COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC CANNONSBURG)
WATER DISTRICT'S)
UNACCOUNTED-FOR WATER LOSS) CASE NO. 2014-00267
REDUCTION PLAN, SURCHARGE)
AND MONITORING)

RESPONSE OF

CANNONSBURG WATER DISTRICT

TO

COMMISSION STAFF'S THIRD REQUEST FOR INFORMATION DATED APRIL 4, 2019

FILED: April 18, 2019

COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

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ELECTRONIC CANNONSBURG)
WATER DISTRICT'S)
UNACCOUNTED-FOR WATER LOSS) CASE NO. 2014-00267
REDUCTION PLAN, SURCHARGE)
AND MONITORING)

RESPONSE OF CANNONSBURG WATER DISTRICT TO COMMISSION STAFF'S THIRD REQUEST FOR INFORMATION

Comes Cannonsburg Water District, for its Response to the Commission

Staff's Third 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 Cannonsburg Water District

COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

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ELECTRONIC CANNONSBURG)
WATER DISTRICT'S)
UNACCOUNTED-FOR WATER LOSS) CASE NO. 2014-00267
REDUCTION PLAN, SURCHARGE)
AND MONITORING)

CERTIFICATION OF RESPONSE OF CANNONSBURG WATER DISTRICT TO COMMISSION STAFF'S THIRD REQUEST FOR INFORMATION

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

Date: 4-18-19

Tim Webb, General Manager Cannonsburg Water District

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 1

Responding Witness: Tim Webb

- Q-1. Cannonsburg District informed Commission Staff at the informal conference held in this matter on August 30, 2018, that an application for a Certificate of Public Convenience and Necessity (CPCN) would be filed. Provide an update to the status of that filing.
- A-1. Within the next **60 days**, Cannonsburg Water District ("Cannonsburg") realistically expects to advertise for bids for a contractor to furnish and install approximately 36 additional zone meters and to replace the existing 10 zone meters. Cannonsburg will then file for a Certificate of Public Convenience and Necessity ("CPCN") within 30 days after the bids are opened. Of course, this assumes that favorable bids are received from a reputable contractor.

Cannonsburg's Current Proposed Project. Recently, Cannonsburg engaged the services of Bell Engineering to prepare an Opinion of Probable Cost for the Phase I – Zone Metering Project, which consists, primarily, of furnishing and installing 36 new zone meters and replacing all 10 existing

zone meters. The estimated cost of the Phase I Project is approximately \$987,000. This amount includes a 10% contingency. A copy of Bell Engineering's Opinion of Probable Cost is attached to this response. Assuming that the PSC approves a new monthly water loss reduction surcharge of \$4.00 per month per active meter, Cannonsburg plans to authorize Bell Engineering to prepare the bid specifications, contract documents, and proceed with advertising for bids for the Phase I Project.

Why hasn't Cannonsburg already bid this project and filed for a CPCN? When Cannonsburg attended the August 30, 2018 Informal Conference at the PSC it intended to perform the installation of the new zone meters with its own work force to "stretch" the remaining water loss surcharge funds so there would be adequate funds to purchase all the zone meters without incurring any additional debt. Based upon conversations with PSC Staff at the Informal Conference and various subsequent events, Cannonsburg has since reconsidered and no longer plans to perform the work with its own work force. Some of the events that have delayed this project are listed below.

Are 36 Additional Zone Meters Needed? At the August 30, 2018 Informal Conference, Cannonsburg had just experienced sharp declines in

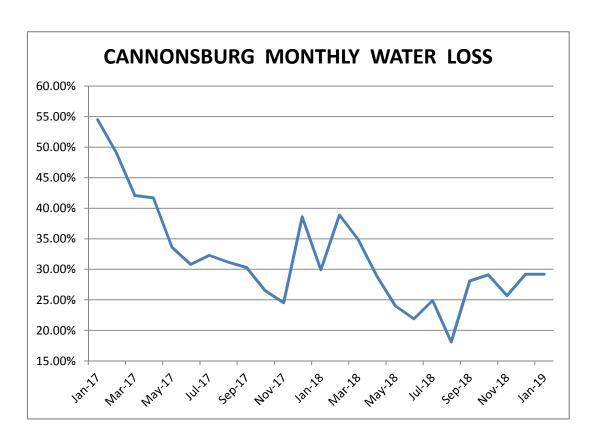
its water loss. It had achieved three (3) consecutive months with line loss below 25%. One month was under 20%. Cannonsburg was uncertain whether it was prudent to invest over \$500,000 to install additional zone meters if the recent line loss reductions could be sustained. Unfortunately, "life happened" and leaks starting occurring more frequently. Attached is a graph which depicts Cannonsburg's monthly water losses for calendar year 2017 and 2018. Obviously, Cannonsburg needs to more aggressively pursue additional line loss reduction efforts.

Engineer Retires. One of the reasons that Cannonsburg has not already prepared the bid specifications and contract documents for the Phase I Project is because its former consulting engineer was ill during the fall of 2018 and then retired. As stated above, Cannonsburg has now engaged the services of Bell Engineering.

Limited Work Force. As previously stated, Cannonsburg originally planned to purchase the additional zone meters and install them with its existing work force. Cannonsburg now realizes that this option is no longer realistic. Completion of the Phase I Project is critical to reducing Cannonsburg's water loss and must be given a higher priority. A contractor can install the additional zone meters in less time and more

efficiently. Cannonsburg's existing work force will be better utilized by intensifying its leak detection efforts.

Monthly Surcharge. Approximately \$521,000 remains in Cannonsburg's water loss reduction surcharge account. These funds will be utilized for the Phase I Project. As stated above, Bell Engineering estimates that the total Phase I Project will cost approximately \$987,000. Thus, more funds will be needed to install the zone meters and complete the Phase I Project. At its regular monthly meeting on April 17, 2019, the Cannonsburg Board of Commissioners adopted the attached Resolution No. 2019-04-01. This Resolution authorizes Cannonsburg's Chairman and General Manager to request that the PSC authorize a new monthly surcharge in the amount of **\$4.00** per customer to fund Cannonsburg's unaccounted-for water loss reduction efforts, including the Phase I Project. At the formal Hearing to be held on April 25, 2019, Cannonsburg plans to formally request that the PSC authorize this new monthly surcharge.



2017 Annual Average: 36.27%2018 Annual Average: 27.80%

Source: Monthly Water Loss Reports filed by Cannonsburg in PSC Case No. 2014-00267



April 17, 2019

Mr. Tim Webb, Superintendent Cannonsburg Water 1606 Cannonsburg Road Ashland, Kentucky 41102

Re: Opinion of Probable Cost

Phase I-Zone Metering Project

Phase II-Service Line Connection and Meter Replacement Project

Dear Mr. Webb:

On behalf of Bell Engineering, we wanted to thank for taking the time to meet with us last week. As requested, we are attaching opinion(s) of probable cost for the referenced projects. We understand that the focus of each project is the continued reduction of non-revenue water (NRW) in the Cannonsburg system. The following is a brief summary of the scope of work that will be covered under each project.

Phase I – Zone Metering Project

- 1. Installation of approximately 36 "omni" zone metering devices equipped with pressure monitoring equipment that can be incorporated into the existing flex-net system.
- 2. Replacement of approximately 10 existing zone metering devices with new "omni" zone metering devices equipped with pressure monitoring equipment that can be incorporated into the existing flex-net system.
- 3. Development of a comprehensive hydraulic model that can be used to improve current operating efficiency and plan for changes in future demand.

Phase II - Service Line Connection and Meter Replacement Project

- 1. Replacement of approximately 600 existing service line connections.
- 2. Purchase of approximately 500 I-pearl meters equipped with flex-net capabilities to be installed by Cannonsburg Water.

- 3. Upgrades and expansion of existing system wide telemetry.
- 4. Development of a capital improvements plan (CIP), flushing plan and condition assessment report for all tank and pump station sites.

Please understand that the attached probable cost were developed based on information gathered at our initial meeting and may need to be revised and updated as each project progresses.

Thank you again for allowing us the opportunity to meet with you. We look forward to working with you in the future. Should you need any additional information or further assistance please do not hesitate to contact us at your convenience.

Sincerely,

BELL ENGINEERING

Alan Bowman, PE

Project Engineer

Attachments

c: Mr. Kelly Gillespie, President, Bell Engineering Mr. Damon R. Talley, Attorney-at-Law, Stoll Keenon Ogden PLLC



OPINION OF PROBABLE PROJECT COST

Project: PHASE 1 - ZONE METERING

Date: APRIL 2019

PROJECT

CANNONSBURG WATER Client:

☑ Preliminary

DISTRICT

Contract No.: 691-19-A

☐ No Design Completed

		Est. By:	RAB		Checked By:	KGG		☑ Final Design	
		SHEET:	1	OF:		1		Drawing No.: N/A	
ITEM	ITEM DESCRIPTION	QUAN	ITITY	MATE	RIAL	LABOR		TOTAL COST	
NO.	TIEWI DESCRII TION	NO.	UNIT	PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL COST	
CONSTR	UCTION								
1	NEW 3-INCH OMNI ZONE METER	13	EA	\$7,500	\$97,500	\$3,500	\$45,500		
2	NEW 4-INCH OMNI ZONE METER	2	EA	\$9,500	\$19,000	\$4,000	\$8,000	\$27,000	
3	NEW 6-INCH OMNI ZONE METER	20	EA	\$14,000	\$280,000	\$4,500	\$90,000	\$370,000	
4	NEW 12-INCH OMNI ZONE METER	1	EA	\$22,500	\$22,500	\$5,500	\$5,500	\$28,000	
5	REPLACE EX. 6-INCH OMNI ZONE METER	10	EA	\$14,000	\$140,000	\$6,000	\$60,000	\$200,000	
				TOTAL OPINION	OF PROBAB	LE CONSTRU	CTION COST	\$768,000	
PROJECT	COST			74					
1	ENGINEERING FEES - DESIGN (USDA RD CUP	RVE)						\$50,000	
2	ENGINEERING FEES - BIDDING (USDA RD CU	RVE)						\$7,000	
3	ENGINEERING FEES - CONSTRUCTION ADMI	NISTRATION (USDA RD CL	JRVE)				\$14,000	
4	ENGINEERING FEES - INSPECTION (USDA RE	CURVE)						\$47,000	
5	HYDRAULIC MODEL (LUMP SUM)							\$25,000	
6	CONTINGENCIES (APPROXIMATELY 10% CONTINUED TO 10% CONTINU	STRUCTION)						\$76,000	
7	LEGAL / ADMINISTRATIVE							\$10,000	
				TOTAL O	PINION OF PR	ROBABLE PRO	JECT COST	\$987,00	



bell engineering	Lexington, KY 859.278.5412 Hopkinsville, KY 270.886.5466 Asheville, NC 828.774.5499
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OPINION OF PROBABLE PROJECT COST

PHASE II - SERVICE LINE Project: CONNECTION AND METER

REPLACEMENT PROJECT

Client:

CANNONSBURG WATER DISTRICT

☐ No Design Completed

☑ Preliminary

Date: APRIL 2019

Contract No.: 691-19-A

Final Design

		Est. By: F	RAB		Checked By:	KGG		☐ Final Design
		SHEET:	1	OF:		1		Drawing No.: N/A
ITEM	ITEM DESCRIPTION	QUAN	TITY	MATERIAL		LABOR		TOTAL COST
NO.		NO.	UNIT	PER UNIT	TOTAL	PER UNIT	TOTAL	TOTAL COST
CONSTR	UCTION							
1	REPLACE EXISTING SERVICE LINE							
	CONNECTION, INCLUDING SERVICE							
	SADDLE AND 3/4-INCH POLY ETHYLENE							
	WATER LINE.	600	EA	\$300	\$180,000	\$2,000	\$1,200,000	\$1,380,000
2	PURCHASE NEW RESIDENTIAL METERS,							
	EQUIPPED WITH "FLEX NET" MONTORING							
	TO BE INSTALLED BY OWNER.	500	EA	\$330	\$165,000	XXXXX	XXXXX	\$165,000
3	TELEMETRY UPGRADES	1	LS	\$250,000	\$250,000	XXXXX	XXXXX	\$250,000
				TOTAL OPINIO	N OF PROBA	BLE CONSTRU	JCTION COST	\$1,795,000
PROJEC	T COST							
1	ENGINEERING FEES - DESIGN (USDA RD CUR	VE BASED ON	TOTAL OPC	C)				\$99,000
2	ENGINEERING FEES - BIDDING (USDA RD CUF	RVE BASED ON	N TOTAL OP	CC)			0	\$14,000
3	ENGINEERING FEES - CONSTRUCTION ADMIN	IISTRATION (U	ISDA RD CUF	RVE BASED ON	TOTAL OPC	C)		\$28,000
4	ENGINEERING FEES - INSPECTION (USDA RD	CURVE BASE	D ON TOTAL	OPCC)				\$86,000
5	CAPITAL IMPROVMENTS PLAN (CIP)							\$50,000
6	FLUSHING PLAN					¥		\$5,000
7	CONDITION ASSESSMENT REPORT OF EXIST	ING PUMP STA	ATIONS AND	TANK SITES		· mesensité s	STATION OF	\$10,000
8	LEGAL / ADMINISTRATIVE					MA NE	KE WAS	\$15,000
9	OTHER					A Same		\$180,000
				TOTAL	OPINION OF	PROBABLE PR	OJECT COST	\$2,282,000



RESOLUTION NO. 2019-04-01

RESOLUTION OF CANNONSBURG WATER DISTRICT APPROVING THE REQUEST FOR AUTHORITY TO IMPLEMENT A NEW MONTHLY SURCHARGE TO FUND ITS UNACCOUNTED-FOR WATER LOSS REDUCTION EFFORTS.

WHEREAS, Cannonsburg Water District ("Cannonsburg") is a water district organized pursuant to KRS Chapter 74;

WHEREAS, Cannonsburg owns and operates facilities that distribute water to customers in Boyd and Greenup counties;

WHEREAS, Cannonsburg has a history of high unaccounted-for water loss;

WHEREAS, on August 8, 2011, Cannonsburg applied for an adjustment of its rates for water service, and on June 4, 2012, the Kentucky Public Service Commission ("PSC") authorized the assessment of a monthly surcharge of \$5.53 on all customers for a period of 36 months to fund Cannonsburg's non-revenue water reduction efforts;

WHEREAS, the monthly surcharge has since ended, but Cannonsburg realizes there is more progress to be made in reducing its water loss;

WHEREAS, the separate account holding the remaining surcharge funds has a current balance of approximately \$521,000;

WHEREAS, Cannonsburg has engaged the services of Bell Engineering ("Bell") to assist in its ongoing water loss reduction efforts. Bell and Cannonsburg have identified several projects that need to be undertaken to reduce Cannonsburg's water loss. Bell proposes that these projects be undertaken in multiple phases;

WHEREAS, Bell has estimated the cost to perform Phase I of the water loss reduction projects will far exceed the funds currently available in the surcharge account;

WHEREAS, it is necessary for Cannonsburg to raise more revenue to finance its efforts to reduce its water loss; and

WHEREAS, implementing a new monthly surcharge to fund Cannonsburg's non-revenue water reduction efforts appears to be the most feasible means to raise the necessary funds.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF CANNONSBURG WATER DISTRICT AS FOLLOWS:

Section 1. The facts, recitals, and statements contained in the foregoing preamble of this Resolution are true and correct and are hereby affirmed and

incorporated as a part of this Resolution.

Section 2. It is hereby determined and declared to be necessary that

Cannonsburg request the PSC to authorize a new monthly surcharge in the amount

of \$ 4.00 per customer to fund Cannonsburg's unaccounted-for water loss

reduction efforts.

Section 3. The Board of Commissioners hereby authorizes the Chairman

and General Manager to request that the PSC authorize a new monthly surcharge

fee in the amount of \$ 4.00 per month per active meter.

Section 4. This Resolution shall take effect upon its adoption.

ADOPTED BY THE BOARD OF COMMISSIONERS OF

CANNONSBURG WATER DISTRICT at a meeting held on April 17, 2019,

signed by the Chairman, and attested by the Secretary.

CANNONSBURG WATER DISTRICT

BY:

Robert McGuire, Chairman

ATTEST:

Mark Kazee. Secretary

CERTIFICATION

The undersigned Secretary of Cannonsburg Water District (the "District") does hereby certify that the foregoing is a true copy of a Resolution duly adopted by the Commission of the District at a meeting properly held on April 17, 2019, signed by the Chairman of the Commission, attested by the Secretary, and now in full force and effect.

WITNESS my hand this 17th day of April, 2019.

Mark Kazee, Secretary

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 2

Responding Witness: Tim Webb

- Q-2. Describe in detail the procedure utilized in preparing monthly water use and water loss reports, including, but not limited to, the following:
 - a. How Cannonsburg District calculates water loss, water treatment plant usage, and system flushing.
 - b. Identify by name and job title, employees who prepare or assist in the preparation of the reports.
 - c. What is included in the water loss category? Specifically, state whether Cannonsburg District includes water loss from known leaks and breaks in the water loss category.

A-2.

a. Cannonsburg calculates water loss using two different Excel spreadsheets (see attached exhibits). Water purchased is provided by the City of Ashland and all other water usage is provided by Cannonsburg. Cannonsburg does not have a Water Treatment Plant, but does include water used by the utility at its office, shop, and sampling sites in this category as can be seen on line 16 of the

attached exhibit. System flushing is calculated by different methods depending on the location and flushing apparatus. Flushing done through a hydrant is calculated by using a flushing diffuser with attached pitot gauge. This gauge measures the flow in GPM. Flushing done on a line with no hydrant, but where there is a zone meter, is measured through the zone meter. A line flushed that has no hydrant or zone meter is flushed through a blow off. To determine the rate of flow on the blow off, the flow is measured and compared to the chart contained in the Operator's Companion Handbook (see exhibit).

- b. Reports are prepared by Tim Webb, General Manager. Information for reports are compiled by Tim Webb-General Manager, Bob Hicks-Field Foreman, Tommy McCalvin-Distribution Operator, and Caleb Porter-Distribution Operator.
- c. On the attached exhibit, the water loss category includes loss from tank overflow, line breaks, and line leaks. Line break quantities are determined by leak repairs made during the calculated month. Line leaks is the determined water loss within the system after all accounted for use has been calculated. In other words, the Line leaks category is the amount of the unknown water loss.

PUBLIC SERVICE COMMISSION

Monthly Water Loss Report

Wate	r Utility:	Cannonsburg Water District			
For th	e Month of:	December	Year:	2018	3
ES TO UNITED STATES					
LINE		ITEM		LONS (Omit 000's)	
1		CED, PURCHASED & DISTRIBUTE	:D		7
2	Water Produced	29			
3	Water Purchased				
4		TOTAL PRODUCED AND P	URCHASED		
5					
6	WATER SALES				-
7	Residential				
8	Commercial				
9	Industrial	AVA-0000-00-00-00-00-00-00-00-00-00-00-00-			H
10	Bulk Loading Sta	tions			1
11	Wholesale				
12	Other Sales				
13		TOTAL WA	TER SALES		#DIV/0
14					-
15	OTHER WATER	USED			
16	Utility and/or Wat	er Treatment Plant			7
17	Wastewater Plan				
18	System Flushing				A
19	Fire Department				
20	Other				
21		TOTAL OTHER W	ATER HISED		#DIV/0
22		TOTAL OTHER W	ATER OSED		#101070
23	WATER LOSS				
24	Tank Overflows				1
25	Line Breaks				
26	Line Leaks				
27	Other				
21	Otriei				
28		TOTAL	LINE LOSS	A Commence of the Commence of	#DIV/0
29					
30	Note: Line 13 + I	Line 21 + Line 28 Must Equal Line 4			
31		ran erg annar truss. — vol. 14 Print Brit. 15 1943 F. 15 Print 4 (1945 - 15) vol. 15 16 16 16 16 16 16 16 16 1 Print Brit. 16 16 16 16 16 16 16 16 16 16 16 16 16			
32	WATER LOSS P	ERCENTAGE			
33		Water (Line 28 divided by Line 4)		#DIV/0!	Ī

Water Use Report

Water Util	ity:	Cannonsburg Water	er District	PWSID	KY0100064
For the Mo	onth of:	December		Year:	2018
	PPOPUC	TION COST PER TH	OUEAND	(larget and	
1 2		SE COST PER THOU		(insert cost	
-	TORONIA	52 0001 1 EK 11100	, oans	(moon door	
	WATER	RODUCED or PURC	HACED		GALLONS
3	Water Pro		HASED		
4	Water Pur				
5	vvalor i ai		AL PRODUCED AND PU	IRCHASED	
6			AL COST		
	WATER S	OLD			
7	Residentia	d			
8	Commerci	al			
9	Industrial				
10		ng Stations			
11	Wholesale				
12	Other Sale	es (explain)			
13			TOTAL WA	TER SOLD	0
14			TOTAL WATER		
4-		OWN OF WATER US	AGE		
15		atment Plant			
16		er Treatment Plant			
17 18	System Flo	usning tment Usage			
19	DBP Flush				
19	DDF Flush	iiig			L
20				AL USAGE	
21			VATER LOSS PERCENT	AGE FOR	RATE PURPOSES
The state of the s		OWN OF WATER LO	DST		
22	Tank Over				
23	Excavation				
24		ine Breaks			
25	Unknown I	Loss			0
26		то	TAL WATER NOT SOLD	OR USED	0
27		COST	OF WATER NOT SOLD	OR USED	
			==		
	UNKNOV	VN LOSS" FLOW RA		nown Loss'	
28				nown Loss' nown Loss'	
29	Description of the				
30	(insert day	s of operation during mon	th) Number of Day own Loss" per Day (Gallo		
31 32		Unkno	"Unknown Loss" per Mi		
33			"Unknown Loss" Cos		
33			OTINIOWIT LOSS COS	ocioi wionii	

Estimating Discharge from a Horizontal Pipe with Fuil Pipe Flow

Use a carpenter's square to measure the distance A at the point where the top of water flow has dropped 4 inches. Determine the flow rate in gallons per minute from the table below.

Example: If the pipe size is 2" and the "A" measurement is 10", the flow rate is 55.5 gpm.

					Discha	rge Rate in Ga	illons per M	linute				
horiz, dist.	Nominal Pipe Size											
(A) inches	1"	11/4"	11/2"	2"	21/2"	3*	4"	5*	6"	8"	10"	12"
4	5.7	9.8	13.3	22.0	31.3	48.5	83.5	-	-	-	-	-
5	7.1	12.2	16.6	27.5	39.0	61.0	104	163	_	_	_	_
6	8.5	14.7	20.0	33.0	47.0	73.0	125	195	285	_	-	-
7	10.0	17.1	23.2	38.5	55.0	85.0	146	228	334	380		-
8	11.3	19.6	26.5	44.0	62.5	97.5	166	260	380	665	1060	-
9	12.8	22.0	29.8	49.5	70.0	110	187	293	430	750	1190	1660
10	14.2	24.5	33.2	55.5	78.2	122	208	326	476	830	1330	1850
11	15.6	27.0	36.5	60.5	86.0	134	229	360	525	915	1460	2100
12	17.0	29.0	40.0	66.0	94.0	146	250	390	570	1000	1600	2200
13	18.5	31.5	43.0	71.5	102	158	270	425	620	1080	1730	2400
14	20.0	34.0	46.5	77.0	109	170	292	456	670	1160	1860	2590
15	21.3	36.3	50.0	82.5	117	183	312	490	710	1250	2000	2780
16	22.7	39.0		88.0	125	196	334	520	760	1330	2120	2960
17	_	41.5		93.0	133	207	355	550	810	1410	2260	3140
18	-	-		99.0	144	220	375	590	860	1500	2390	3330
19	_	_	_	110.0	148	232	395	620	910	1580	2520	3500
20	-	-	- <u>1.</u>	_	156	244	415	650	950	1660	2660	3700
21	-	-	_	Jan 1997	-	256	435	685	1000	1750	2800	_
22	-	-	_		-	_	460	720	1050	1830	2920	-
23	-	- 1	-	-	-	-	-	750	1100	1910	3060	-
24	- 1	- 1	_	_	_		_	_	1140	2000	3200	_

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 3

Responding Witness: Tim Webb

- Q-3. State whether Cannonsburg District has completed a water loss detection plan.
 - a. If the answer is yes, provide a copy of the last completed water loss detection plan.
 - b. If the answer is no, explain why a water loss detection plan has not been completed.

A-3.

a & b. Cannonsburg does not have a written water loss detection plan in place at this time. With the assistance of Bell Engineering, Cannonsburg will be completing a Hydraulic Model of the system to better understand flow, demand, and pressures. This information will be used to create a more precise approach to leak detection. Currently, standard practice, when manpower is available, is to visually inspect for leaks and to use portable flow monitor on lines and listening device to narrow down areas of concern. Zone meters are monitored daily to compare known usage.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 4

Responding Witness: Tim Webb

- Q-4. State whether Cannonsburg District has completed a comprehensive unaccounted-for water loss reduction plan.
 - a. If the answer is yes, provide a copy of the last completed comprehensive unaccounted-for water loss reduction plan.
 - b. If the answer is no, explain why a comprehensive unaccounted-for water loss reduction plan has not been completed.

A-4.

a & b. Cannonsburg does not have a comprehensive unaccounted-for water loss reduction plan beyond the addition of zone metering at this time.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 5

- Q-5. Provide a copy of Cannonsburg District's most recent and updated annual and long-range Capital Improvement Plans.
- A-5. Cannonsburg does not have a Capital Improvement Plan. Cannonsburg has contracted with Bell Engineering to assist in the creation of a 10-year Capital Improvement Plan. This plan will provide a prioritized improvement plan for each year through year ten with the capability to be built upon for additional years beyond that.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 6

- Q-6. Provide the names of the persons or entities responsible for assisting the utility with capital improvement planning, grant application assistance, engineering design, and construction services.
- A-6. Kelly Gillespie and Alan Bowman with Bell Engineering will be providing the primary assistance for Cannonsburg. Further assistance will be provided by Damon Talley of Stoll, Keenon and Ogden. Assistance may also be provided by FIVCO, USDA-RD, KRWA, and Boyd County Fiscal Court.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 7

- Q-7. Provide a copy of Cannonsburg District's preventative maintenance program for the plant, pump, and storage facilities.
- A-7. Cannonsburg does not have a written preventative maintenance program at this time. Preventative pump maintenance is done in accordance with the pump manufacturer's recommendations contained in the pump manuals. If a pump has no manual, maintenance is done according to Service Pump and Supply, Inc.'s recommendations. Service Pump and Supply, Inc. is a local area business that supplies pump parts and repairs. Cannonsburg has five (5) water storage tanks. Tanks are on a 5-year rotating inspection schedule. Every year one (1) tank is inspected professionally by a tank inspection company by diving and/or an ROV. Cannonsburg also does visual inspections of all facilities.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 8

- Q-8. State whether Cannonsburg District has assigned specific personnel the responsibility to detect and fix water line leaks, and if so, state the names and job titles of such personnel and describe the functions and duties of each.
- A-8. Cannonsburg has six (6) field employees on staff. As time allows, any or all employees will conduct some type of leak detection and repair. At this time Cannonsburg does not have the manpower to dedicate specific individuals to the role of detection and repair.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 9

- Q-9. State whether leak detection is conducted on a daily basis, and if not, state the reasons why not.
- A-9. Leak detection is not done daily in the field due to lack of manpower. Zone meters are checked daily online. As time and manpower allows, leak detection is done in the field.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 10

- Q-10. Provide the number of completed water line leak repairs by category, i.e., mains, service lines, etc., that were completed from September 1, 2018, to the date of the issuance of this request.
- A-10. Cannonsburg had a total of 53 repairs in the requested time range. Of those repairs made, 39 were service line repairs, 9 were water main repairs, 4 were broken meters, and 1 was a hydrant that blew off its coupling.

CASE NO. 2014-00267

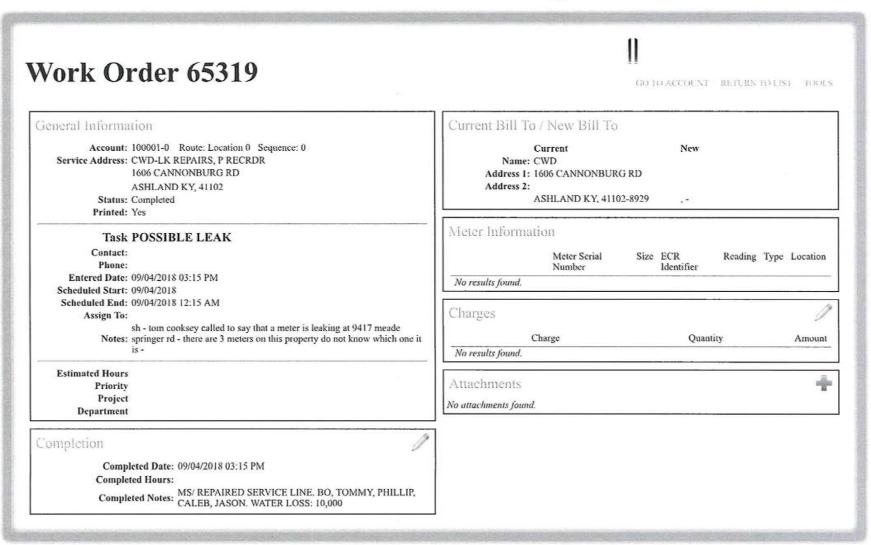
Response to Commission Staff's Third Request for Information

Question No. 11

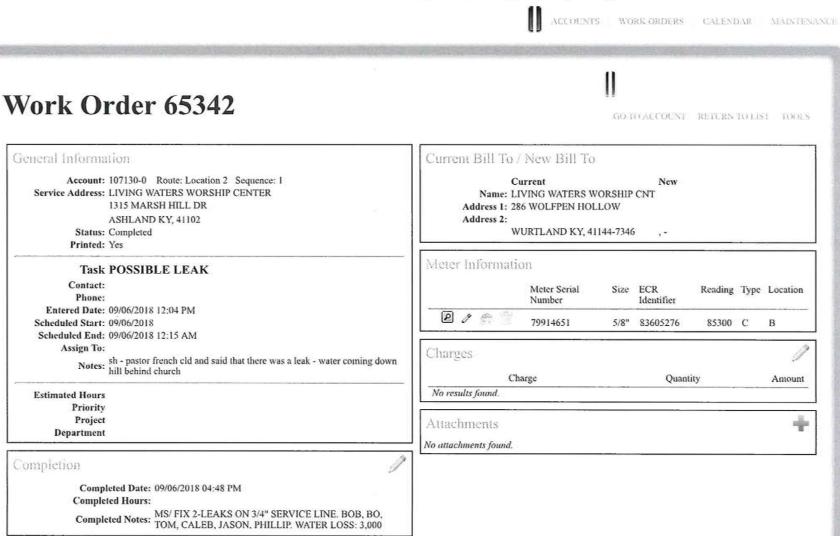
- Q-11. Provide copies of each work order generated to investigate leaks reported by customers of Cannonsburg District from September 1, 2018, to the date of the issuance of this request.
- A-11. See attached Work Order exhibits.



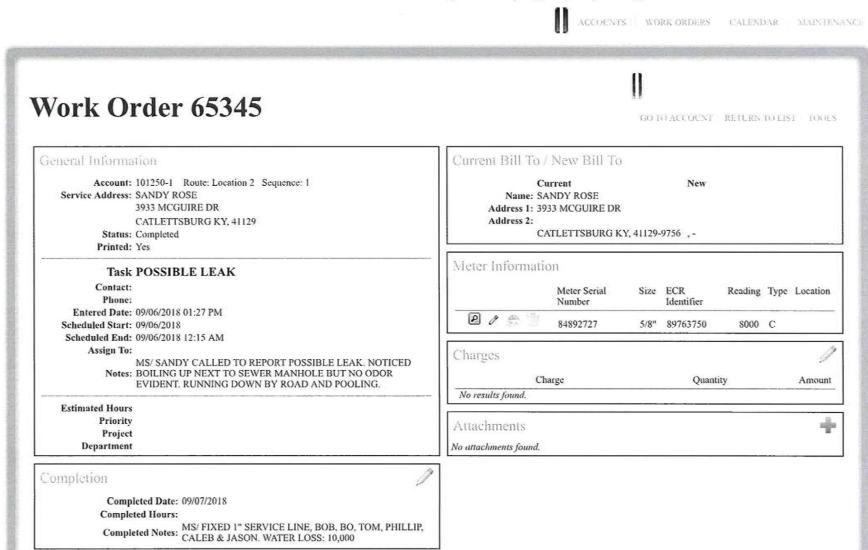






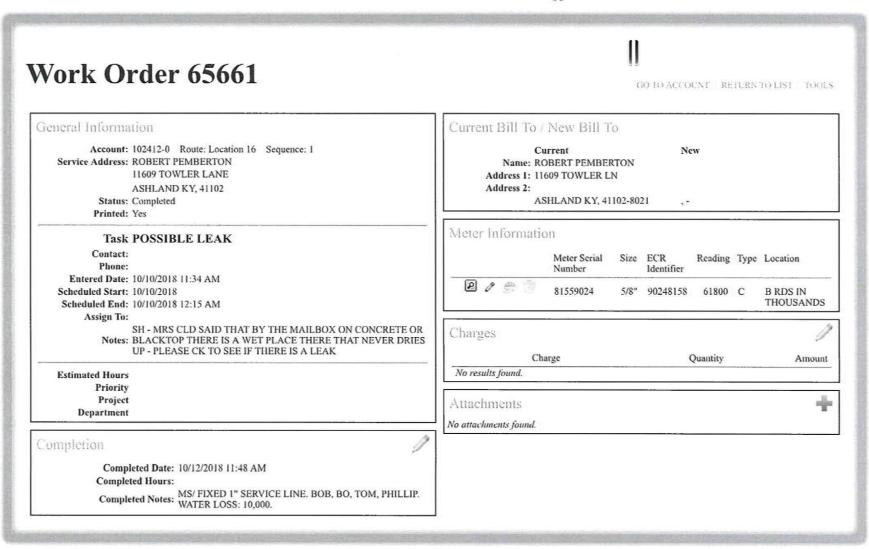










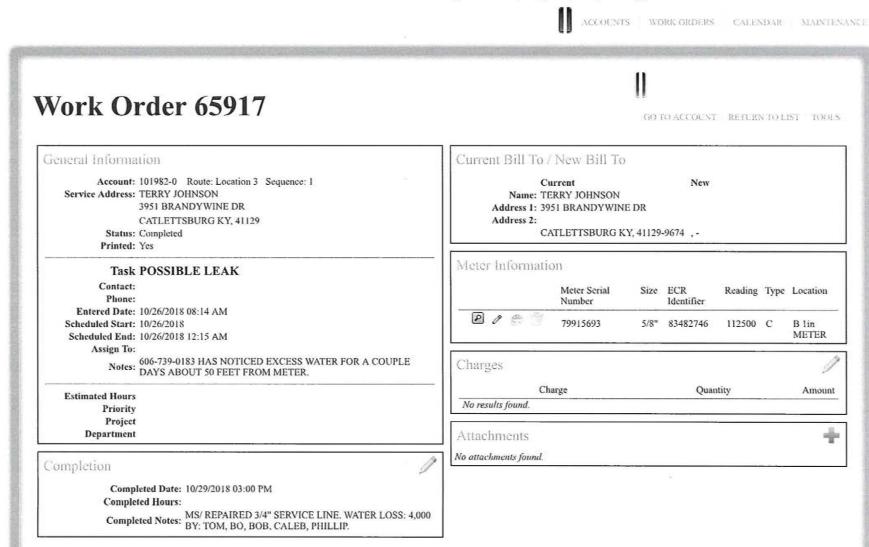






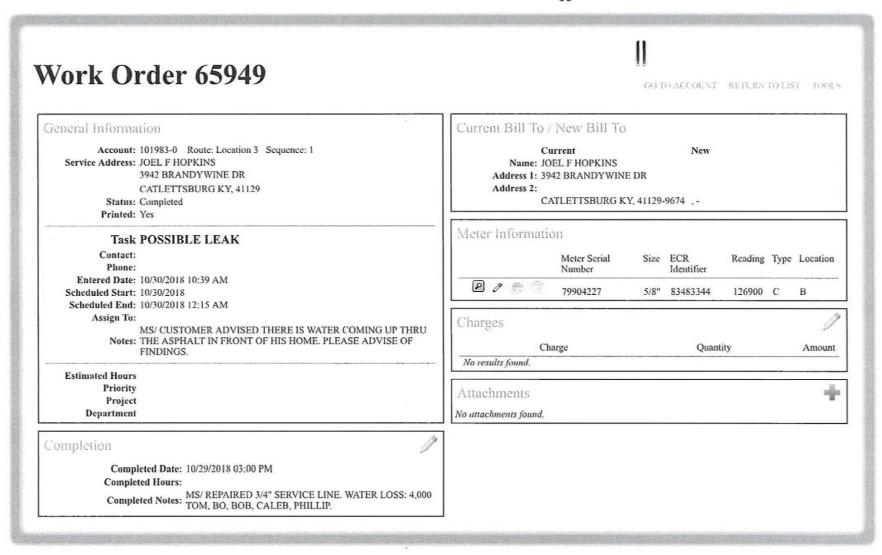
Work Order 65677 GO TO ACCOUNT. RETURN TO LIST. TOOLS General Information Current Bill To / New Bill To Account: 104619-0 Route: Location 15D Sequence: 1 Current New Service Address: JOHN SMITH Name: JOHN SMITH 1421 GREEN VALLEY DR Address 1: 1421 GREEN VALLEY DR ASHLAND KY, 41102 Address 2: Status: Completed ASHLAND KY, 41102-9731 Printed: Yes Meter Information Task POSSIBLE LEAK Contact: Meter Serial Size ECR Reading Type Location Phone: Number Identifier Entered Date: 10/12/2018 12:59 PM P 0 8 Scheduled Start: 10/12/2018 79915404 5/8" 13418915 76600 C Scheduled End: 10/12/2018 12:15 AM Assign To: Charges SH - CUS CALLED IN TO SAY THAT THERE IS CLEAR WATER Notes: RUNNING IN DITCH COMING FROM WHERE THEY TORE DOWN Charge Quantity Amount No results found. **Estimated Hours** Priority Attachments Project Department No attachments found. Completion Completed Date: 10/12/2018 Completed Hours: MS/ REPQIR SERVICE LINE LEAKING OUTSIDE OF Completed Notes: THE METER BOX. TOM, BOB, BO, CALEB, PHILLIP. WATER LOSS: 35,281



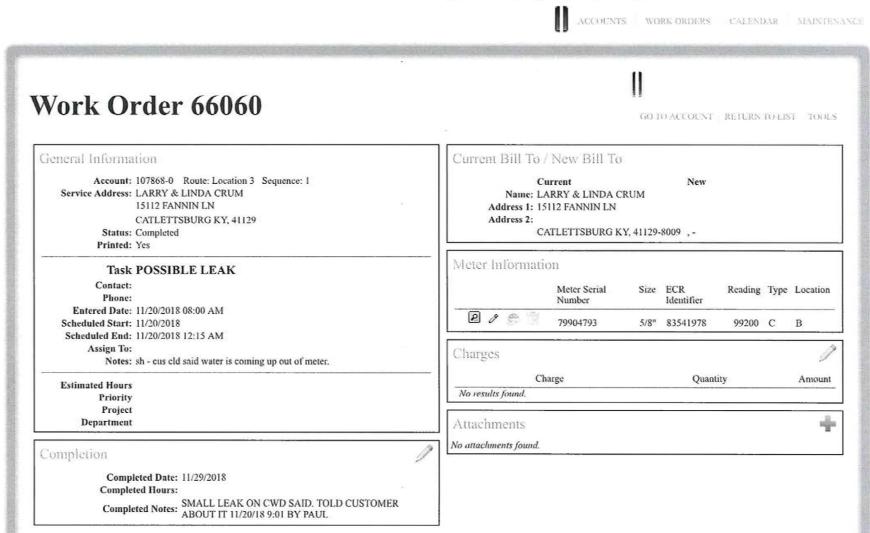




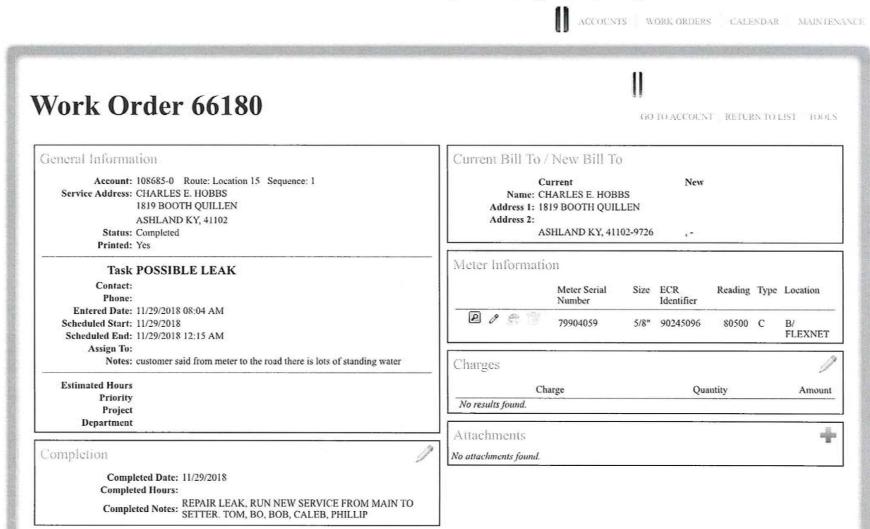






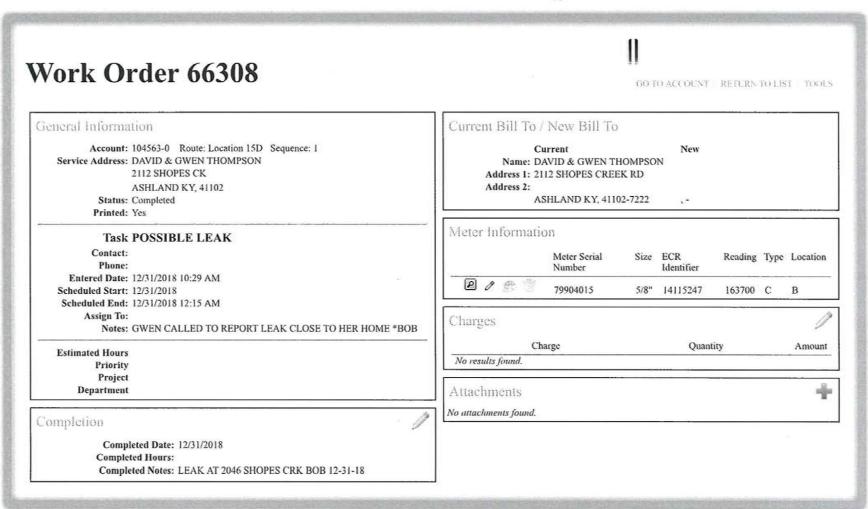




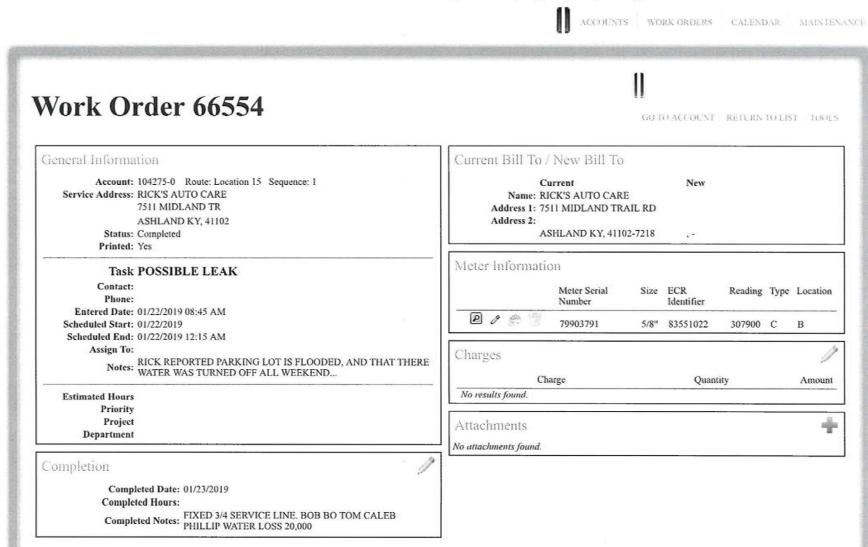






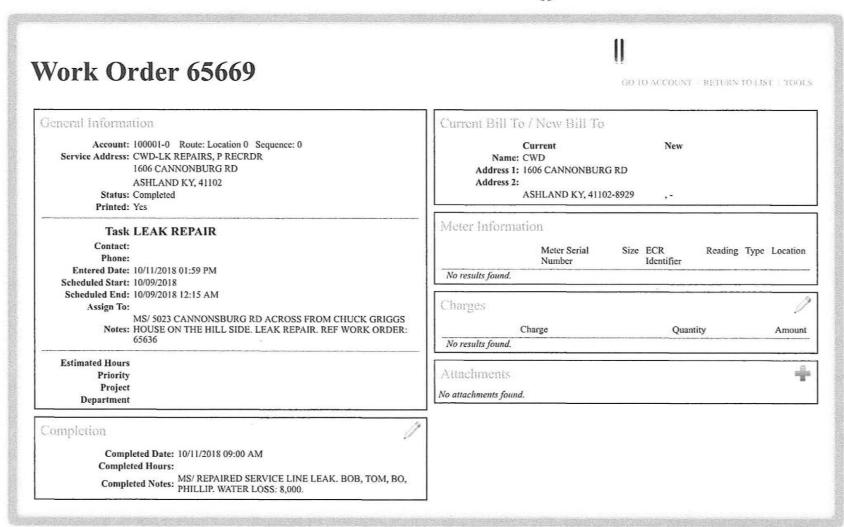






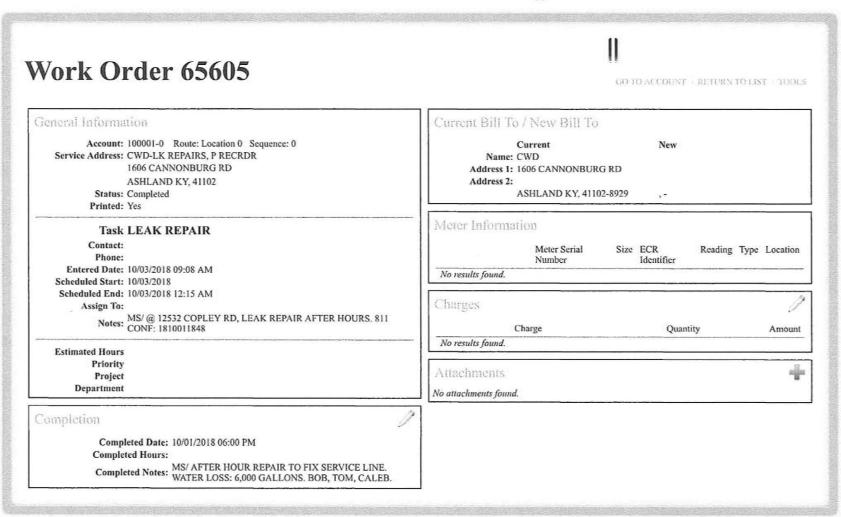






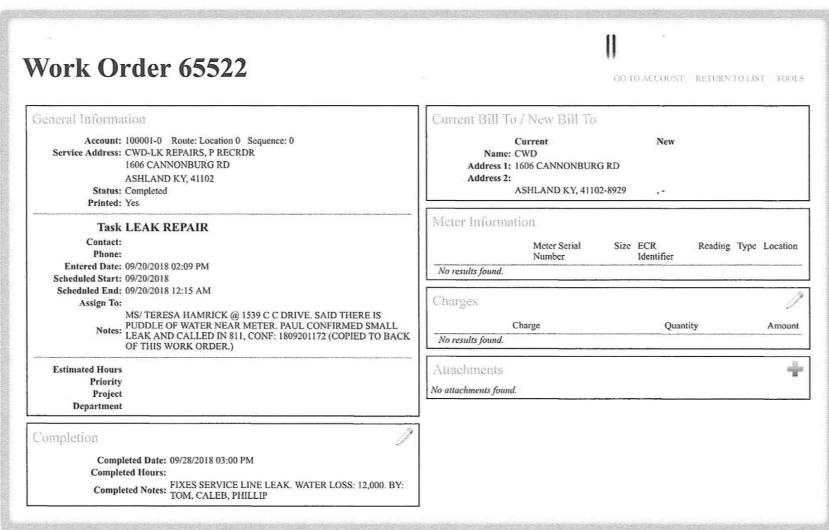












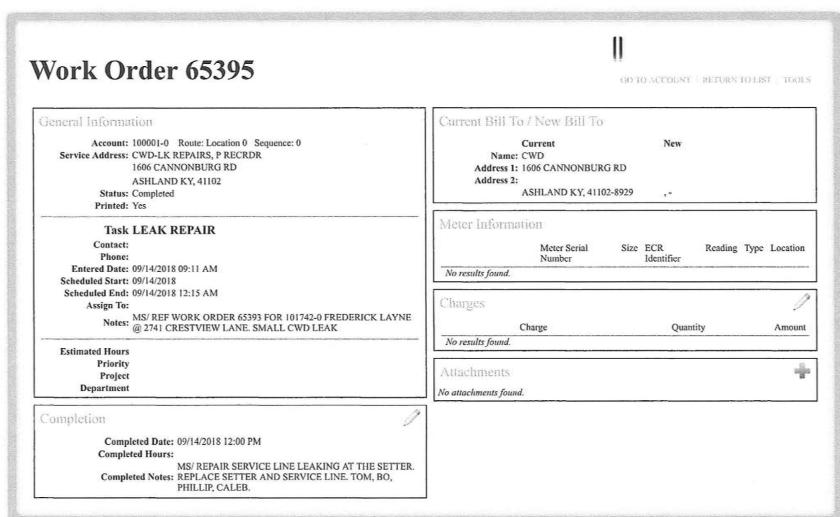


ACCOUNTS WORK ORDERS CALENDAR MAINTENANCE

Work Order 65405 GO TO ACCOUNT | RETURN TO LIST | TOOLS Current Bill To / New Bill To General Information Account: 100001-0 Route: Location 0 Sequence: 0 Current New Service Address: CWD-LK REPAIRS, P RECRDR Name: CWD 1606 CANNONBURG RD Address 1: 1606 CANNONBURG RD ASHLAND KY, 41102 Address 2: ASHLAND KY, 41102-8929 Status: Completed Printed: Yes Meter Information Task LEAK REPAIR Contact: Meter Serial Size ECR Reading Type Location Phone: Number Identifier Entered Date: 09/17/2018 01:48 PM No results found. Scheduled Start: 09/17/2018 Scheduled End: 09/17/2018 12:15 AM Charges Notes: MS/ TRAVIS RICE @ 11913 MIDLAND TRAIL, ASHLAND, KY 41102 LEAK REPAIR: Charge Quantity Amount No results found. **Estimated Hours** Priority Project Department No attachments found. Completion Completed Date: 09/11/2018 Completed Hours: MS/ REPAIRED LEAK AT TRAVIS RICE @ 11913 Completed Notes: MIDLAND TRAIL, ASHLAND. WATER LOSS: 12,000. BY TOM, BO, BOB. @ 745PM

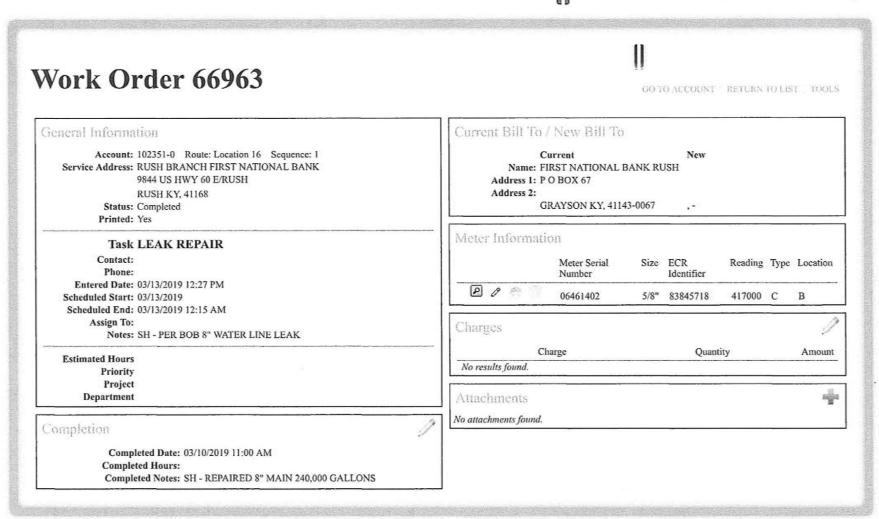






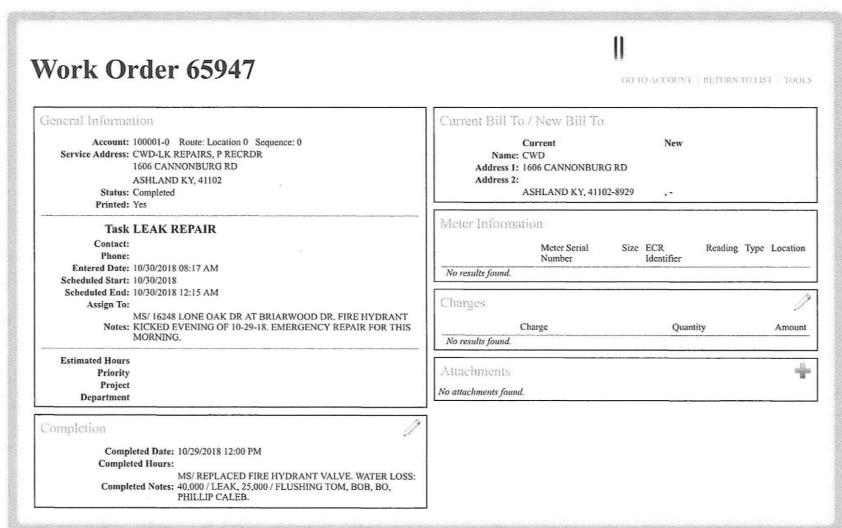




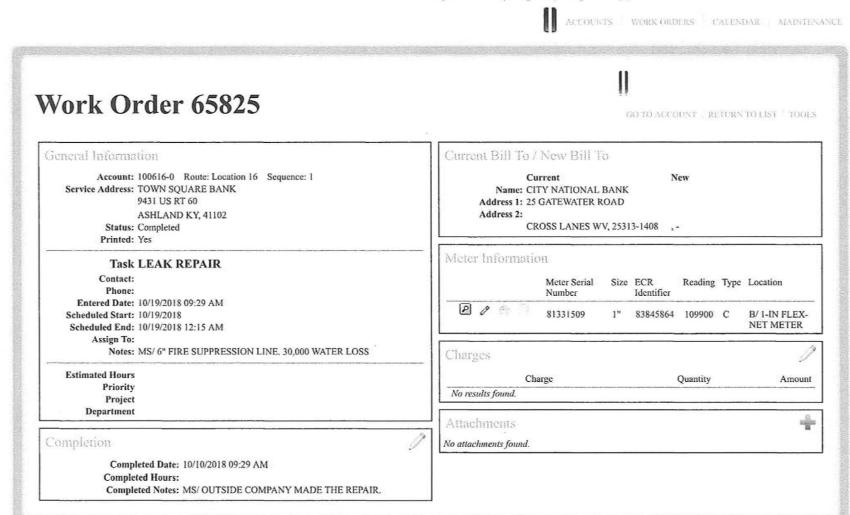






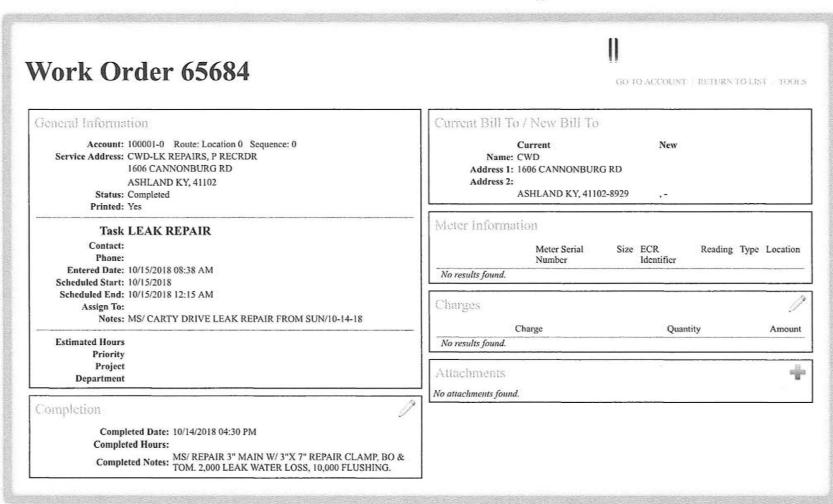






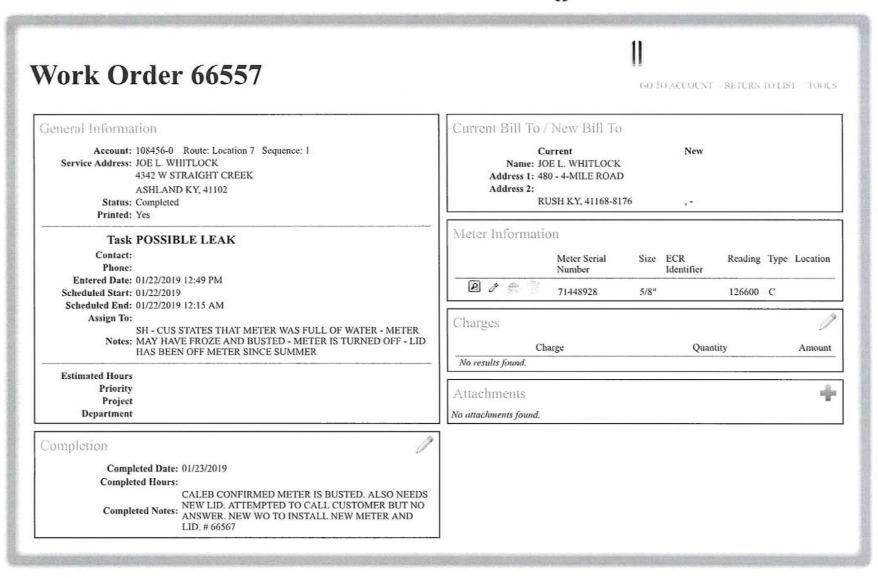






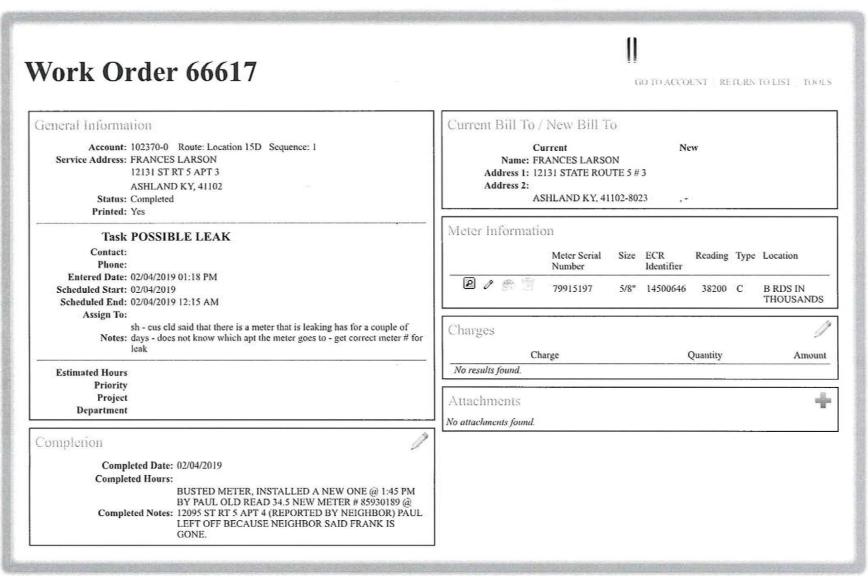






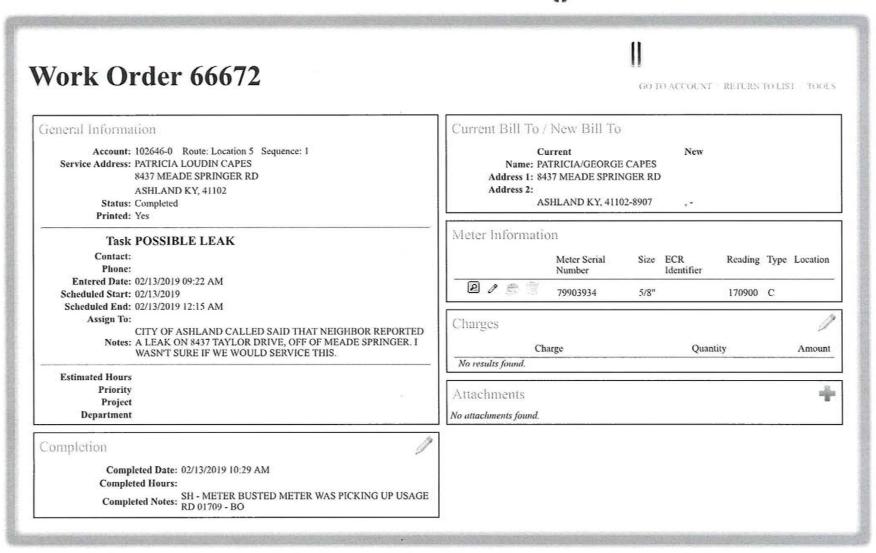






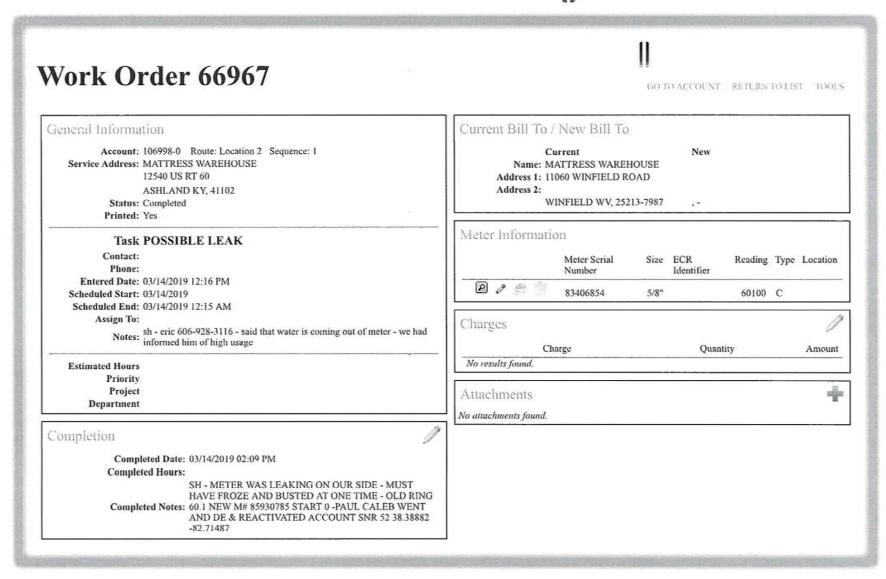












CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 12

- Q-12. Provide the policy or operating procedure in place that addresses the process and the length of time it should take for Cannonsburg District to fix a known or reported leaking water line.
- A-12. Once a leak is discovered or reported, the site is marked for 811 location services to mark utilities with a typical clear site given in 48-72 hours. For a site that will require the presence of another utility, a schedule will be determined between the utilities involved. If site is clear, the repair will be made immediately.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 13

- Q-13. Provide a general asset ledger identifying all new equipment purchased by Cannonsburg District from January 1, 2018, to the date of the issuance of this request used in water loss reduction efforts (e.g., listening devices, flow meters, metal detectors, hand tools, etc.).
- A-13. Cannonsburg did not buy any new equipment for the purpose of water loss reduction during the 2018 calendar year.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 14

- Q-14. Provide the type of training and the total amount of time Cannonsburg District's personnel have received for leak detection and repairs since January 1, 2015, to the date of the issuance of this request. List the personnel and dates of training.
- A-14. Cannonsburg field staff received onsite training on portable flow monitor usage and sub-surface listening device usage in July 2017 by Tim Blanton with Kentucky Rural Water Association. Tim Webb received correlating device training in October of 2018 by Mark Underwood of CI Thornburg. All other training has been given by Tim Webb of Cannonsburg to field employees onsite at various times throughout the year.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 15

- Q-15. Provide Cannonsburg District's policy that identifies errors that result in missed customer billings or under billing of customer accounts.
- A-15. Meter reading software used by Cannonsburg Water will identify all customers with no reading or zero usage during the meter reading process.

 Once readings are imported into the billing system, the billing software runs the same identifier for customers with no reading or zero usage along with active accounts with no imported information. Meter reading software also reports high or low readings compared to customer profile usage.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 16

- Q-16. Provide the date that the meters, through which Cannonsburg District purchases water from its supplier, were last tested and state how frequently those meters are tested. Provide a copy of the most recent meter test results.
- A-16. Meter testing information is not provided to Cannonsburg from its supplier. Information has been requested in the past, but not supplied.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 17

Responding Witness: Tim Webb

Q-17. Provide the dates on which Cannonsburg District's master meters were last tested and the results of the tests.

A-17. Big Sandy Water District – Tested on 8/11/17

Low Flow – 100.1%

Medium Flow – 99.9%

High Flow – 100%

City of Greenup – Tested on 5/13/15

Low Flow - 98.5%

Medium Flow – 98.7%

High Flow – 99%

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 18

- Q-18. Provide Cannonsburg District's procedure and schedule for testing its master meters and customer meters.
- A-18. Cannonsburg tests customer meters upon request by a customer or if a meter seems to be faulty. Customer meters are currently in the process of being replaced as they reach 10 years of age or when a new account is started and the meter meets or exceeds the 10-year mark. Cannonsburg staff conducts all residential meter testing. Master meters and large customer meters are tested at this time by CI Thornburg. Currently, Cannonsburg is getting all meter testing up to testing standards and schedule.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 19

- Q-19. State the number of meters that have been replaced by Cannonsburg District from January 1, 2018, to the date of the issuance of this request.
- A-19. Cannonsburg has replaced 194 meters since January 1, 2018.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 20

- Q-20. Provide the type of metering equipment, including brands and model numbers, Cannonsburg District uses.
- A-20. Cannonsburg uses Sensus meters within its system. All meters ¾" 1" are Sensus iPERL and meters 2" and above are Sensus Omni meters. Radio reading devices are manufactured by Sensus as well. Drive by radios are Sensus 520R and tower read radios are 520M.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 21

- Q-21. State whether Cannonsburg District utilizes supervisory control and data acquisition (SCADA) technology within its system.
- A-21. Yes, Cannonsburg uses SCADATA software for its SCADA system.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 22

- Q-22. State whether Cannonsburg District utilizes telemetry within its system.
- A-22. Yes, Cannonsburg utilizes SCADATA telemetry software.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 23

- Q-23. State whether all meters within Cannonsburg District's distribution area are read monthly. If all meters are not being read monthly, state the reasons why not.
- A-23. All Cannonsburg meters are read monthly.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 24

- Q-24. Provide a list of all training provided to Cannonsburg District's meter readers.
- A-24. Training provided to Cannonsburg meter readers is given by Tim Webb, General Manager. This includes the tower read system that is read by office staff and the drive by read system that is read by field staff. Tim Webb was trained by Sensus staff and CI Thornburg.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 25

Responding Witness: Tim Webb

- Q-25. For each of the utility's master meter zones, provide a monthly comparison of the master meter readings to the total customer meter readings for that zone for December 2018 and January 2019.
- A-25. Unfortunately, this information is not available. Cannonsburg switched billing software vendors. Because of this switch, Cannonsburg's office personnel will need to individually review each customer's account and place it into the corresponding Master (Zone) Meter Zone. Some of Cannonsburg's existing 10 zone meters do not work. Other zone meters work erratically and are unreliable. Cannonsburg is planning to create 36 additional zones and replace all 10 existing zone meters. Thus, the zones will be much smaller. Once this is done, then the office staff will review each customer account and place it in the correct zone.

In the meantime, each morning Cannonsburg's General Manager, Tim Webb, reviews the usage report from each functioning zone meter. This report shows the usage for each hour of the day. He looks at the usage for 2:00 am each day. From his experience, he can tell whether there is an

abnormally high usage in a particular zone. If so, he takes appropriate action to investigate for a possible leak. Attached are copies of the daily reports for Zones 3 and 6 for April 16, 2019.

ashboard Alerts Reports D	levices Groups System Intellig	gence	Single ID	Device ID	Search Sayed
Meter B807804U165 Rockdele - Zone 6 Ashland, KY	SmarlPoint North American 2-Way	Water 47 Lifecycle Stat Installed		RIS 99.44% Voltage 3.69 V 94.05/2019 7 57 12 AM	Latest Read 1269754 Gal 24/17/2619 11:30:00 Au Latest Message 11:25:11 Ali 04/17/2019
bout this Device Alerts Com	munications History Read Da	ata			Actions
« Back Yesterday : April 16, 2019	Today »			Export: CSV	04/16/2019
ervals	Analysis	Interval Status		Consumption (G	al)
DT)	Analysis	interval status	STATUS	USAGE	READING
:00 РМ				139	1268582
:00 РМ				195	1268443
00 PM				196	1268248
00 РМ				156	1268052
00 PM				164	1267896
0 PM				165	1267732
0 PM				134	1267567
00 РМ				105	1267433
00 РМ				105	1267328
00 РМ				142	1267223
00 РМ				112	1267081
:00 РМ				124	1266969
:00 AM				107	1266845
0:00 AM				114	1266738
00 AM				132	1266624
00 AM				154	1266492
00 AM				146	1266338
00 AM				114	1266192
00 AM				57	1266078
00 AM				43	1266021
00 AM				38	1265978
00 AM				57	1265940
00 AM				72	1265883
				91	1265811

Last Refresh: 04/17/2019 3:35:24 PM

« Back Apr. 9 Apr. 10 Apr. 11 Apr. 12 Apr. 13 Apr. 14 Apr. 15 Apr. 16 Today Next »

1664431

1664405

1664390

1664379

1664364

1664349

1664335

Showing 1 - 24 of 24 |

Dashboard Alerts Reports Devices Groups System Intelligence Device ID Search Saved Single ID Voltage 1665916 Gal 1:44:48 PM Installed 100% North American 2-Way Water 47 Active Tarpin Ridge - Zone 3 Ashland, KY Actions About this Device Alerts Communications History Read Data Chart 04/16/2019 04/16/2019 go Export: CSV Yesterday: April 16, 2019 « Back Today » Consumption (Gal) Intervals Analysis Interval Status (EDT) READING USAGE STATUS 58 1665432 11:00 PM 1665374 70 10:00 PM 1665304 109 9:00 PM 1665195 78 8:00 PM 1665117 60 7:00 PM 47 1665057 6:00 PM 59 1665010 5:00 PM 1664951 4:00 PM 46 1664905 43 3:00 PM 66 1664862 2:00 PM 41 1664796 1:00 PM 1664755 32 12:00 PM 1664723 39 11:00 AM 64 1664684 10:00 AM 56 1664620 9:00 AM 69 1664564 8:00 AM 1664495 64 7:00 AM

Last Refresh: 04/17/2019 3:23:50 PM

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15

11

15

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14

26

SYSTEM MESSAGING

6:00 AM

5:00 AM

4:00 AM

3:00 AM

2:00 AM

1:00 AM

12:00 AM

« Back Apr. 9 Apr. 10 Apr. 11 Apr. 12 Apr. 13 Apr. 14 Apr. 15 Apr. 16 Today Next »

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 26

- Q-26. State whether Cannonsburg District uses a system-wide hydraulic model to evaluate the pressure zones and flow in the utility's distribution system.
- A-26. At this time Cannonsburg does not use a hydraulic model. Bell Engineering has been contracted to include this as part of the Phase I Water Loss Reduction Project.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 27

- Q-27. Excluding the monthly activity reports filed in the case, provide copies of any written reports, memorandums, letters, emails, or minutes from January 1, 2018, to the date of the issuance of this request that details the efforts of the utility manager in reducing water loss as reported to the water utility's board of commissioners.
- A-27. The General Manager provides a monthly water loss report to all commissioners during monthly board meetings. Water loss for that period is discussed and any explanation for the increase or decrease is provided. See attached exhibits. The Commissioners receive copies of the attached KRWA Water Use Report because it shows the actual monetary cost of the "Unknown Loss" (see Line 33 of the attached exhibits) for each month.

Water Util	lity: Cannonsburg Water District PWSID: KY0100064	
For the M	onth of: January Year: 2018	
1	PRODUCTION COST PER THOUSAND \$0.00	
2	PURCHASE COST PER THOUSAND \$2.94	
	GALLONS	
	WATER PRODUCED or PURCHASED	
3	Water Produced \$0.00	0%
4	Water Purchased \$128,530.92 43,718,000	100%
5	TOTAL PRODUCED AND PURCHASED 43,718,000	
6	TOTAL COST \$128,530.92	
	WATER SOLD	
7	Residential 13,165,000	
8	Commercial 5,229,000	
9	Industrial 947,000	
10	Bulk Loading Stations 3,000	
11	Wholesale 11,129,000	
12	Other Sales (explain) Office, Shop, Sampling 32,000	
13		69.78%
14	TOTAL WATER NOT SOLD 13,213,000	30.22%
	BREAKDOWN OF WATER USAGE	
15	Water Treatment Plant 0	
16	Wastewater Treatment Plant 0	SIGN FROM THE WITH THE SAME
17		\$346.92
18	Fire Department Usage 3,000	\$8.82
19	DBP Flushing 0	\$0.00
P607360		
20	TOTAL USAGE 121,000	
21		29.95%
	BREAKDOWN OF WATER LOST	
22	Tank Overflows 0	\$0.00
23	Excavation Breaks 0	\$0.00
24	Repaired Line Breaks 1,317,000 \$3	
25	Unknown Loss 11,775,000	26.93%
2252		
26	TOTAL WATER NOT SOLD OR USED 13,092,000	
27	COST OF WATER NOT SOLD OR USED \$38,490.48	
	"UNKNOWN LOSS" FLOW RATE AND COST:	
28	"Unknown Loss" 11,775,000	
29	% "Unknown Loss" 26.93%	
30	Number of Days in Period 31	
31	"Unknown Loss" per Day (Gallons per Day) 379,839	
32	"Unknown Loss" per Minute (GPM) 263.78	
33	"Unknown Loss" Cost for Month \$34,618.50	

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Water Ut	lity: Cannonsburg Water District	PWSID	: KY0100064	
For the N	lonth of: February	Year:	2018	
1	PRODUCTION COST PER THOUSAND		\$0.00	
2	PURCHASE COST PER THOUSAND		\$2.94	
			GALLONS	
	WATER PRODUCED or PURCHASED	XX-24-V2X-12X-0		
3	Water Produced \$0.00		0	0%
4	Water Purchased \$96,837.72		32,938,000	100%
5 6	TOTAL PRODUCED AND PUR TOTAL COST \$96,837.72	CHASE	32,938,000	Si .
	WATER SOLD			
7	Residential		10,177,000	
8	Commercial		3,391,000	
9	Industrial		1,087,000	
10	Bulk Loading Stations		4,500	
11	Wholesale		5,346,000	
12	Other Sales (explain) Office, Shop, Sampling		32,000	
13	TOTAL WATE	R SOLE	20,037,500	60.83%
14	TOTAL WATER NO			39.17%
0.22	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plant		0	
16	Wastewater Treatment Plant		0	
17	System Flushing		33,000	\$97.02
18	Fire Department Usage		4,000	\$11.76
19	DBP Flushing		60,000	\$176.40
20	TOTAL	USAGE	97,000	
21	WATER LOSS PERCENTAGE	GE FOR	RATE PURPOSES	38.87%
	BREAKDOWN OF WATER LOST			
22	Tank Overflows		0	
23	Excavation Breaks		0	
24	Repaired Line Breaks			\$2,243.22
25	Unknown Loss		12,040,500	36.56%
26	TOTAL WATER NOT SOLD O	R USEC	12,803,500	
27	COST OF WATER NOT SOLD C	R USEC	\$37,642.29	
ye. <u>22.286.286.</u> 2	"UNKNOWN LOSS" FLOW RATE AND COST:	TO ALL PARTY OF THE PARTY OF TH		
28	The state of the s	wn Loss		
29	% "Unkno			
30	Number of Days			
31	"Unknown Loss" per Day (Gallons			
32	"Unknown Loss" per Minu			
33	"Unknown Loss" Cost f	or Month	n \$35,399.07	

Water Util	ity: Cannonsburg Water District PWSII	D: KY0100064	
For the Mo	onth of: March Year:	2018	
1	PRODUCTION COST PER THOUSAND	\$0.00	
2	PURCHASE COST PER THOUSAND	\$2.94	
2	FORMIAGE COST FER THOUSAND	Ψ2.54	
		GALLONS	
	WATER PRODUCED or PURCHASED		
3	Water Produced \$0.00	0	0%
4	Water Purchased \$94,550.40	32,160,000	100%
5	TOTAL PRODUCED AND PURCHASE	D 32,160,000	
6	TOTAL COST \$94,550.40		
722	WATER SOLD	44.070.000	
7	Residential	11,276,000	
8	Commercial	3,726,000	
9	Industrial	1,141,000	
10	Bulk Loading Stations	15,000	
11	Wholesale	4,539,000	
12	Other Sales (explain) Office, Shop, Sampling	31,000	
13	TOTAL WATER SOL	D 20,728,000	64.45%
14	TOTAL WATER NOT SOL	[1] [1] [1] [1] [1] [1] [1] [1] [1] [1]	35.55%
	BREAKDOWN OF WATER USAGE		
15	Water Treatment Plant	0	
16	Wastewater Treatment Plant	0	
17	System Flushing	157,000	\$461.58
18	Fire Department Usage	4,000	\$11.76
19	DBP Flushing	56,000	\$164.64
20	TOTAL USAG	E 217,000	
21	WATER LOSS PERCENTAGE FOR	[10] (14] (2017 - 2017] : [1] (2] (2] (2] (2] (2] (2] (2] (2] (2] (2	34.87%
	BREAKDOWN OF WATER LOST		
22	Tank Overflows	0	
23	Excavation Breaks	0	
24	Repaired Line Breaks		\$1,202.46
25	Unknown Loss	10,806,000	33.60%
26	TOTAL WATER NOT SOLD OR USE	D 11,215,000	
27	COST OF WATER NOT SOLD OR USE	. [1.1.1]	
	"UNKNOWN LOSS" FLOW RATE AND COST:		
28	"Unknown Los	10,806,000	
29	% "Unknown Los	33.60%	
30	Number of Days in Perio	d 31	
31	"Unknown Loss" per Day (Gallons per Da	() 348,581	
32	"Unknown Loss" per Minute (GPN	1) 242.07	
33	"Unknown Loss" Cost for Mon		
26 (1970 H	ANNOUNCEMENT TO THE PROPERTY OF THE PROPERTY O	4454AVU - 117AVP-217U	

Water Util	lity: Cannonsburg Water District PW	SID: KY0100064
For the Mo	onth of: April Yea	nr: 2018
1	PRODUCTION COST PER THOUSAND	\$0.00
2	PURCHASE COST PER THOUSAND	\$2.94
		GALLONS
	WATER PRODUCED or PURCHASED	
3	Water Produced \$0.00	0 0%
4	Water Purchased \$86,832.90	29,535,000 100%
5 6	TOTAL PRODUCED AND PURCHAS TOTAL COST \$86,832.90	SED 29,535,000
	WATER SOLD	
7	Residential	11,276,000
8	Commercial	4,091,000
9	Industrial	776,000
10	Bulk Loading Stations	11,000
11	Wholesale	4,516,000
12	Other Sales (explain) Office, Shop, Sampling	41,000
13	TOTAL WATER SO	OLD 20,711,000 70.12%
14	TOTAL WATER NOT SO	OLD 8,824,000 29.88%
	BREAKDOWN OF WATER USAGE	
15	Water Treatment Plant	0
16	Wastewater Treatment Plant	0
17	System Flushing	145,000 \$426.30
18	Fire Department Usage	11,000 \$32.34
19	DBP Flushing	141,000 \$414.54
20	TOTAL USA	AGE 297,000
21	WATER LOSS PERCENTAGE F	
	BREAKDOWN OF WATER LOST	
22	Tank Overflows	0
23	Excavation Breaks	0
24	Repaired Line Breaks	820,000 \$2,410.80
25	Unknown Loss	7,707,000 26.09%
00	TOTAL WATER NOT SOLD OR US	SED 9 527 000
26 27	COST OF WATER NOT SOLD OR US	[2017]
	COST OF WATER NOT SOLD OR O	3ED \$23,003.30
	"UNKNOWN LOSS" FLOW RATE AND COST:	
20	"Unknown L	oss" 7,707,000
28 29	% "Unknown L	
30	Number of Days in Pe	
31	"Unknown Loss" per Day (Gallons per I	
32	"Unknown Loss" per Minute (G	
33	"Unknown Loss" Cost for M	
33	CHINIOWIT LOSS COST IOI IVI	U
	Large and the contract of the	

Water Util	lity: Cannonsburg Water District PWSID:	KY0100064	
For the M	onth of: May Year:	2018	
1	PRODUCTION COST PER THOUSAND	\$0.00	
2	PURCHASE COST PER THOUSAND	\$2.94	
		GALLONS	
·	WATER PRODUCED or PURCHASED		
3	Water Produced \$0.00	0	0%
4	Water Purchased \$102,397.26	34,829,000	100%
5 6	TOTAL PRODUCED AND PURCHASED TOTAL COST \$102,397.26	34,829,000	
	WATER SOLD		
7	Residential	14,109,000	
8	Commercial	4,769,000	
9	Industrial	365,000	
10	Bulk Loading Stations	32,000	
11	Wholesale	7,042,000	
12	Other Sales (explain) Office, Shop, Sampling	42,000	
13	TOTAL WATER SOLD	26,359,000	75.68%
14	TOTAL WATER NOT SOLD	8,470,000	24.32%
15	BREAKDOWN OF WATER USAGE	ol.	
15	Water Treatment Plant	0	
16	Wastewater Treatment Plant	110,000	¢222.40
17	System Flushing	110,000	\$323.40
18	Fire Department Usage	4,000	\$11.76
19	DBP Flushing	0	
20	TOTAL USAGE	114,000_	
21	WATER LOSS PERCENTAGE FOR R	ATE PURPOSES	23.99%
-	BREAKDOWN OF WATER LOST		
22	Tank Overflows	0	
23	Excavation Breaks	0	
24	Repaired Line Breaks	589,000	\$1,731.66
25	Unknown Loss	7,767,000	22.30%
26	TOTAL WATER NOT SOLD OR USED	8,356,000	
27	COST OF WATER NOT SOLD OR USED	\$24,566.64	
	"UNKNOWN LOSS" FLOW RATE AND COST:		
28	"Unknown Loss"	7,767,000	
29	% "Unknown Loss"	22.30%	
30	Number of Days in Period	31	
31	"Unknown Loss" per Day (Gallons per Day)	250,548	
32	"Unknown Loss" per Minute (GPM)	173.99	
33	"Unknown Loss" Cost for Month	\$22,834.98	
	Not and consider interstation and an interstation of the St.	AMERICAN STREET	

Water Util	lity: Cannonsburg Water District PWSID: KY0100064	
For the Me	onth of: June Year: 2018	
1	PRODUCTION COST PER THOUSAND \$0.00	
2	PURCHASE COST PER THOUSAND \$2.94	
	GALLONS	
	WATER PRODUCED or PURCHASED	
3	Water Produced \$0.00 0	0%
4	Water Purchased \$98,160.72 33,388,000	100%
5	TOTAL PRODUCED AND PURCHASED 33,388,000	
6	TOTAL COST \$98,160.72	
	WATER SOLD	
7	Residential 14,109,000	
8	Commercial 4,769,000	
9	Industrial 365,000	
10	Bulk Loading Stations 15,000	
11	Wholesale 6,664,000	
12	Other Sales (explain) Office, Shop, Sampling 42,000	
13	TOTAL WATER SOLD 25,964,000	77.76%
14	TOTAL WATER NOT SOLD 7,424,000	22.24%
	BREAKDOWN OF WATER USAGE	
15	Water Treatment Plant 0	
16	Wastewater Treatment Plant 0	
17	System Flushing 110,000	\$323.40
18	Fire Department Usage 3,000	\$8.82
19	DBP Flushing 0	
20	TOTAL USAGE 113,000	
20 21	WATER LOSS PERCENTAGE FOR RATE PURPOSES	21.90%
	BREAKDOWN OF WATER LOST	
22	Tank Overflows 0	
23	Excavation Breaks 0	
24	Repaired Line Breaks 399,000	\$1,173.06
25	Unknown Loss 6,912,000	20.70%
26	TOTAL WATER NOT SOLD OR USED 7,311,000	
27	COST OF WATER NOT SOLD OR USED \$21,494.34	
222	"UNKNOWN LOSS" FLOW RATE AND COST:	
28	"Unknown Loss" 6,912,000	
29	% "Unknown Loss" 20.70%	
30	Number of Days in Period 30	
31	"Unknown Loss" per Day (Gallons per Day) 230,400	
32	"Unknown Loss" per Minute (GPM) 160.00	
33	"Unknown Loss" Cost for Month \$20,321.28	

Water Util	ity: Cannonsburg Water District PWSID	KY0100064	
For the M	onth of: July Year:	2018	
1	PRODUCTION COST PER THOUSAND	\$0.00	
2	PURCHASE COST PER THOUSAND	\$2.94	
		GALLONS	
	WATER PRODUCED or PURCHASED		-01
3	Water Produced \$0.00	0	0%
4	Water Purchased \$96,320.28	32,762,000	100%
5 6	TOTAL PRODUCED AND PURCHASED TOTAL COST \$96,320.28	32,762,000	
	WATER SOLD		
7	Residential	13,571,000	
8	Commercial	4,066,000	
9	Industrial	894,000	
10	Bulk Loading Stations	15,000	
11	Wholesale	5,900,000	
12	Other Sales (explain) Office, Sampling, Shop	39,000	
13	TOTAL WATER SOLD	24,485,000	74.74%
14	TOTAL WATER NOT SOLE	8,277,000	25.26%
	BREAKDOWN OF WATER USAGE		
15	Water Treatment Plant	0	
16	Wastewater Treatment Plant	0	rajanaja, ajaz
17	System Flushing	113,000	\$332.22
18	Fire Department Usage	6,000	\$17.64
19	DBP Flushing	0	
20	TOTAL USAGE	119,000	
21	WATER LOSS PERCENTAGE FOR		24.90%
	BREAKDOWN OF WATER LOST	B0	
22	Tank Overflows	0	
23	Excavation Breaks	0	
24	Repaired Line Breaks	464,000	\$1,364.16
25	Unknown Loss	7,694,000	23.48%
26	TOTAL WATER NOT SOLD OR USED	8,158,000	
27	COST OF WATER NOT SOLD OR USED		
	"UNKNOWN LOSS" FLOW RATE AND COST:		
28	"Unknown Loss	7,694,000	
29	% "Unknown Loss		
30	Number of Days in Period	31	
31	"Unknown Loss" per Day (Gallons per Day	248,194	
32	"Unknown Loss" per Minute (GPM		
33	"Unknown Loss" Cost for Month	\$22,620.36	

Water Util	lity: Cannonsburg Water District PW	SID: KY0100064	
For the M	lonth of: August Yea	ır: 2018	
1	PRODUCTION COST PER THOUSAND	\$0.00	
2	PURCHASE COST PER THOUSAND	\$2.94	
		GALLONS	
	WATER PRODUCED or PURCHASED		
3	Water Produced \$0.00	0	0%
4	Water Purchased \$87,744.30	29,845,000	100%
5	TOTAL PRODUCED AND PURCHA	SED 29,845,000	
6	TOTAL COST \$87,744.30		
-	WATER SOLD	40,000,000	
7	Residential	12,980,000	
8	Commercial	4,618,000	
9	Industrial	2,827,000	
10	Bulk Loading Stations	12,000	
11	Wholesale	3,854,000	
12	Other Sales (explain) Office, Shop, Sampling	35,000	
13	TOTAL WATER SO	OLD 24,326,000	81.51%
14	TOTAL WATER NOT SO		18.49%
	BREAKDOWN OF WATER USAGE		
15	Water Treatment Plant	0	
16	Wastewater Treatment Plant	0	
17	System Flushing	112,500	\$330.75
18	Fire Department Usage	3,000	\$8.82
19	DBP Flushing	0	
1272			
20	TOTAL USA		
21	WATER LOSS PERCENTAGE F	OR RATE PURPOSES	18.11%
	BREAKDOWN OF WATER LOST		
22	Tank Overflows	0	
23	Excavation Breaks	0	
24	Repaired Line Breaks	300,000	\$882.00
25	Unknown Loss	5,103,500	17.10%
200	TOTAL WATER NOT SOLD OR US	SED 5,403,500	
26 27	COST OF WATER NOT SOLD OR US		
	COST OF WATER NOT SOLD OR O	JLD \$10,000.23	
	"UNKNOWN LOSS" FLOW RATE AND COST:		
28	"Unknown L	oss" 5,103,500	
29	% "Unknown L		
30	Number of Days in Pe		
31	"Unknown Loss" per Day (Gallons per I		
32	"Unknown Loss" per Minute (G		
33	"Unknown Loss" Cost for M		
33	Olikilowii Loss Cost loi Wi	Ontil \$15,004.29	

Water Util	lity: Cannonsburg Water District PWSID: KY	0100064	
For the M	onth of: September Year: 20	18	
4	PRODUCTION COST PER THOUSAND	\$0.00	
1 2	PURCHASE COST PER THOUSAND	\$2.94	
2	FORCHASE COST FER THOUSAND	Ψ2.54	
		GALLONS	
	WATER PRODUCED or PURCHASED		
3	Water Produced \$0.00	0	0%
4	Water Purchased \$79,879.80	27,170,000	100%
5 6	TOTAL PRODUCED AND PURCHASED TOTAL COST \$79,879.80	27,170,000	
	WATER SOLD		
7	Residential	11,764,000	
8	Commercial	4,449,000	
9	Industrial .	2,459,000	
10		12,000	
11	Bulk Loading Stations Wholesale	326,000	
12		41,000	
12	Other Sales (explain) Office, Shop, Sampling	41,000	
13	TOTAL WATER SOLD	19,051,000	70.12%
14	TOTAL WATER NOT SOLD	8,119,000	29.88%
	BREAKDOWN OF WATER USAGE		
15	Water Treatment Plant	0	
16	Wastewater Treatment Plant	0	
17	System Flushing	426,000	\$1,252.44
18	Fire Department Usage	4,000	\$11.76
19	DBP Flushing	60,000	\$176.40
		ALLONIA CHE CALANTONIA CA	
20	TOTAL USAGE	490,000	
21	WATER LOSS PERCENTAGE FOR RAT	E PURPOSES	28.08%
	BREAKDOWN OF WATER LOST		
22	Tank Overflows	0	
23	Excavation Breaks	0	
24	Repaired Line Breaks	148,000	\$435.12
25	Unknown Loss	7,481,000	27.53%
00	TOTAL WATER NOT SOLD OR USED	7 620 000	
26 27	COST OF WATER NOT SOLD OR USED	7,629,000 \$22,429.26	
	COST OF WATER NOT SOLD OR COLD	Ψ22,423.20	
	WINKNOWN LOSS! ELOW BATE AND COST.		
00	"UNKNOWN LOSS" FLOW RATE AND COST:	7,481,000	
28	"Unknown Loss" % "Unknown Loss"	27.53%	
29		30	
30	Number of Days in Period	249,367	
31	"Unknown Loss" per Day (Gallons per Day)	00.07 046 400 00 110 100	
32	"Unknown Loss" per Minute (GPM) "Unknown Loss" Cost for Month	173.17	
33	Unknown Loss Cost for Month	\$21,994.14	

Water Uti	lity: Cannonsburg Water District PWSID: KY0100064	
For the M	onth of: October Year: 2018	
1	PRODUCTION COST PER THOUSAND \$0.00	
2	PURCHASE COST PER THOUSAND \$2.94	
-	TOTOLINGE GOOT LET MODERNE	
	GALLONS	
2	WATER PRODUCED or PURCHASED	220
3	Water Produced \$0.00 0	0%
4	Water Purchased \$81,570.30 27,745,000	100%
5 6	TOTAL PRODUCED AND PURCHASED 27,745,000 TOTAL COST \$81,570.30	
	WATER SOLD	
7	Residential 11,926,000	
8	Commercial 4,107,000	
9	Industrial 1,574,000	
10	Bulk Loading Stations 10,000	
11	Wholesale 1,829,000	
12	Other Sales (explain) Office, Shop, Sampling 44,000	
13	TOTAL WATER SOLD 19,490,000	70.25%
14	TOTAL WATER NOT SOLD 8,255,000	29.75%
45	BREAKDOWN OF WATER USAGE	
15	Water Treatment Plant 0	
16	Wastewater Treatment Plant 0	\$461.58
17		\$13.23
18 19	Fire Department Usage 4,500 DBP Flushing 24,000	\$70.56
19	DBP Flushing	\$70.50
20	TOTAL USAGE 185,500	
21	WATER LOSS PERCENTAGE FOR RATE PURPOSES	29.08%
	BREAKDOWN OF WATER LOST	
22	Tank Overflows 0	
23	Excavation Breaks 0	
24		1,140.72
25	Unknown Loss 7,681,500	27.69%
26	TOTAL WATER NOT SOLD OR USED 8,069,500	
27	COST OF WATER NOT SOLD OR USED \$23,724.33	
	"UNKNOWN LOSS" FLOW RATE AND COST:	
28	"Unknown Loss" 7,681,500	
29	% "Unknown Loss" 27.69%	
30	Number of Days in Period 31	
31	"Unknown Loss" per Day (Gallons per Day) 247,790	
32	"Unknown Loss" per Minute (GPM) 172.08	
33	"Unknown Loss" Cost for Month \$22,583.61	

Water Uti	lity: Cannonsburg Water District PWSIE): KY0100064	
For the M	onth of: November Year:	2018	
á	PRODUCTION COST PER THOUSAND	\$0.00	
1 2	PURCHASE COST PER THOUSAND	\$2.94	
2	PORCHASE COST PER THOUSAND	Ψ2.54	
		GALLONS	
	WATER PRODUCED or PURCHASED		
3	Water Produced \$0.00	0	0%
4	Water Purchased \$83,055.00	28,250,000	100%
5 6	TOTAL PRODUCED AND PURCHASE TOTAL COST \$83,055.00	D 28,250,000	
	WATER SOLD		
7	Residential	12,312,000	
8	Commercial	4,076,000	
9	Industrial	1,263,000	
10	Bulk Loading Stations	2,000	
11	Wholesale	3,111,000	
12	Other Sales (explain) Office, shop, sampling	32,000	
13	TOTAL WATER SOL	20,796,000	73.61%
14	TOTAL WATER NOT SOL	하시다	26.39%
	The second property of	22-27-1	
	BREAKDOWN OF WATER USAGE		
15	Water Treatment Plant	0	
16	Wastewater Treatment Plant	0	
17	System Flushing	35,000	\$102.90
18	Fire Department Usage	3,000	\$8.82
19	DBP Flushing	164,000	\$482.16
20	TOTAL USAG	E 202,000	
21	WATER LOSS PERCENTAGE FOR	RATE PURPOSES	25.67%
	BREAKDOWN OF WATER LOST		
22	Tank Overflows	0	
23	Excavation Breaks	0	
24	Repaired Line Breaks		\$1,123.08
25	Unknown Loss	6,870,000	24.32%
26	TOTAL WATER NOT SOLD OR USE	7,252,000	
27	COST OF WATER NOT SOLD OR USE		
	"UNKNOWN LOSS" FLOW RATE AND COST:		
28	"Unknown Loss		
29	% "Unknown Loss		
30	Number of Days in Perio		
31	"Unknown Loss" per Day (Gallons per Day		
32	"Unknown Loss" per Minute (GPN		
33	"Unknown Loss" Cost for Mont	h \$20,197.80	
	Last 100 100 100 100 100 100 100 100 100 10		

Water Ut	ility: Cannonsburg Water District PWSID:	KY0100064	
For the M	flonth of: December Year:	2018	
1	PRODUCTION COST PER THOUSAND	\$0.00	
2	PURCHASE COST PER THOUSAND	\$2.94	
		GALLONS	
1000000	WATER PRODUCED or PURCHASED		
3	Water Produced \$0.00	0	0%
4	Water Purchased \$96,014.52	32,658,000	100%
5 6	TOTAL PRODUCED AND PURCHASED TOTAL COST \$96,014.52	32,658,000	
-	WATER SOLD	44.000.000	
7	Residential	11,968,000	
8	Commercial Industrial	3,934,000	
9 10	Bulk Loading Stations	1,676,000	
11	Wholesale	6,500 5,468,000	
12	Other Sales (explain) Office, Shop, Sampling	31,000	
12	Office, Office	31,000	
13	TOTAL WATER SOLD	23,083,500	70.68%
14	TOTAL WATER NOT SOLD	9,574,500	29.32%
	BREAKDOWN OF WATER USAGE		
15	Water Treatment Plant	0	
16	Wastewater Treatment Plant	0	
17	System Flushing	65,000	\$191.10
18	Fire Department Usage	1,000	\$2.94
19	DBP Flushing		
20	TOTAL USAGE	66,000	
21	WATER LOSS PERCENTAGE FOR F	RATE PURPOSES	29.12%
	BREAKDOWN OF WATER LOST		
22	Tank Overflows	0	
23	Excavation Breaks	0	
24	Repaired Line Breaks	384,000	\$1,128.96
25	Unknown Loss	9,124,500	27.94%
26	TOTAL WATER NOT SOLD OR USED	9,508,500	
27	COST OF WATER NOT SOLD OR USED	\$27,954.99	
	"UNKNOWN LOSS" FLOW RATE AND COST:		
28	"Unknown Loss"	9,124,500	
29	% "Unknown Loss"	27.94%	
30	Number of Days in Period		
31	"Unknown Loss" per Day (Gallons per Day)	294,339	
32	"Unknown Loss" per Minute (GPM)	204.40	
33	"Unknown Loss" Cost for Month	\$26,826.03	

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 28

- Q-28. State whether Cannonsburg District's Board of Commissioners has placed any deadlines or target dates on Cannonsburg District tor achieving a reduction in the amount of water loss.
- A-28. Cannonsburg has worked continually on water loss. Currently, Cannonsburg has been able to achieve a 10% decrease in water loss from the end of calendar year 2017 to the end of calendar year 2018. The goal for the end of calendar year 2019 is 15% or less.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 29

- Q-29. Provide a list of Cannonsburg District's management's five most critical projects, listed in order of priority, notwithstanding the opinions of the county judge/executive nor the opinions of the water district board of commissioners.
- A-29. Cannonsburg has contracted with Bell Engineering to develop a Capital Improvement Plan. This plan will be established on the priorities of: (1) distribution zone metering; (2) service line and meter replacement; (3) pump station rehabilitation; (4) water main replacement; and (5) tank refurbishment.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 30

Responding Witness: Tim Webb

Q-30. Provide the total salary of the general manager/superintendent of Cannonsburg District for calendar years 2017 and 2018.

A-30. 2017 - \$59,315.64

2018 - \$60,339.12

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 31

- Q-31. Provide a copy of the most recent signed employment contract between the general manager/superintendent and Cannonsburg District.
- A-31. Cannonsburg does not have a written contract with the General Manager.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 32

- Q-32. State the average age, with the high and low ages, of Cannonsburg District's distribution mains.
- A-32. The average age of Cannonsburg's distribution mains is approximately 35 years old. The oldest lines within the system are 50 years old and the newest lines are 1 year old.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 33

- Q-33. "Service connection," as defined by 807 KAR 5:066(6), means the line from the main to the customer's point of service, and shall include the pipefittings and valves necessary to make the connection. State the average age of Cannonsburg District's service connections.
- A-33. The average age of a service connection for a Cannonsburg customer is 35 years old.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 34

- Q-34. Explain if Cannonsburg District has mapped the entire distribution area for service connections to include mapping of its system, and identifying parts of its system with repeated breaks.
- A-34. Cannonsburg is nearing completion of a system wide GIS map. Once complete, field crews will begin mapping all repairs made within the system along with a picture of the area, material used, and any other information needed for future reference.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 35

- Q-35. Provide a copy of Cannonsburg District's policy tor dealing with apparent theft of water.
 - a. Provide documentation of any request by Cannonsburg District from January 1, 2017, to the date of the issuance of this request to the county attorney or commonwealth attorney's office for the prosecution of any person for the theft of water.
 - b. State whether Cannonsburg District provided information related to a request for prosecution to the county attorney or commonwealth attorney's office for this time frame.
 - c. State to which office Cannonsburg District provided the information, whether any action was taken on behalf of Cannonsburg District to prosecute any person for theft of water, and provide copies of the documentation and correspondence related to the prosecution.
- A-35. Cannonsburg immediately terminates service to anyone who is receiving service through theft. When theft of service is discovered, Cannonsburg will alert the Boyd County Sheriff's Department and ask for assistance for the termination of this service. However, once service is terminated, the Boyd County Sheriff's Department will not issue a citation or recommend prosecution because they are of the thought that it cannot be proven who installed the device or who removed the lock to the residence or business

to use the service illegally. Cannonsburg has requested the Boyd County Sheriff's Office to reconsider its stance on this, but it has not changed its position.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 36

- Q-36. State whether Cannonsburg District has conducted a comprehensive water audit, and if so, provide a copy of the most recent water audit.
- A-36. Cannonsburg performed a water audit in mid-2017. During this time, field staff would walk the customer routes and document the address, meter number, and radio number. This was then compared to the information that was in the billing software by office personnel.

 Documents were not retained after they were checked by office staff. See the attached exhibit for the blank document used for the audit.

Cannonsburg Water District Water Audit

Address:
Area:
Meter Locked: Yes No
Meter Type:
Meter Size:
Meter ID on Meter:
Meter Reading on Meter:
Radio Type:
Radio ID:
Meter ID on Gun:
Meter Reading on Gun:
Additional Information:

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 37

Responding Witness: Tim Webb

- Q-37. Provide a copy of Cannonsburg District's procedure for monitoring and documenting withdrawals from Cannonsburg District's distribution system by fire departments. If no document exists, explain the process in detail.
 - a. For each fire department that made a withdrawal from Cannonsburg District's system from January 1, 2018, to the date of the issuance of this request, provide a copy of the fire department's estimate of its withdrawal.
 - b. For any instance in which a fire department failed to provide an estimate of withdrawal from January 1, 2018, to the date of the issuance of this request, state the actions Cannonsburg District implemented to correct the failure.
 - c. Provide the date on which Cannonsburg District last imposed a penalty on a fire department for the fire department's failure to submit a quarterly report on its water usage.
 - d. Provide a sample copy of each type of report form that Cannonsburg District provides to fire departments.
 - e. Provide the fourth quarter of the 2018 fire protection water usage by month, and describe the formula relied upon, identifying all variables and all assumptions, and workpapers utilized to produce this information.

A-37.

a. The Cannonsburg Fire Department is the only fire department within Cannonsburg's service area. Each month, the Cannonsburg Fire Department sends an email message to Cannonsburg stating the

amount of water that it has withdrawn from Cannonsburg's water system during the previous month. Attached is a document which lists the amounts that Cannonsburg Fire Department reported for each month in 2018.

- b. Cannonsburg has never had to take any actions to obtain the water withdrawal information from the Cannonsburg Fire Department, except for an occasional friendly phone call reminder. Thus, Cannonsburg has never developed any formal, written procedures for enforcing the requirement that fire departments report its water usage to Cannonsburg.
- c. It has never had to impose a penalty on a fire department for failure to report its water usage.
- d. N/A. There is no official report form. Cannonsburg Fire Department simply sends an email message each month and states the volume of its water usage.
- e. See the attached list, which shows the fire department usage by month for the entire 2018 calendar year. Cannonsburg is unaware of the method that the Cannonsburg Fire Department uses to compute the amount of water withdrawn.

Cannonsburg Fire Department 2018

January	3,000
Febuary	4,000
March	4,000
April	11,000
May	4,000
June	3,000
July	6,000
August	3,000
September	4,000
October	4,000
November	3,000
December	1,000

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 38

- Q-38. Explain how Cannonsburg District's accounts for flushing when determining water loss for its system.
- A-38. System flushing is calculated by different methods depending on the location and flushing apparatus. Flushing done through a hydrant is calculated by using a flushing diffuser with attached pitot gauge. This gauge measures the flow in GPM. Flushing done on a line with no hydrant, but on a line where there is a zone meter, is measured through the zone meter. A line flushed that has no hydrant or zone meter is flushed through a blow off. To determine the rate of flow through the blow off, the flow is measured and compared to the chart contained in the Operator's Companion Handbook (see exhibit attached to the response to Q-2).

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 39

- Q-39. Provide the type of flushing equipment that Cannonsburg District uses.
- A-39. Cannonsburg uses fire hydrants with at diffuser and pitot gauge and water main installed blow offs.

CASE NO. 2014-00267

Response to Commission Staff's Third Request for Information

Question No. 40

- Q-40. Provide Cannonsburg District's system flushing records, by month, from January 1, 2018, to the date of the issuance of this request, and describe the formula relied upon, identifying all variables, and all assumptions and workpapers utilized to produce this information.
- A-40. Cannonsburg's flushing records are attached. System flushing is calculated by different methods depending on the location and flushing apparatus. Flushing done through a hydrant is calculated by using a flushing diffuser with attached pitot gauge. This gauge measures the flow in GPM. Flushing done on a line with no hydrant, but a line where there is a zone meter, is measured through the zone meter. A line flushed that has no hydrant or zone meter is flushed through a blow off. To determine the rate of flow through the blow off, the flow is measured and compared to the chart contained in the Operator's Companion Handbook (see exhibit attached to the response to Q-2).

Cannonsburg Water District Flushing Report

Name: Tw Month: MARCH

Date	Location	GPM	Start Time	Stop Time	Gallons
3-26	SHOPES CER & HICE HILL	1600	10:25	10:35	10,000 21,000 21,200 4,200
3-26	264R SHORES CRIC	840	10:40	11:05	21,000
3-26	KEYES AK & SHOPES	1360	16:15	11:35	21,200
3-26	GREEN HOUSE + SHORES	840	1:15	1:20	4,200
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Name:

Flushing Report

Month: A PRIC

Date	Location	GPM		Stop Time	
4-13	2000 SHORES CRK	1100	9:15	9:20	5,500
4-13	HICKORY & SPOPES CEK	1080	10:15	10:25	10,800
4-13 4-13	KEYES + SHOPES CKK	1080	10:15	11:50	10,800 16,200 7500
4-13	3244 SHORES CAK	500	12:50	1:05	7500
4-20	AED LAYDOWN YARD	1000	9:45	9:55	19000
4-20	KYOUA SING	1190	10:07	10:27	23,800
4-20	CRT 3 SISTERS MANNING FURN BP#	1060	10:58	11:10	12,720
4-20	MANNING FURN	1405	11:15	11:27	16,860
4-20	BP#1	1190	1:03	1:19	16,860 19,040
4-20	HOPPY'S	1060	1:45	2:02	18,020
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		8			140,440
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Cannonsburg Water District Flushing Report

Name and the second sec	
Name:	Month:

Date	Location	GPM	Start Time	Stop Time	Gallons
4.13.18	Blowoff for Softball Field	1,000	11:10	11:45	15,000
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Flushing Report

Name: Caleh Month: Twe

Date	Location	GPM	Start Time	Stop Time	Gallons
6/28	Cint of 3 5,7408 Rt. 60 Ot BP Stoder	920	11:04	11:15	Gallons 10, 120 16, 400
(125)	Rt. 60 Oct BR Stocker	(341)	11:30	11:50	16.400
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Flushing Report

Month:

Date	Location	GPM	Start Time	Stop Time	Gallons
8/24	Hoppy is on 60	840	18215	Stop Time	37. 400 37. 400
	4000 3 00 60	890	11:25	BILLO	22 ×et 0
4/24	74 00CO	240	11:25	19:10	2000
2/21	7/10/11/2 -01/00	010	1113)	10, 10	01,5100
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Cannonsburg Water District Flushing Report

Name: IIM Month: AUGUST

Date	Location	GPM	Start Time	Stop Time	Gallons
8-1	PAUL COFFEE	1250	11:00	12:00	75,000
8-1 8-2	PAUL COFFEE HOPPY'S	1150	11:00	10:15	75,000 51,750
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Flushing Report

Name: TW	Month:	AUGUST
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Date	Location	GPM	Start Time	Stop Time	Gallons
8-2	LINDZEY CT.	530	10:45A	11:15 A	15,900
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Flushing Report

Month: September 2018

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Date	Location	GPM		Stop Time	
9/4	Hoppis on 60	340	8:40	4:38	37,800
915	Industrien Ph o Cush	550	9:50	11:35	55 650
9/5	Ceilp Ch	530	12:85	1105	5.300
914	Homy's on to	2540	10:10	11:05	46,200
911	thrans 00 60	340	9(55)	11:35	44 000
9/13	Hoppers on 60	840	11165	12:50	46,200
9/17	thoppy on 60	440	MAPOR	10:25	16,800
4191	Hope's on 60	940	9:10	10:40	75,600
0 B	HODD'S 0160	750	10:20	187.00	[50, 1 000]
4/25	Hobby on ou	350	10:00	10:15	11, 250
101	17 Wess Charhoner	cyo	100 8125	8:55	25, au
10)1	Mappy's un 60	840	9:00	7:30	26,200
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Name: Coleb

Flushing Report

Month: Octobor

Date	Location	GPM	Start Time	Stop Time	Gallons
101	Romans Church on 60		4:25	8:55	25, 200
101	4000 5 m60	440	9:00	9:30	26 200
NON	Maggin's endo	230	9:55	10:45	26,800
109	#0001/2 00 60	650	4:35	9:50	55, 250
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, Flushing Report

Name:	In	NEBB	Month:	NOVEMBER
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Date	Location	GPM	Start Time	Stop Time	Gallons
11-6	HYDRAM - AEP	1000	8:18	8:2B	10,000
11-6	PRINCESS CHURCH	1100	8:47	9:02	11 700
11-6	MEDIANA 4 15 COS	1100	9.43	9:58	16,500 16,500 20,230 32,130 18,080
11-6	MANATAGO	1190	11:14	11:31	20 234
11-6	MANNING BP STATION HOPPY'S	1190	1:30	1:57	22 130
11-6	HOPPY'S	1190	2:14	2:36	18'000
11-7	1941 SHOPES CREEK	1200	9:05	9:20	
11-7	KEYSER CRK + SALPRSCAK		9:27	9:47	20,000
11-7	3624 SHORES CAG	750	9:53	10:10	12,750
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				re-reaction of the	
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Cannonsburg Water District Flushing Report

Name: TW Month: DEC

Date	Location HOPPY'S (HYPKAM)	GPM	Start Time	Stop Time	Gallons
12-21	HOPPY'S (HYDGAM)	530	1:45	2:00	7,950
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CERTIFICATE OF SERVICE

In accordance with 807 KAR 5:001, Section 8, I certify that Cannonsburg 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 April 18, 2019; that there are currently no parties that the Public Service Commission has excused from participation by electronic means in this proceeding; and that an original paper medium of this Response will be delivered to the Public Service Commission within two business days.

Damon R. Talley