water loss by utilizing this method and does not think it would be prudent to pay for a consulting firm to assist in this effort.

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10. State whether an employee dedicated to leak detection would be a worthwhile investment for the water utility, and if not state why not.

Response:

Cawood currently has three employees that share the daily task of detecting leaks. Cawood looks for leaks on a daily basis. Cawood does not believe that an additional employee dedicated to leak detection would be a worthwhile investment.

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11. Refer to the water utility's response to Commission Order of March 12, 2019, Appendix C (March 12 Order), Item 8. Provide a copy of the most recent written and completed inspection report done at the water utility's plant, pump, and storage facilities. If no written and completed inspection report exists, then state in specific detail all tasks performed by the water utility during the water utility's most recent inspection of its plant, pump, and storage facilities.

Response:

Please see attached.

5/1/2019 **SOURCE OF SUPPLY**

INTAKE	WILL BE DOING INSPECTION ON INTAKE AT END OF JULY
WELL/STRUCTURE	WELL LOOKS TO BE CLEAN NO CRACKS IN CONCRETE PUMP WIRE LOOKS GOOD NO CUTTS AND SAFTEY CHAINS AR GOOD
WELL MOTERS	WELL MOTERS AMP PULL IS NORMAL
WELL ELECTRIC CONTROLS	ALL WIRES IN PANNAL AT WELL IN GOOD CONDITION ALL CONNECTIONS ARE TIGHT AND SUCURE

TREATMENT/PURIFICATION

SEDIMENTATATION BASINE	ALL THREE BASINES HAVE BEEN CLEANED AND FREE OF ANY OBSTRUCTIONS
FILTERS	ALL THREE FILTERS HAVE BEEN CLEANED
CLEARWELL	CHECKED THE OUTSIDE STRUCTURE OF THE CLEARWELL AND IT LOOKED GOOD CHECKED VALVES AND ALL WORKED TARGET WORKES GOOD ON TANK LEVEL AND TELEMETARY IS WORKING WITH THE TARGET
CHEMICAL FEED EQUIPMENT	CHIMICAL EQUIPMENT IS CHECKED DAILY WENT AND DONE SPOT CHECK ON AND EVERYTHING IS GOOD NO WORN HOSES AND ALL PUMPS ARE WORKING PROPERLY
BUILDINGS	THE BUILDINGS ARE IN GOOD SHAPE HAD TO REPLACE LIGHT OUTSIDE BECAUSE ONE WAS BLOWN, HOUSE KEEPING IS UP AND NO OBSTRUCTIONS WAS NOTICED

STORAGE AND DISTRIBUTION

PUMPING EQUIPMENT	CHECKED ALL PUMPS AT PUMP STATIONS SMITH, ALL PUMPS AND MOTORS TEST GOOD MOTORS AMP DRAW WAS IN RANG CRUMMIES, ONE PUMP WAS NOT PULLING AMPS RIGHT SO CHECKED AND FOUND BEARINGS IN MOTOR WERE GOING OUT, GOT NEW MOTER TO REPLACE AND PUMP ALSO GULSTON, ALL PUMPS AND MOTORS TEST GOOD MOTORS AMP DRAW WAS IN RANG ALL PLANT PUMPS TEST ON AMPS WAS GOOD WE GREASED ALL MOTORS AT ALL PUMP STATIONS AND AT PLANT 05/01/2019
WATER STORAGE TANKS	THEY ARE SET TO GE INSPECTED IN JUNE OR JULY
HYDRANTS	ALL SYSTEM HYDRANTS HAVE BEEN WORKED AND IN OPERATION
VALVES	SYSTEM VALVES HAVE BEEN WORKED
MASTER METERS	ALL HAVE BEEN CHECKED
MASTER METER CALABRATIONS	CALABRATIONS HAVE BEEN DONE AND HAVE REPORTS ON ALL, ONE FAILED AND IN BEING REPLACED WITH NEW METER
LEAK DETECTION	IN DOING DAILY LEAK DETECTION WE FOUND 4 SERVICE LINE LEAKS LAST MONTH AND ONE MAIN LINE LEAK

VALVES AND BLOWOFF ASSEMBLYS

VALVES	ALL VALVES IN THE SYSTEM HAVE BEEN WORKED
BLOW OFF	WE LIKE 15 MORE BLOWOFFS TO HAVE THE ENTIRE SYSTEM WORKED

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12. Refer to the water utility's response to the March 12 Order, Item 14.

    a. Provide the cost and purchase date of all equipment the water utility identified in its response.

    b. State how frequently the identified leak detection equipment items are utilized by the water utility.

Response:

a. The cost and purchase date for the equipment is as follows:

- -Chain saw and combo kit for cutting pipe - 03/21/2019 - $815.00;
- Dynasonics flow meter - 12/14/2017 - $6144.00;
- Itron digital leak detector - 01/05/2018 - $3020.00;
- Ingersol Rand jackhammer - 12/19/2017 - $1520.00; and,
- Rock Saw with 16-inch chain and diamond chain for rock - 11/30/2017 - $2258.96

b. The frequency of use of the equipment is as follows:

- Chain saw kit - twice in 4 months;
- Dynasonics flow meter - 9 times in the last 6 months;
- Itron digital leak detector - 3 times in the last 4 months;
- Ingersol Rand jackhammer - once in the last year; and,
- Rock saw - once in last year.

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13. Refer to the water utility's response to the March 12 Order, Item 16. For water utilities that responded that they have no written policy to identify errors that result in missed customer billings or under billings of customer accounts, state whether writing and adopting a formal written policy regarding this would be considered by its board of commissioners or directors, and if not state why not.

Response:

Please see the Response to Item 16 to Commission Staff's First Request for Information.

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14. Refer to the water utility's response to the March 12 Order, Item 17. For water utilities that responded that they cannot accurately verify through testing how much water they produce at their water treatment plant, state how the water utility can accurately assess its water loss with an unverified production meter.

Response:

Please see the Response to Item 17 of Commission's Staff First Request for Information.

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15. Refer to the water utility's response to the March 12 Order, Item 18.

    a. For water utilities that provided test results and had master meters that failed tests, state whether those master meters were replaced or repaired and provide the dates when they were replaced or repaired.

    b. For water utilities that could not provide test results, provide any previous test results of the water utility's master meters or those from the wholesale provider from any previous date.

Response:

Please see attached.

C.I. Thornburg

Branch Office
740 Enterprise Drive
Lexington, KY 40510
Phone: (859)255-0852
Fax: (859)259-1171

CITCO Large Meter Test Record

Customer Name: Cawood, Ky. **Date: 4-29-19**

Make: Badger Compound **Serial #: 92053746**

3" **Location: Cawood Elementary**

Meter Tester Information:

Make: Sensus **Type:** V2

Serial #: Tester3 **Size: 3"** **Last Tested: 07-19-2018**

Test As Found

	Flow Rate	Residual Pressure	Meter	Prover	Result %=(A/B)x100	Curve	Meter Accuracy
HIGH	150/500	70	440	500	88.00%	100.80%	88.70%
MED	15/100	85	50	100	50.00%	100.80%	50.40%
LOW	.50/10	95	6	10	60.00%	100.10%	60.06%
	Average of Tests As Found:						66.39%

Result: FAILED **Oxygen: 20.8**

Installed: ***Michael Shipley (Card# W1370)***

Size	High Flow	AWWA Standard	Mid Flow	AWWA Standard	Minimum Flow	AWWA Standard	
1.5"	90 gpm for 300 gal	98.5% - 101.5%	10 gpm for 100 gal	98.5% - 101.5%	4 gpm for 100 gal	98.5% - 101.5%	TURBINE
2"	120 gpm for 300 gal	98.5% - 101.5%	10 gpm for 100 gal	98.5% - 101.5%	4 gpm for 100 gal	98.5% - 101.5%	TURBINE
3"	275 gpm for 600 gal	98.5% - 101.5%	20 gpm for 100 gal	98.5% - 101.5%	8 gpm for 100 gal	98.5% - 101.5%	TURBINE
4"	500 gpm for 1000 gal	98.5% - 101.5%	20 gpm for 1000 gal	98.5% - 101.5%	15 gpm for 100 gal	98.5% - 101.5%	TURBINE
6"	1100 gpm for 2500 gal	98.5% - 101.5%	40 gpm for 1000 gal	98.5% - 101.5%	30 gpm for 1000 gal	98.5% - 101.5%	TURBINE
8"	1500 gpm for 4000 gal	98.5% - 101.5%	50 gpm for 1000 gal	98.5% - 101.5%	50 gpm for 1000 gal	98.5% - 101.5%	TURBINE
2"	100 gpm for 100 gal	97% - 103%	15 gpm for 100 gal	90% - 103%	.25 gpm for 10 gal	95% - 101%	COMPOUND
3"	150 gpm for 500 gal	97% - 103%	15 gpm for 100 gal	90% - 103%	.50 gpm for 10 gal	95% - 101%	COMPOUND
4"	200 gpm for 500 gal	97% - 103%	25 gpm for 100 gal	90% - 103%	.75 gpm for 10 gal	95% - 101%	COMPOUND
6"	500 gpm for 1000 gal	97% - 103%	35 gpm for 100 gal	90% - 103%	1.5 gpm for 100 gal	95% - 101%	COMPOUND
8"	600 gpm for 2000 gal	97% - 103%	45 gpm for 100 gal	90% - 103%	2 gpm for 100 gal	95% - 101%	COMPOUND

REPLACED WITH NEW METER ON 6/01

C.I. Thornburg

Branch Office
740 Enterprise Drive
Lexington, KY 40510
Phone: (859)255-0852
Fax: (859)259-1171

CITCO Large Meter Test Record

Customer Name: Cawood, Ky. **Date: 4-29-19**

Make: Sensus Omni C2 **Serial #: 76479726**

4" **Location: Harlan?**

Meter Tester Information:

Make: Sensus **Type:** V2

Serial #: Tester3 **Size: 3"** **Last Tested: 07-19-2018**

Test As Found

	Flow Rate	Residual Pressure	Meter	Prover	Result %=(A/B)x100	Curve	Meter Accuracy
HIGH	200/500	65	512	515	99.42%	100.50%	**99.91%**
	25/100	75	110	110	100.00%	100.70%	**100.47%**
LOW	.75/10	90	10	10.1	99.01%	99.50%	**98.51%**
	Average of Tests As Found:						99.63%

Result: PASSED **Oxygen: 20.8**

Installed: 1.5" x 6" nipple, 1.5" ball valve ***Michael Shipley (Card# W1370)***

Size	High Flow	AWWA Standard	Mid Flow	AWWA Standard	Minimum Flow	AWWA Standard	
1.5"	90 gpm for 300 gal	98.5% - 101.5%	10 gpm for 100 gal	98.5% - 101.5%	4 gpm for 100 gal	98.5% - 101.5%	**TURBINE**
2"	120 gpm for 300 gal	98.5% - 101.5%	10 gpm for 100 gal	98.5% - 101.5%	4 gpm for 100 gal	98.5% - 101.5%	**TURBINE**
3"	275 gpm for 600 gal	98.5% - 101.5%	20 gpm for 100 gal	98.5% - 101.5%	8 gpm for 100 gal	98.5% - 101.5%	**TURBINE**
4"	500 gpm for 1000 gal	98.5% - 101.5%	20 gpm for 1000 gal	98.5% - 101.5%	15 gpm for 100 gal	98.5% - 101.5%	**TURBINE**
6"	1100 gpm for 2500 gal	98.5% - 101.5%	40 gpm for 1000 gal	98.5% - 101.5%	30 gpm for 1000 gal	98.5% - 101.5%	**TURBINE**
8"	1500 gpm for 4000 gal	98.5% - 101.5%	50 gpm for 1000 gal	98.5% - 101.5%	50 gpm for 1000 gal	98.5% - 101.5%	**TURBINE**
2"	100 gpm for 100 gal	97% - 103%	15 gpm for 100 gal	90% - 103%	.25 gpm for 10 gal	95% - 101%	**COMPOUND**
3"	150 gpm for 500 gal	97% - 103%	15 gpm for 100 gal	90% - 103%	.50 gpm for 10 gal	95% - 101%	**COMPOUND**
4"	200 gpm for 500 gal	97% - 103%	25 gpm for 100 gal	90% - 103%	.75 gpm for 10 gal	95% - 101%	**COMPOUND**
6"	500 gpm for 1000 gal	97% - 103%	35 gpm for 100 gal	90% - 103%	1.5 gpm for 100 gal	95% - 101%	**COMPOUND**
8"	600 gpm for 2000 gal	97% - 103%	45 gpm for 100 gal	90% - 103%	2 gpm for 100 gal	95% - 101%	**COMPOUND**

C.I. Thornburg

Branch Office
740 Enterprise Drive
Lexington, KY 40510
Phone: (859)255-0852
Fax: (859)259-1171

CITCO Large Meter Test Record

Customer Name: Cawood, Ky. **Date: 4-29-19**

Make: Badger 170 **Serial #: 17844277**

2" **Location: Laurels**

Meter Tester Information:

Make: Sensus **Type:** V2

Serial #: Tester3 **Size: 3"** **Last Tested: 07-19-2018**

Test As Found

		Residual			Result	Curve	Meter
	Flow Rate	Pressure	Meter	Prover	%=(A/B)x100		Accuracy
HIGH	120/300	70	321	326	98.47%	100.90%	**99.35%**
LOW	4/100	85	112	114	98.25%	100.50%	**98.74%**
	Average of Tests As Found:						99.04%

Result: PASSED **Oxygen: 20.8**

Installed: 1" x 6" nipple, 1" ball valve ***Michael Shipley (Card# W1370)***

Size	High Flow	AWWA Standard	Mid Flow	AWWA Standard	Minimum Flow	AWWA Standard	
1.5"	90 gpm for 300 gal	98.5% - 101.5%	10 gpm for 100 gal	98.5% - 101.5%	4 gpm for 100 gal	98.5% - 101.5%	TURBINE
2"	120 gpm for 300 gal	98.5% - 101.5%	10 gpm for 100 gal	98.5% - 101.5%	4 gpm for 100 gal	98.5% - 101.5%	TURBINE
3"	275 gpm for 600 gal	98.5% - 101.5%	20 gpm for 100 gal	98.5% - 101.5%	8 gpm for 100 gal	98.5% - 101.5%	TURBINE
4"	500 gpm for 1000 gal	98.5% - 101.5%	20 gpm for 1000 gal	98.5% - 101.5%	15 gpm for 100 gal	98.5% - 101.5%	TURBINE
6"	1100 gpm for 2500 gal	98.5% - 101.5%	40 gpm for 1000 gal	98.5% - 101.5%	30 gpm for 1000 gal	98.5% - 101.5%	TURBINE
8"	1500 gpm for 4000 gal	98.5% - 101.5%	50 gpm for 1000 gal	98.5% - 101.5%	50 gpm for 1000 gal	98.5% - 101.5%	TURBINE
2"	100 gpm for 100 gal	97% - 103%	15 gpm for 100 gal	90% - 103%	.25 gpm for 10 gal	95% - 101%	COMPOUND
3"	150 gpm for 500 gal	97% - 103%	15 gpm for 100 gal	90% - 103%	.50 gpm for 10 gal	95% - 101%	COMPOUND
4"	200 gpm for 500 gal	97% - 103%	25 gpm for 100 gal	90% - 103%	.75 gpm for 10 gal	95% - 101%	COMPOUND
6"	500 gpm for 1000 gal	97% - 103%	35 gpm for 100 gal	90% - 103%	1.5 gpm for 100 gal	95% - 101%	COMPOUND
8"	600 gpm for 2000 gal	97% - 103%	45 gpm for 100 gal	90% - 103%	2 gpm for 100 gal	95% - 101%	COMPOUND

The C.I.Thornburg Co.,Inc.

YOUR FIRST CHOICE IN WATER AND WASTEWATER DISTRIBUTOR
740 Enterprise Drive
Lexington, KY 40510
1-800-999-3484

Sensor Calibration Sheet

Date: 5-9-19 **Sheet:** 1 of 1

Specific Work to be Performed: Cleaned Hi and Lo venturi sensing lines, zero checked good, applied pressure up to 65" H2O

CONTACT NAME	Ronnie		
OWNER	Cawood WTP		
JOB	Raw Water D.P. Meter		
LOCATION	WaterTreatment Plant		
MFG.	Siemens		
DEVICE ID	Sitrans P		
PART/MODEL NO.	model #D-76181		
PRODUCT CODE			
Factory Calibration Range	0 - 250"H2O		
WARRANTY	YES ☐	NO ☐	Other : new unit replacement
NOTES/COMMENTS:			
If Ronnie can find Flow vs inches of water curve documentation I will check 2 more points on the curve and verify URV.			
Zero before and after 0.01"H2O 65" H2O = 400 GPM	URV = 65" H2O @ 400 GPM LRV = 0 GPM		
No adjustments needed.			

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16. Refer to the water utility's response to the March 12 Order, Item 19. Provide the total number of customer meters that are greater than ten years old that a water utility currently has in service, if any, and provide any previous tests for each of these meters. If the meter has not been tested, please state in the affirmative and state why it has not been tested.

Response:

Cawood currently has 268 meters that are more than ten years old. Cawood has been changing 75 meters per month and will continue until all of 268 meters have been changed out. According to a February 2019 visit from Commission Staff, Erin Donges, Cawood has changed 181 meters since this process began.

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Requests for Information contained in
Appendix C to the Commission's Order entered March 12, 2019

17. Refer to the water utility's response to the March 12 Order, Item 23. For water utilities that do not utilize supervisory control and data acquisition (SCADA) technology within its system, state the reasons why the water utility does not utilize SCADA technology within its system.

Response:

Please see the Response to Item 23 to Commission Staff's First Request for Information.

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18. Refer to the water utility's response to the March 12 Order, Item 23. For water utilities that do not utilize telemetry within its system, state the reasons why the water utility does not utilize telemetry within its system.

Response:

Please see the Response to Item 23 of Commission Staff's First Request for Information.

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Appendix C to the Commission's Order entered March 12, 2019

19. Refer to the water utility's response to the March 12 Order, Item 26.

a. For water utilities that currently utilize master meter zones in leak detection, state how the data from the zone meters is used to reduce water loss and whether the water utility has a sufficient number of zone meters to monitor its entire system.

b. For water utilities that currently do no utilize master meter zones in leak detection, state with specific detail whether doing so would assist in the water utility's water loss reduction efforts or why it would not.

Response:

Cawood's process for leak detection is as follows:

There is a pit at each tank and a flow meter is placed on the pipe going out to the customers' lines. Cawood then gets the flow rate from the flow meter and calculates how many customers are on that particular tank. Cawood then takes the rate of flow that should be on the tank and the actual rate of flow to find the unknown flow rate. Once the unknown flow rate is known, Cawood begins to close off valves to section off the system, starting with the main lines. Cawood then watches the flow meter to see if the flow rate decreases. If the flow rate does not decrease, then Cawood will move to the next tank. Once the decrease in flow rate is detected, Cawood goes back and does the branch lines in between the valve and the flow meter. This is the process to section off lines to determine main line and service line leaks. Cawood also uses a listening device to listen to every meter in a section where a high flow rate is detected. This has aided in detecting several leaks. This technique was taught to Cawood personnel by Kentucky Rural Water Association.

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Commission Staff's Second Request for Information issued May 3, 2019

20. Refer to the water utility's response to the March 12 Order, Item 31.

a. Provide the approximate hourly rate for the water utility's general manager/superintendent for the calendar years 2017 and 2018 utilizing actual hours worked, or if by salary by dividing the monthly salary by the standard 173.3 hours worked per month.

b. Provide the job title and job description for the general manager/superintendent from the water utility's handbook, if such a handbook exists. If the water utility does not currently have a handbook, provide the job title and a detailed job description for the general manager/superintendent that includes job duties.

Response:

a. The general manager's hourly rate for 2017 was $15.75 (using the standard 173.3 hours worked since this is a salaried position). Using the same method, the 2018 general manager hourly rate is $19.75 since it continues to be a salaried position.

b. Please see attached.

ADMINISTRATIVE DIVISION

Class Title: Manager

Characteristics of the Class: This is technical and administrative work involving a sophisticated level of direction in the management of the District's public works program. The person in this position plans, supervises and coordinates the activities of the District in accordance with Board policy and is directly responsible to the Board.

Essential Job Function: Supervises and coordinates activities of District personnel. Plans and coordinates projects including research, general layout, cost estimates, statistical data and related requirements of developing projects. Studies proposed projects, deeds, easement, and contract documents as necessary in the process of implementing a project. Listens to and answers complaints and requests of citizens and citizen groups. Work with the District Board in reference to financial planning, budgeting, personnel administration, policy development, long term planning and related administrative functions. Conducts employee performance evaluations, job training, etc., including safety and equipment operation. Coordinates activities with the various city public works operations in the county as needed. Does related work required.

Job Related Physical Activity Requirement: This position involves work requiring the employee to exert in excess of 50 pounds of force occasionally and less force frequently to move objects. Physical activity related to this position may include climbing, stooping, kneeling, crouching, reaching, standing, walking, grasping, feelings, talking, hearing, and repetitive motion. Visually inspect work being performed and prepare reports. An employee in this position will be exposed to indoor and outdoor environmental conditions including extreme heat and cold; subject to noise fumes, odors, gases, poor ventilation, oils and grease; An employee in this position could "reasonably anticipate" facing contract with potentially infectious materials.

Special Knowledge, Skills and Abilities: Through knowledge of the principles and practices of operation of water distribution system; ability to develop and understand working plans and coordinate work; ability to supervise and get along well with the public and co-workers; ability to plan financially for long term projects of the District; good physical condition.

Acceptable Experience and Training: Considerable experience in personnel administration, including supervision of employees; However, any combination of education and experience sufficient to demonstrate the required special knowledge, skills and abilities will be considered. The employee is required to obtain the appropriate class of distribution license in accordance with state regulations. Possess a valid Kentucky driver's license. Hold the necessary plant certification (II-A) and distribution license certifications.

Cawood Water District
Case No. 2019-00041
Commission Staff's Second Request for Information issued May 3, 2019

21. Refer to the water utility's response to the march 12 Order, Item 35. For water utilities that have not mapped their distribution area for service lines and connections, provide specific detail of the process of how the water utility locates its service lines and connections.

    a. State the process for water utility responses to 811 calls for line locates.

    b. Provide an approximate date of completion of the water utility to map their entire distribution system for service lines and connections.

Response:

a. Cawood takes the call from 811 and proceeds to get a map of the system in that area. Cawood then goes to the premises and marks the line. Cawood is currently working on obtaining a line locating device to aid in this procedure.

b. Cawood is currently working on GPS mapping of valves and service lines. Cawood has already put into place maps of the lines themselves.

Cawood Water District
Case No. 2019-00041
Requests for Information contained in
Appendix C to the Commission's Order entered March 12, 2019

22. Refer to the water utility's response to the March 12 Order, Item 37a. For water utilities that have not requested prosecution of water theft (a.k.a. theft of services) by either the county attorney or commonwealth attorney's office, state the reasons why such requests have not been made.

Response:

Please see Response 37 a to Commission Staff's First Request for Information.

Cawood Water District
Case No. 2019-00041
Commission Staff's Second Request for Information issued May 3, 2019

23. Refer to the water utility's response to the March 12 Order, Item 38. For a water utility that has stated in the affirmative that a leak adjustment is permitted, provide the current leak adjustment rate and applicable tariff page from the water utility's tariff on file with the Commission.

Response:

Please see attached.

Form for filing Rate Schedules

For Cawood
Community, Town or City

P.S.C. NO. 2

2nd revised SHEET NO. 2

Cawood Water District
Name of Issuing Corporation

CANCELLING P.S.C. NO. 2

1st revised SHEET NO. 2

CLASSIFICATION OF SERVICE

	RATE PER UNIT

a. **Multiple Users on One Meter.** Where two or more tenants or occupants (of different rental units) of property, including duplexes, apartment houses, mobile home parks, trailer parts, or other multi-unit premises, are served by a single water meter, the rates and charges to each tenant or occupant shall be computed by dividing the number of gallons of water registered by such single meter by the number of customers being served through such meter and then applying the result thus obtained to the water rate schedule set out above to arrive at the monthly bill for each tenant or occupant. Each tenant or occupant shall be billed separately unless the owner or operator of the property has agreed with the District to be responsible for and pay the full amount of the total monthly water bill for such property. In no event shall the monthly bill applicable to each tenant or occupant be less than the minimum water rate stipulated above.

LEAK ALLOWANCE POLICY -

An account billing adjustment will be made upon proof of excess water loss due to a leak that is verified by Cawood Water District's employee. The customer under age 65 will be billed at a rate consistent with their average monthly use over the last 12-month period, plus 1/2 (one/half) the amount of the excess used due to the leak. The customer aged 65 or older will be billed an amount equal to their average use over the past 12 months. This adjustment will be made only one time per 12-month period.

PUBLIC SERVICE COMMISSION
OF KENTUCKY
EFFECTIVE

AUG 01 1998

PURSUANT TO 807 KAR 5:011,
SECTION 9 (1)
BY: Stephanie Bell
SECRETARY OF THE COMMISSION

DATE OF ISSUE June 25, 1998

DATE EFFECTIVE August 1, 1998

ISSUED BY Walter Smith
Name of Officer

TITLE Chairman

Issued by authority of an Order of the Public Service Commission of Kentucky in Case No. _____ dated _____.

LEAK ADJUSTMENT

UNDER 65					
TOTAL $ AMOUNT OF LEAK	$	100.00			
TOTAL 12 MONTH BILL	$	600.00		12 MONTHS	$ 50.00
AVERAGE BILL AMOUNT	$	50.00		2	$ 25.00
TOTAL LEAK ADJUSTMENT	$	25.00	$ 100.00		$ (75.00)
TOTAL AMOUNT FOR CUSTOMER TO PAY	$	(75.00)			

OVER 65					
TOTAL AMOUNT OF LEAK	$	100.00			
TOTAL 12 MONTH BILL	$	600.00		12 MONTHS	$ 50.00
AVERAGE BILL AMOUNT	$	50.00			
TOTAL AMOUNT FOR CUSTOMER TO PAY	$	50.00			

Cawood Water District
Case No. 2019-00041
Commission Staff's Second Request for Information issued May 3, 2019

24. Refer to the water utility's response to the March 12 Order, Item 44. For utilities that responded that they currently do not have flushing equipment, state whether its board of commissioners or directors has ever discussed the purchase of flushing equipment to improve the water utility's system. Provide any applicable board minutes as an attachment to this request.

Response:

Please see the Response to Item 44 to Commission Staff's First Request for Information.