APPENDIX C

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2019-00041 DATED MAR 12, 2019

1. Provide the utility's monthly unaccounted for loss water loss percentage report with associated underlying data from January 1, 2018, to the date of the issuance of this Order.

2. Describe in detail the procedure utilized in preparing monthly water use and loss reports, including, but not limited to, the following:

a. How the utility calculates water loss, water treatment plant usage, system flushing, and disinfection byproduct 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 the utility includes water loss from known leaks and breaks in the water loss category.

3. State whether the water utility 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.

4. State whether the water utility 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.

5. Describe and provide the results of all water loss reduction projects that the water utility has initiated from January 1, 2015, to the date of the issuance of this Order.

6. Provide a copy of the utility's most recent and updated annual and longrange Capital Improvement Plans.

7. 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.

8. Provide a copy of the utility's preventative maintenance program for the plant, pump, and storage facilities.

9. State whether the water utility has assigned specific personnel the responsibility to detect and fix of water line leaks, and if so, state the names and job titles of such personnel and describe the functions and duties of each.

10. State whether leak detection is conducted on a daily basis, and if not, state the reasons why not.

11. 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 Order.

12. Provide copies of each work order generated to investigate leaks reported by customers of the utility from September 1, 2018, to the date of the issuance of this Order.

13. Does the utility have a policy or operating procedure in place that addresses the process and the length of time it should take for the utility to fix a known or reported leaking water line? If yes, provide a copy of the policy or operating procedure.

14. Provide a general asset ledger listing identifying all new equipment purchased by the utility from January 1, 2018, to the date of the issuance of this Order used in water loss reduction efforts (e.g., listening devices, flow meters, metal detectors, hand tools, etc.).

15. Provide the type of training and the total amount of time the utility's personnel have received for leak detection and repairs since January 1, 2015, to the date of the issuance of this Order. List the personnel and dates of training.

16. Does the utility have a policy to identify errors that result in missed customer billings or under billings of customer accounts? If so, provide a copy of the policy.

17. If the utility produces and treats water for its distribution system, provide the date that the utility's water treatment plant meter was last tested and state how frequently the utility's water treatment plant meter is tested. Provide a copy of the most recent meter test results.

18. Provide the dates on which the utility's master meters were last tested and the results of the tests.

19. Provide the utility's procedure and schedule for testing its master meters and customer meters.

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20. State the number of meters that have been replaced by the utility from January 1, 2018, to the date of the issuance of this Order.

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21. Provide the type of metering equipment, including brands and model numbers, the utility uses.

22. State whether the utility utilizes supervisory control and data acquisition (SCADA) technology within its system.

23. State whether the utility utilizes telemetry within its system.

24. State whether all meters within the utility's distribution area are read monthly. If all meters are not read monthly state the reasons why not.

25. What training is provided to the utility's meter readers?

26. Does the utility utilize master meter zones in leak detection? If yes, 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.

27. State whether the utility uses a system-wide hydraulic model to evaluate the pressure zones and flow in the utility's distribution system.

28. Does the utility manager regularly report the water loss reduction efforts to the water utility's board of commissioners? Provide copies of any written reports, memorandums, letters, emails, or minutes from January 1, 2018, to the date of the issuance of this Order that details the efforts of the utility manager in reducing water loss as reported to the water utility's board of commissioners.

29. For the period from January 1, 2015, to the date of the issuance of this Order, discuss whether the water utility's board of commissioners has placed any

deadlines or target dates on the utility for achieving a reduction in the amount of water loss.

30. Provide a list of the utility 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.

31. Provide the total salary of the general manager/superintendent of the water utility for calendar years 2017 and 2018.

32. Provide a copy of the most recent signed employment contract between the general manager/superintendent and the utility.

33. State the average age, with the high and low ages, of the utility's distribution mains.

34. "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 the utility's service connections.

35. Has the utility mapped the entire distribution area for service connections to include mapping of its system, and identifying parts of its system with repeated breaks?

36. Provide a copy of the utility's policy for dealing with apparent theft of water.

37. Provide documentation of any request by the utility from January 1, 2017, to the date of the issuance of this Order to the county attorney or commonwealth attorney's office for the prosecution of any person for the theft of water.

a. State whether the utility provided information related to the request for prosecution to the county attorney or commonwealth attorney's office for this time frame.

b. If the response to Item 37a. above is confirmed, state to which office the utility provided the information, whether any action was taken on behalf of the utility to prosecute any person for theft of water, and provide copies of the documentation and correspondence related to the prosecution.

38. Provide the utility's policy for determining whether a leak adjustment to a customer's account is warranted and identify the person(s) that approve leak adjustments.

39. State whether the utility's tariff permits the utility to adjust late charges when making a leak adjustment.

40. Provide a copy of the utility's most recent Leak Adjustment Worksheet that was used by the utility and explain what software is being used by the utility to generate the Leak Adjustment Worksheet. If the utility is using Microsoft Excel to generate the Leak Adjustment Worksheet, then provide a copy of the most recent Leak Adjustment Worksheet used by the utility in electronic format with all rows unprotected and all formulas intact.

41. State whether the utility has conducted a comprehensive water audit, and if so, provide a copy of the most recent water audit.

42. Provide a copy of the utility's procedure for monitoring and documenting withdrawals from the utility's distribution system by fire departments. If no document exists, explain the process in detail.

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a. For each fire department that made a withdrawal from the utility's system from January 1, 2018, to the date of the issuance of this Order, provide a copy of the fire department's estimate of its withdrawal.

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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 Order, state the actions the utility implemented to correct the failure.

c. Provide the date on which the utility 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 the utility 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.

43. Explain how the utility accounts for flushing when determining water loss for its system.

44. Provide the type of flushing equipment that the utility uses.

45. Provide the utility's system flushing records, by month, from January 1, 2018, to the date of the issuance of this Order, and describe the formula relied upon, identifying all variables, and all assumptions and workpapers utilized to produce this information.

Rattlesnake Ridge Response to Appendix C

1. See Attached forms

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Water Ut	ility:	Rattlesnal	ke Ridge Water Distric	t PWSID: H	<u> </u>	
For the N	Nonth of:	January		Year:	2018	
1	PRODUC	TION COST PER	THOUSAND	<u> </u>		
	TRODUC		moodand	(insert cost)	·	
2	PURCHA	SECOSTPERT	HOUSAND	()	,	
	WATER P	RODUCED or P	URCHASED		GALLONS	
3	Water Pro			-	53,814,000	99.7%
4	Water Pur	chased			<u>55,814,000</u> 165,000	99.7% 0.3%
5			TOTAL PRODUCED A	ND PURCHASED	53,979,000	0.070
6			TOTAL COST #V/	ALUE!		
	WATER S	OLD				
_	_				12,798,780	
7	Residentia				2,978,500	
8	Commerc	ial				
9	Industrial	in a Oto the s				
10 11		ing Stations				
11 12	Wholesale					
12	Uther Sale	es (explain)				
13 14				AL WATER SOLD ATER NOT SOLD	15,777,280 38,201,720	29.2% 70.8%
, 15		eatment Plan	R USAGE			
16		ter Treatment		1		
17	System F				180,000	#VALUE!
18		irtment Usage			409,955	#VALUE!
19	DBP Flus	hing		I	403,000	
			DBP Mainter	nance	0	
20				TOTAL USAGE	637,286	
21			WATER LOSS PE			69.6%
	BREAKD	OWN OF WATE				
22	Tank Ove	rflows (other that	n for DBP maintenance)		
23	Excavatio	,			1,451,4111	#VALUE!
24	Repaired	Line Breaks				
25	Unknown				36,113,023	66.9%
26					37,564,434	
20 27			TOTAL WATER NO		#VALUE!	
21			COST OF WATER NO	I SOLD OR USED		
			W RATE AND COST:			
28	511110			"Unknown Loss"	36,113,023	
29				% "Unknown Loss"	<u>66.9%</u>	
30				er of Days in <u>Period</u>		ļ
31		"(Jnknown Loss" per Da			
32			"Unknown Loss	' per Minute (GPM)	808.98	
33			"I lakaowa I c	oss" Cost for Month	#VALUE!	

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	Monthly Water Use Re	<u>eport</u>		
Water Utility:	Rattlesnake Rids e Water District	PWSID:	<u>Ky0220555</u>	
For the Month of:	February	Year:	<u>2018</u>	
	TION COST PER THOUSAND SE COST PER THOUSAND	(insert cost) (insert cost)		

		GALLONS	
	WATER PRODUCED OF PURCHASED		
3	Water Produced	41,893,000	98.3%
4	Water Purchased	720,000	1.7%
5		42,613,000	
6	TOTAL COST #VALUE!		
	WATER SOLD		
7	Residential	14,346,834	
8	Commercial	5,345,370	
9	Industrial		
10	Bulk Loading Stations		
11	Wholesale		
12	Other Sales (explain)		
13	TOTAL WATER SOLD	, ,	46.2%
14	TOTAL WATER NOT SOLD	22,920,796	53.8%
15	BREAKDOWN OF WATER USAGE Water Treatment Plant	2,000,000	
15		2,000,000	
10	Wastewater Treatment	417,,8088	
17	Our terre Elevels'e e		/////// / /
17	System Flushing DBP Maintenance		#VALUE!
18		U U	#VALUE!
19	DBP Flushing		
20	TOTAL USAGE	2,476,884	
21	WATER LOSS PERCENTAGE FOR RAT	, ,	
	BREAKDOWN OF WATER LOST		
22	Tank Overflows (other than for DBP maintenance)		
23	Excavation Breaks	<u>1,518,11</u> #	[#] VALUE!
24	Repaired Line Breaks		
25	Unknown Loss	18,925,767	44.4%
26	TOTAL WATER NOT SOLD OR USE	20,443,912	
27	COST OF WATER NOT SOLD OR USED		
	"UNKNOWN LOSS" FLOW RATE AND COST:		
28	"Unknown Loss	· · ·	
29	% "Unknown Loss	s" <u>44.4</u> %	
30	Number of Days in Period		
31	"Unknown Loss" per Day (Gallons per Day	() 675,920	
32	"Unknown Loss" per Minute (GPM		
33	"Unknown Loss" Cost for Mont	-	

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		Mon	thly Water Use I	Report		
W Util	ity:	Rattlesnake I	Ridge Water District		Ky0220555	
For the M	onth of:	March		Year:	2018	
					2010	
				-	I	
1	PRODUC.	TION COST PER TH		(lineart aget)		
2		SE COST PER THO		('insert cost)	<u>.</u>	
-				(insert cost)	·	
					GALLONS	
	WATER F	RODUCED or PUR	CHASED	_		
3	Water Pro			_	45,460,0001	100.0%
4	Water Pu					0.0%
5 6			TAL PRODUCED AND TAL COST #VALU		45,460,000	
0	WATER S		TAL COST #VALU			
7	Residentia			Г	9,766,790	
8	Commerc				1,985,450	
9	Industrial					
10		ling Stations				
11	Wholesal			_		
12	Other Sal	es (explain)		L		
13			τοται ν	NATER SOLD	11,752,240	25.9%
13 14				ER NOT SOLD	33,70'i',760	23.9% 74.1%
					55,701,700	/ 4.1 /0
"	BREAKD	OWN OF WATER U	ISAGE	-		
15		eatment Plant		Ļ	2,000,000	
16		ter Treatment Plant			207 605	
17 18	System F			1	327,685 35,250	#VALUE! #VALUE!
18 19	DBP Flus	artment Usage	DBP Maintenand	e -	<u>33,230</u>	#VALUE!
1)		ining .	BBI Maintonant		9	
20			Т	OTAL USAGE	2,362,935	
21			WATER LOSS PERCE			
	BREAK	DOWN OF WATER	LOST	-		69.0
22	Tank Ove	erflows (other than fo	or DBP maintenance)	-		
		.			(7.1.10)	<i></i>
23	Excavation	on Breaks			6/4,429	#VALUE!
	.					
24		Line Breaks		-	0	
25	Unknown	LOSS			30,670,396	67.5%
26		Т	OTAL WATER NOT SO	OLD OR USED	31,344,825	
27			ST OF WATER NOT SO		#VALUE!	
	"UNKNC	WN LOSS" FLOW				-
28				Unknown Loss"	30,670,396	_
29				Unknown Loss"	67.5%	
30				Days in Period		-
31 32		UN	known Loss" per Day (G "Unknown Loss" pe		989,368 687.06	
32					007.00 #\/\\	

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W-● Utility:		Rattlesnake Ridge Water District			<u>PWSID: Ky0220555</u>				
For the N	Nonth of:	April		Year	: [<u>2018</u>			
1 2		TION COST PEI SE COST PER T		(insert (insert					
						GALLONS			
2		RODUCED or F	URCHASED				00.00/		
3	Water Pro				_	46,774,000	99.2%		
4 5	Water Pur	cnased				400,000	0.8%		
6			TOTAL PRODUCED	AND PORCHAS	ED	47,174,000			
0	WATER S			ALUE:					
7	Residentia				Г	12,536,640			
8	Commerci				_	3,080,560			
9	Industrial				-	2,000,000			
10		ing Stations			-				
11	Wholesale				_				
12	Other Sale	es (explain)							
13			тот	TAL WATER SC	DLD	15,617,200	33.1%		
14			TOTAL V	VATER NOT SC	DLD	<u>31,556,800</u>	66.9%		
15 16 17 18 19	Water Tre Wastewat System Fl	rtment Usage	R USAGE	enance		3,000,000 192,,8255 46,850 (#VALUE!		
20				TOTAL US	٩GE	3,239,675	,,		
21			WATER LOSS PE						
0.0	BREAKD	OWN OF WAT	ER LOST				-		
22			n for DBP maintenance	e)			-		
23	Excavatio					<u>9</u> 75.554	#VALUE!		
24		Line Breaks			_		_		
25	Unknown	Loss				27,341,571	58.0%		
26			TOTAL WATER NO			28,317,125			
27			COST OF WATER NO	OT SOLD OR US	SED	#VALUE!			
20	"UNKNO	WN LOSS" FLO	W RATE AND COST:			05 0 41 55	1		
28				"Unknown L		27,341,571			
29 20				% "Unknown L		<u>58.0%</u> 30			
30				er of Daysin Pe		JU	1		
31		"	Unknown Loss" per Da			911,380			
32 33				s" per Minute (G		632.91			
22			UNKNOWN L	.oss" Cost for M	UIIII	#VALUE!			

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Wr Utility:		Rattlesna	ke Rid.9.e Water I	District	PWSID	:I	Ky0220555		
For t	he M	onth of:	May			Year:	I	<u>2018</u>	
	1 2					(insert co	,		
4	2	PURCHAS	E COST PER	THOUSAND		(insert cos	st)	••••••	
								GALLONS	
	3	WATER P Water Proc	RODUCED or I duced	PURCHASED				48,142,0001	100.0%
									100.070
	4	Water Pure	chased						0.0%
	5			TOTAL PRODUC		CHASED)	48,142,000	
	6	WATER S		TOTAL COST	#VALUE!			-	
	7	Residentia							
	8	Commercia						10,969,870	
	9	Industrial					-	2,679,210	
	0	Bulk Loadi	ng Stations						
1	1	Wholesale							
1	12	OtherSa	les(explain) -				╞		
	13			тот	TOTAL WAT			13,649,080	28.4%
	14			101	AL WATER N	101 SUL	U	<u>34,492,920</u>	71.6%
		BREAKDO	OWN OF WATE	ER USAGE					
1	15	Water Tre	atment Plan					2,500,000	
	16	Wastewat	er Treatmen					354,789	
	17	System Fl					-		#VALUE!
	18		rtment Usage					0	
	19	DBP Flush	ning	DBP M	aintenance				
/	20				ΤΟΤΑ	L USAG	Е	2,854,789	
	21			WATER LOS	S PERCENT	AGE FOR	RA	TE <u>PURPOSES</u>	
		BREAKD	OWN OF WAT						
	22			an for DBP mainter	nance)		I		
	23	Excavatio					╉	361,033	, #VALUE!
	24 25	•	Line Breaks					21 277 000	
	25	Unknown	Loss					31,277,098	65.0%
	26			TOTAL WATE	R NOT SOLD	OR USE	D	31,638,131	
	27			COST OF WATER	R NOT SOLD	OR USE	D	#VALUE!	
			NN LOSS" FI	OW RATE AND CO	DST:				
	28 29					nown Los nown Los	s" s"	31,277,098 <u>65.0%</u>	

	monthly water ose keport	
30	(insert da ys of operation during month) Number of Da ys in Period	_
31	"Unknown Loss" per Day (Gallons per Day)	
32	"Unknown Loss" per Minute (GPM)	
33	"Unknown Loss" Cost for Month #VALUE!	

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w,,,	Utility:	Rattlesna	ke Ridge W	ater District	P	WSID:I	<u>Ky0220555</u>	
For the M	onth of:	June			Y	/ear: I	<u>2018</u>	
1 2		TION COST PEI SE COST PER 1				sert cost)		
							GALLONS	
3 4 5 6	WATER F Water Pro Water Pur			ODUCED AND		HASED	45,787,000 310,000 46,097,000	99.3% 0.7%
7 8 9 10 11 12	Wholesale	al ial ling Stations	то	TAL WATER S	OLD		14,917,280 2,888,740 0	
13 14				TOTAL TOTAL WAT	WATER		17,806,020 28,290,980	38.6% 61.4%
5 16 17 18 19	Water Tre Wastewa System F	artment Usag <u>e</u>	ant	DBP Maintenan	nce		2,000,000 754,474 53,410 0	#VALUE! #VALUE!
20					TOTAL		2,807,884	
21	BBEVKI	DOWN OF WAT	WATE	R LOSS PERC	ENTAG	E FOR R	ATE <u>PURPOSES</u>	<u>55.3%i</u>
22 23 24 25	Tank Ove Excavatio	erflows (other tha on Breaks Line Breaks		naintenance)			<u>50,000</u> <u>2,046,891</u> 0 23,386,205	#VALUE! #VALUE! 50.7%

26	TOTAL WATER NOT SOLD OR USED	25,483,096
27	COST OF WATER NOT SOLD OR USED	#VALUE!

	"UNKNOWN LOSS" FLOW RATE AND COST:	
28	"Unknown Loss"	23,386,205
29	% "Unknown Loss"	<u>.50.7%</u>
30	(insert days of operation during month) Number of Days in Period.	-
	"Unknown Loss" per Day (Gallons per Day)	
	"Unknown Loss" per Minute (GPM)	

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Wf>""":Util	ity: Rattlesnake Ri	Rattlesnake Rid.9.e Water District			Ky0220555	
For the Mo	nth of: JULY	<u> </u>	Year:	j	<u>2018</u>	
				I	I	
1	PRODUCTION COST PER THO	DUSAND	(insert co	st)		
2	PURCHASE COST PER THOU	SAND	•	,	:::'.	
			(-)		
	WATER PRODUCED or PURC	HASED			GALLONS	
3	Water Produced				55,384,000	99.6%
4	Water Purchased			_	220,000	0.4%
5	тот	AL PRODUCED AND PUR			- 55,604,000	
6		AL COST #VALUE!				
7	WATER SOLD					
7 8	Residential Commercial				15.000.000	
8 9	Industrial				15,336,890	
10	Bulk Loading Stations				17,_043,630	
10	Wholesale			_		
				_		
12	Other Sales (explain) $$			•.		
13		TOTAL WAT			32,380,520	58.2%
14		TOTAL WATER N	IOT SOLI)	23,223,480	41.8%
7 •16 17 18 19	BREAKDOWN OF WATER US Water Treatment Plan Wastewater Treatment System Flushing Fire Department Usage DBP Flushing	AGE DBP Maintenance		Т	1,500,000 637,634 0 0	#VALUE!
20		-	L USAGI		2,137,634_	
21		VATER LOSS PERCENT	AGE FOR	RA	TE <u>PURPOSES(</u>	<u>37.9%(</u>
22	BREAKDOWN OF WATER LO					
22	Tank Overflows (other than for Excavation Breaks	DBP maintenance)			2.625.9331	#\/^!!!⊏!
24	Repaired Line Breaks				<u>2,02.0,9.0.0</u>	#VALUL!
25	Unknown Loss				18,459,913	33.2%
26 27		TAL WATER NOT SOLD T OF WATER NOT SOLD			21,085,846 #VALUE!	
	UNKNOWN LOSS" FLOW R	ATE AND COST.				
28 29		"Unkı % "Unkı	nown Loss	s"	18,459,913 <u>33.2%</u>	
30 31	(insert days of operation during mor					
31 32	ÜNKN	own Loss" per Day (Gallor "Unknown Loss" per Mir				
		"Unknown Loss" per Mir "Unknown Loss" Cos	•		#VALUE!	

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W;,.•r Utility:		Rattlesn	ake Ridge Water Dist	rict	PWSID	: <u>!</u> Ł	<u>(y0220555</u>	
For the N of:	lonth	August			Year:		<u>2018</u>	
01.								
1	PRODUC	TION COST PE	R THOUSAND				<u>I</u>	
2	PURCHAS	SE COST PER	THOUSAND		(insert cos			
					(insert co	st)	GALLONS	
,		RODUCED or	PURCHASED					100.00/
3	Water Pro	aucea					52,562,0001	100.0%
4	Water Pur	chased						0.0%
5 6			TOTAL PRODUCE TOTAL COST	ED AND PUR #VALUE!	CHASE	D	52,562,000	
	WATER S	OLD	TOTAL COST	#VALUE:				
						_		
7	Residentia Commerc						9,844,290	
8 9	Industrial	lai					3,296,230	
10		ing Stations						
11	Wholesale							
12	Other Sale	es (explain)						
13			r	TOTAL WAT	ER SOL	D	13,140,520	25.0%
14			ΤΟΤΑ	L WATER N	OT SOL	D	39,421,480	75.0%
-			ER USAGE				2,000,000	
, <u>,</u> 5		atment Plan					can 225522	
16 17	System F	er Treatmen				J	639,225533 39 842	#VALUE!
18		rtment Usage	DBP Ma	intenance			,	#VALUE!
19	DBP Flus							
	Tark O							
22 23	Excavatio		an for DBP maintena	ince)			2 270 (21)	
23 24		Line Breaks					<u>2,270,621</u>	#VALUE!
25	Unknown						34,471,764	65.6%
26			TOTAL WATER	NOT SOLD	OR USE	D	36,742,385	
27			COST OF WATER	NOT SOLD	OR USE	D	#VALUE!	
		WN LOSS" FL	OW RATE AND CO	ST:			T	
28					own Los	s"	34,471,764	
29					nown Los		<u>65.6%</u>	
30	1			mber of Day			<u>31</u> .	
31	1		manual de la calle	Day (Callan	o por Do	(/)	1,111,992	
32			"Unknown Loss" per	Loss" per Min			772.22	

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W.;,.,,.,Utility:		Rattlesna	ke Rid.9.e Water	District	PWSIE):I	Ky0220555	
For the M	onth of:	Septemb	er		Year:	I	<u>2018</u>	
1 2		FION COST PER SE COST PER T			(insert cos (INSert (GALLONS	
		RODUCED or F	PURCHASED					
3	Water Pro					_	52,600,000	99.6%
4	Water Pur						235,000	0.4%
5			TOTAL PRODU	CED AND PU	RCHASE	D	52,835,000	
6			TOTAL COST	#VALUE!				
_	WATER S							
7	Residentia					_	14 174 200	
8	Commerci	ai					<u>14,174,290</u> 5,245,120	
9 10	Industrial	ing Stations					<u>5,345,130</u>	
10	Wholesale	•						
	vinolesale	,				_		
12	Other Sa	les (explain) -			•	_ -		
13				TOTAL WA	TER SOL	D	19,519,420	36.9%
14			TO	TAL WATER			33,315,580	63.1%
5		OWN OF WATE	RUSAGE					
		atment Plan					2,500,000	
16		er Treatment					520 (20	/////////
17 18	System Fl						539,628	#VALUE!
18	DBP Flus	rtment Usage		Maintenance			58,558	#VALUE!
1)		ining		Viaintenance			9	
20				тот	AL USAC	GΕ	3,098,186	
21			WATER LO	SS PERCENT	AGE FO	R RA	TE <u>PURPOSES</u>	<u>57.2%i</u>
	BREAKD	OWN OF WAT	ER LOST					
22	Tank Ove	rflows (other tha	in for DBP mainte	enance)				
23	Excavatio			,			4,216,283	#VALUE!
24	Repaired	Line Breaks					0	
25	Unknown	Loss					26,001,111	49.2%
26			TOTAL WATE		OR USE	ED	30,217,394	
27			COST OF WATE		OR USE	ED	#VALUE!	
								L
	"UNKNO	WN LOSS" FLC	W RATE AND C	OST:				
28	1			"Unk	nown Los	ss"	26,001,111	
29					nown Los			
30	(insert da	ays of operation duri	- ,	Number of Da	-		49.2%	
31		"	'Unknown Loss"	• •	•	• •		
32			"Unknow	n Loss" per Mi	inute (GP	M)		

"Unknown Loss" Cost for Month

#VALUE!

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W Utility:		Rattlesn	ake Ridge Water Dis	strict F	wsid:	Ky0220555	
For the M of:	onth	Oct		Y	∕ear: I	<u>2018</u>	
1 2		TION COST PE SE COST PER	R THOUSAND THOUSAND	,	insert cost)		
				(11	nsert cost) ======== GALLONS	
2			PURCHASED				
3	Water Proc					53,726,000	99.5%
4	Water Purc	chased			-	260.000	0.5%
5			TOTAL PRODUCE		IASED	53,986,0 <u>00</u>	
6			TOTAL COST	#VALUE!	•		
_	WATER S						
7	Residentia					<u>9,057,120</u>	
8 9	Commercia	al			_	3,678,570	
9 10	Industrial Bulk Loadi	ng Stations			-		
10	Wholesale				_		
	VIIOICOUIC				-		
12	Other Sal	les(explain)				- <u></u> ,	
13			1		SOLD	12,735,690	23.6%
14				L WATER NOT		41,250,310	<u>76.4%</u>
16 17 18 19 20 21	Water Trea Wastewate System Flu Fire Depar DBP Flush	tment Usage ing	DBP Mai	intenance TOTAL ERCENTAGE FO		38,200	#VALUE! #VALUE!
22		OWN OF WATE			l r	00.000	
22	Excavation		an for DBP maintena		I	20,000 4,541,148	#VALUE!
24		Line Breaks				<u>,,,,,,,,</u>	#VALUE!
25	Unknown				L	32,933,073	61.0%
						- ,,	
26 27			TOTAL WATER COST OF WATER			37,494,220 #VALUE!	
	UNKNOV	VN LOSS" FL	OW RATE AND COS	ST:		i	
28				"Unknow	n Loss"	32,933,073	
29				% "Unknow		<u>61.0%</u>	
30				mber of Days in		31.	
31			"Unknown Loss" per "Unknown L	Day (Gallons poss" per Minute		1,062,357 737.75	

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		M	onthly Water Us			
W Utility:		Rattlesna	ke Ridge Water Distric	t PWSID:	<u>Ky0220555</u>	
For the N	lonth of:	Novembe	er	Year:	<u>2018</u>	
1 2		TION COST PER		(insert <u>cost)</u> (insert cost) =====================================	
					GALLONS	
	WATER P	RODUCED or P	URCHASED			
3	Water Proc	duced		_	<u>53,726.000</u> I	100.0%
4	Water Pure	chased		_		0.0%
5			TOTAL PRODUCED A	NDPURCHASED	53,726,0 <u>00</u>	_
6	WATER S		TOTAL COST #VA	ALUE!		
	WAIER S					
7	Residentia	al		Γ	19,863,540	
8	Commercia	al			4,037,390	
9	Industrial					
10	Bulk Loadi	ing Stations				
11	Wholesale	;				
12	Other Sale	es (explain)				
13				AL WATER SOLD	23,900,930	44.5%
14			TOTAL W	ATER NOT SOLD	<u>29,825,070</u>	55.5%
F			R USAGE	Г		
,,5		atment Plan			2,500,000	
i6		er Treatmen		-		
17	System Fl	ushing			371,661	#VALUE!
					71,702	
18	•	rtment Usage	DBP Mainter	nance	0	#VALUE!
19	DBP Flush	ning				
20				TOTAL USAGE	2,943,363	
21				ENTAGE FOR RATE <u>P</u>	URPOSES 50.00%	
22		OWN OF WATER				
22 23			n for DBP maintenance)	0.007.700	- μ. μ. μ
23 24	Excavation Repaired	n Breaks Line Breaks			<u>6,267,706^</u> 0	I #VALUE!
25	Unknown			-	20,614,001	38.4%
26			TOTAL WATER NO			
20			COST OF WATER NO		26,881,707 #VALUE!	
			COULCE WATER NU		#VALUE!	
						-
00	"UNKNO	WN LOSS" FLO	W RATE AND COST:			
28				"Unknown Loss"	20,614,001	
29				% "Unknown Loss"	<u>38.4%</u>	
30				er of Days in Period	31.	
31		"	Unknown Loss" per Da		664,968	
				" per Minute (GPM)	461.78	
			"Unknown Lo	oss" Cost for Month	#VALUE!	

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vy:at r Uti	lity: Rattlesnake Rid.9.e Water District	PWSID:	I	<u>Ky0220555</u>	
For the M	onth of: December	Year:	I	<u>2018</u>	
1 2	PURCHASE COST PER THOUSAND	isert <u>COSt</u> insert Co		+	
	WATER PRODUCED or PURCHASED			GALLONS	
3	Water Produced			52,§30,000	99.1%
4	Water Purchased			500.000	0.9%
5 6	TOTAL PRODUCED AND PURCH TOTAL COST #VALUE!	HASED		53,030,000.	
	WATER SOLD				
7 8	Residential Commercial			11,112,040 2,656,560	
9	Industrial				
10 11	Bulk Loading Stations Wholesale		_		
12	Other Sales (explain)				
13	TOTAL WATER			13,768,600	26.0%
14	TOTAL WATER NOT	T SOLD)	<u>39,261,400</u>	74.0%
,5	BREAKDOWN OF WATER USAGE Water Treatment Plant			2,000,000	
16	Wastewater Treatment Plant				
17 18	System Flushing				#VALUE!
18 19	Fire Department Usage DBP Flushing DBP Maintenance		_	41,300 0	#VALUE!
20			-	2 400 457	
20	TOTAL	USAGE	-	2,490,457	
21	WATER LOSS PERCENTAG	E FOR	RAT	E <u>PURPOSES</u>	<u>69.3%</u>
22	BREAKDOWN OF WATER LOST Tank Overflows (other than for DBP maintenance)				
23	Excavation Breaks			1,799,8561	#\/ALLIEI
24	Repaired Line Breaks			1,799,8301	#VALUE!
25	Unknown Loss			34,971,087	65.9%
26 27	TOTAL WATER NOT SOLD OF COST OF WATER NOT SOLD OF			36,770,943 #VALUE!	
	"UNKNOWN LOSS" FLOW RATE AND COST:			<u>ا</u>	
28 29	"Unknow % "Unknow	vn Loss vn Loss	"	34,971,087 <u>65.9%</u>	

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	"Unknown Loss" Cost for Month		#VALUE!		
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W?'='- Uti	ility:	Rattlesna	ke Ridge Water District	PWSID:	Ky0220555	
For the Month of:		January		Year:	2019	
1 PRODUCTION 2 PURCHASE CC				(insert cost) (insert cost)		
		RODUCED or F	URCHASED		GALLONS	
3	Water Proc	luced			56.099.000	100.0%
4	Water Purc	chased				0.0%
5 6			TOTAL PRODUCED A TOTAL COST #V	AND PURCHASED ALUE!	56,099,000	
7 8 9 10 11 12 13 14	Wholesale	l al ng Stations		AL WATER SOLD	12.309.660	21.9% 78.1%
5 16 17 18 19	Water Trea Wastewate System Flu	tment Usage	R USAGE	nance	3,000,000 682,710 36,928 0	#VALUE! #VALUE!
20				TOTAL USAGE	3,719,638	
20			WATER LOSS PE		RATE <u>PURPOSES</u>	71.4%
22 23 24 25	Tank Over Excavation	n Breaks _ine Breaks	ER LOST n for DBP maintenance	9)	5,958,974 0 34,110,728	
20			TOTAL WATER NO		10 000 700	

26TOTAL WATER NOT SOLD OR USED40,069,70227COST OF WATER NOT SOLD OR USED#VALUE!

	"UNKNOWN LOSS" FLOW RATE AND COST:	
28	"Unknown Loss"	34,110,728
29	% "Unknown Loss"	60.8%
30	Number of Days in Period	311
31	"Unknown Loss" per Day (Gallons per Day)	1,100,346
32	"Unknown Loss" per Minute (GPM)	764.13
33	"Unknown Loss" Cost for Month	#\/ALLIE!

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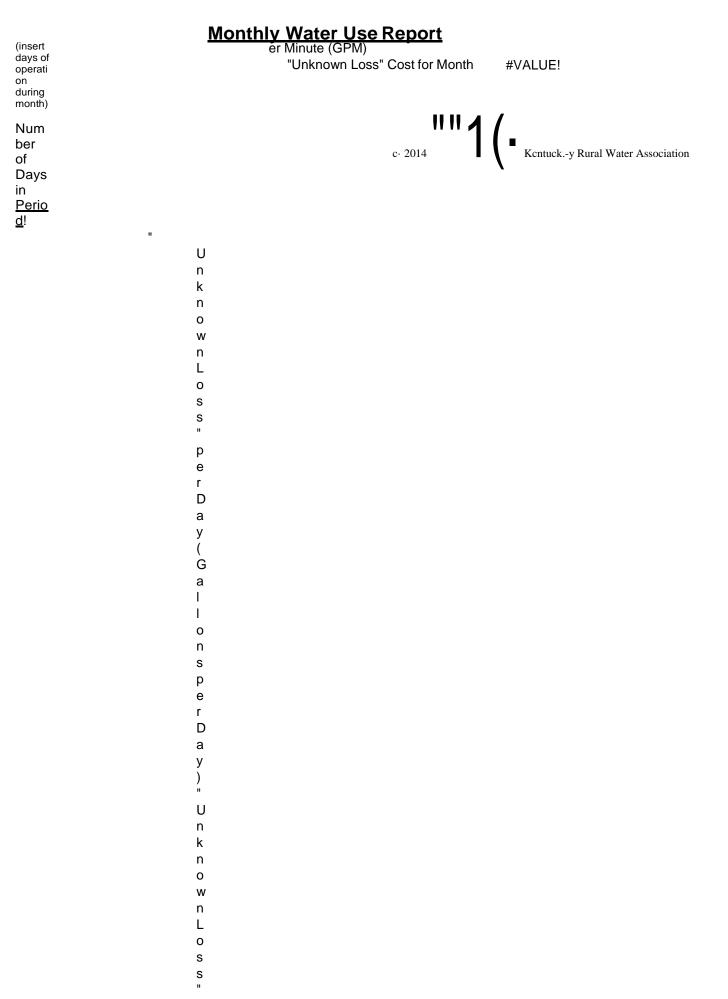
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W Utility:		Rattlesna	ake Rid.9.e Water	District	PWSID	<u>Ky0220555</u>	
For the M	onth of:	Feb			Year:	<u>2019</u>	
1 2		TION COST PE SE COST PER	R THOUSAND THOUSAND		(insert <u>cost)</u> ! (insert cost)	<u>+</u>	
						GALLONS	
		RODUCED or	PURCHASED				
3	Water Pro					<u>51,973,000</u>	99.5%
4 5	Water Pure	cnased				275,000	0.5%
Э			TOTAL PRODU	CED AND PUP	CHASED	52,248,000	
6			TOTAL COST	#VALUE!			
	WATER S						
7	Residentia						
8	Commercia	al				13,791,118	
9 10	Industrial	ing Stations				<u>2,985,850</u>	
10	Wholesale						
11	Wholesale						
12	Other Sa	les (explain)					
13				TOTAL WAT		16,776,968	32.1%
14			то	TAL WATER N			67.9%
/ .5		OWN OF WA atment Plan	TER USAGE				
16		er Treatment				3,000,000	
17	System Fl					694,222	#VALUE!
18		rtment Usage				47,300	#VALUE!
19	DBP Flush		DBP N	<i>l</i> aintenance		0	WWILDE.
20					L USAGE	3,741,522_	
21				SS PERCENT	AGE FOR	RATE <u>PURPOSES</u>	<u>60.7%1</u>
22		OWN OF WAT					
22 23	Excavation	•	an for DBP mainte	enance)		4 400 000	
23		Line Breaks					8 #VALUE!
25	Unknown					27,600,847	52.8%
	CHICHOWIT	2000				21,000,047	02.070
26			TOTAL WATE	R NOT SOLD	OR USED	31,729,510	
27			COST OF WATE	R NOT SOLD	OR USED	#VALUE!	
	_						

	"UNKNOWN LOSS" FLOW RATE AND COST:		
28		"Unknown Loss"	27,600,847
28 29		% "Unknown Loss"	<u>52.8%</u>
30		_	
30 31 32		-	
32			
33			



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2. A. The water district uses a form supplied to us by Rural Water to calculate the amount of water used in flushing, disinfection and line breaks by putting in the size of the line, pressure, the size of the crack or break and the estimated time it leaked or was flushed to determine the water lost or flushed.

2. B. David Gifford Assistant Manager

2.C. The District fixes all leaks as soon as we find them or a leak Is reported. We do not hesitate fixing any leaks and we only report water the has leaked, flushed, or used in fire protection or tank overflows do to telemetry failure.

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3. Yes, See attached form

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WATER LEAK DETECTION PLAN

CHECK SCADA SYSTEM DAILEY TO DETERMINE TANK LEVELS AND WHAT TANK LEVELS ARE ABNORMALLY FALLING. CHECK WATER PUMPED OUT FROM PLANT DAILEY. CHECK AREAS IN SYSTEM WHERE TANK LEVELS ARE FALLING. ONCE AREA IS DTERMINED TO HAVE A POSSIBLE LEAK OR LEAKS SEND PERSONELL TO BEGIN LOCATING LEAKS.

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4. Yes, It is explained in our detection and water loss reduction plan on the form in question# 3 .a

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5. We as a District did not have a water loss reduction plan in use until January 2018 when the board required us to start a water loss and reduction plan.

6. The District does not have a Capital Improvement Plan in place at this time.

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7. The District has Bluegrass Engineering of Georgetown ,KY as its engineering firm.

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8. The District does a monthly inspection of all of its pump stations, plant and storage facilities and it is documented on form from each site. See attached form.

Pump Station Inspection

Туре:	(())	Centrifugal Vertical Tur	Pump bine Pump	(())	Axia Imm			'ump ^P ump			
Location:													
Number of p	ump	os ir	n station:					-,					
Size <u>motor</u> :				Rat	ting of	pu	mp <u>.</u>						
Year pumps	stati	on ۱	was construct	ed:									
-		-	s of wear and	-				(,	Yes	()	No
2. Are there If yes, ex		-	ouplingalignn	nent problem	าร?			()	Yes	()	No
a. Does	cou	ıplir	ng require gre	ease?				()	Yes	()	No
3. Have bea	aring	gs k	been greased	1?				()	Yes	()	No
4. Is there s	suffic	cier	nt packing?					Ι()	Yes	()	No
5. Are there	an	y vio	olations?					()	Yes	()	No
a. Are al	ll ho	ld-c	down bolts or	n pumps and	moto	rs ti	ghter	ned p	orop	erly?			
								()	Yes	()	No
6. Is there a	in e	xce	ssive noise f	rom the pum	p?			()	Yes	()	No
✓ Is there a	iny r	ера	ainting neede	èd?				()	Yes	()	No
8 _Are there If yes, wh			sible signsof	corrosion?				()	Yes	()	No
9. Will one p	oum	p m	eet the dema	and from cus	tomer	s fo	or wat	ter se	ervi	ce?			
								()	Yes	()	No
10.Do both p	ump	os r	need to be op	erated toget	her?			()	Yes	()	No

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RATER STORAGE INSPECTION

Туре:		ated () Star nd Storage (-··		1			
Size	:	Locat	tion:				
Date	Constructed:						
Туре	Tank:	Welded Metal Concrete) Steel-	-lined g	lass		
SITE	:						
1. 2.	Does site slop Is ground sof	pe away from banl t or soggy? (()<br) Yes (Yes (_) No			
FOUN	DATIONS:						
1. 2. 3.	Is the concre	te foundation cra te foundation le p between riser k) No	vel? ().Yes	()		
4.	Condition of	anchor bolts? (l Yes		No ·		
COLU	MNS: (Elevate	d Tanks Only)					
1. 2. 3. 4.	Are they stra Is there any	ensation on colur ight? () Ye slack in the dia bolted connection () Poor	s () 1 gonal X-roo	No ds? (No) No
TANK	OR SRELL:						
1. 2.	the contour o	tion in tank bott f the steel? (seams concave?) Yes	() 1	10	larit	ies in
	() Y	e any rust strea es () No ence of water le					
3. 4. 5.	Condition of	metal loss by pi finish coat? (intermediate coa) Good		Fair (Bad.
6. 7. 8.	condition of Amount of sur	primer coat? (face area showin ding.on roof? (g rust?		Fair (No)	Bad

ACCESSORIES:

1.	Is there a safety climbing device or cage on the ladder: {). Yes () No
2.	Is there a target on tank? { Yes) No
	a. Is it working properly? Yes No
3. 4.	Does the utility have a climbing harness? () Yes () No Row often does the utility climb tank? () day) week {) month () other
5.	What is the condition of the over 5%,
	 a. Does overflow have a screen or flapper? () Screen () Flapper () either b. Any evidence of cross-connections? () Yes) No c. Rip-rap to prevent erosion at end of overflow? () Yes {) No
	-
COMM	IENTS:

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9. WC Gilbert-Manager

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David Gifford -Assistant Manager Jerry Callihan Field Foreman

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10. Yes the District works on leak detection every day by installing valves to eliminate problem areas such as creek crossing and other areas where water may not be surfacing. We also purchased a listening device and a portable flow meter to help detect leaks.

11. See Attached Files

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Mollthly E	xcavation Break Repo	ort					Area C	alculator
i -		t			diameter in	inches		
Rattlesna	ake Ridge Water District	(name of Water System)			le=		Insert the appr	oximate
<u>0</u> —•				Area=	0.000	sq.in.	dimensions of	of the hole or
t	Ку:0220555	l(PWSI D)			lan ath (in)	width (in)	crack to deter of the break. Ir	
Month -	Janua!)[-		Creak	length (in)	, ,	in the spreads	
Year	2018			Crack= Area=		0.2 sq. in.		
		1		/	0.0	9 9 . m.		
						(I)		
			UJ \$:C	Hole or	Area of	a. "iii		
			ċ	Crack?	hole or	E		Gallons Lost During
Date	Excavation Break Location	Excavator	:E		crack	0 Z	GPM	Break
1/2/2018	skanns flats rd	1.25	1444	crack	0.250	90	54	78,071
1/4/2018	daws run service		1444	crack	0.250	120	62	90,148
1/4/2018	da1Ns run service		1444	crack	0.150	120	37	54,089
1/4/2018	oats hill service		722	hole	0.500	80	136	98,139
1/8/2018	hitchins barber shop		180	hole	0.750	100	228	41,032
1/9/2018	bia run meter bust		1444	crack	0.150	50	24	34,914
1/12/2018	carter citv meter and rea		180	crack	0.150	120	37	6,742
1/12/2018	service at shane stevens		1444	hole	0.150	120	50	72,117
1/13/2018	rose ridae rea busted		180	crack	0.150	90	32	5,839
1/19/2018	dav rd service	1.19	1444	crack	0.150	100	34	49,376
1/19/2018	RT1 Adams service	1.35	1444	crack	0.250	120	62	90,148
1/19/2008	bavs store		1444	crack	0.150	120	37	54,089
1/19/2018	smith branch	1.29	1444	crack	0.250	100	57	82,294
1/19/2018	huffs run cat man		2888	crack	0.150	120	37	108,178
1/23/2018	fallsbranch	1.40	1444	crack	0.250	100	57	82,294
1/23/2018	6 inch golf corse	1.42	7220	crack	0.250	150	70	503,943
-		-						
		-						
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			1					
			İ					
								Ì

Total Gallons Lost Due to Excavation Breaks 1.451.411

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Monthly E	Excavation Break Repo	rt			diameter in	inchos	Area C	alculator
Rattlesn	ake Ridge Water District	j(name of Water System)		Area=			Insert the ap dimensions	proximate of the hole or
<u>C:</u>	K}'.0220555	j(PWSID)			length (in)	width (in)		rmine the area
Month	February	_		Crack=	6	0.5	in the spread	
Year	2018			Area=	-	sq. in.	1	
	2018							
			•;					
			:, C:	Hole or Crack?	Area of hole or	11. .; E		Gallons Lost During
			:§		crack	0		
Date	Excavation Break Location	Excavator	Ť			Ž	GPM	Break
		1.05						
2/3/2018 - 2/3/2018	webbville post office san branch	1.25 1.08	2888	crack	0.150	120	37	108,178
2/6/2018	edison rd service	1.00	1444	crack crack	0.150 0.250	120 100	37	54,089
2/6/2018	Grea areenhill 2'	1.23	2000		0.250	90	57 54	164,587
2/6/2018	ordon fork service	1.23	1444	crack crack	0.250	100	-	78,071
2/12/2018	charlev johnson ser		1444	crack	0.150	80	34	49,376
2/12/2018	holbrook rd ser		1444	crack	0.250	100	51 57	73,606 82,294
2/12/2018	binion br 1 " ser		2888	crack	0.150	100	34	98,752
2/13/2018	marvin aearhert ser	1.25	180	crack	0.500	80	102	18,350
2/13/2018	bia run8"	1.41	240	crack	1.500	130	390	93,569
2/13/2018	smith branch ser		1444	crack	0.250	100	57	82,294
2/14/2018	huffs run ser	1.35	4332	crack	0.150	130	39	168,892
2/15/2018	thompson branch		1444	crack	0.150	120	37	54,089
2/23/2018	4 " canes creek	1.21	1444	crack	0.750	140	202	292,113
2/24/2018 -	4" binion br	1.15	300	hole	1.000	120	333	99,885
-								
<u>/</u>								
								_
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Monthly I	Excavation Break Rep	ort					Area C	alculator
					diameter ir			
Rattlesn	ake Rid9e Water District	I <u><name< u=""> of Water System)</name<></u>		H o Area=	0.000	sq. in.	Insert the app dimensions of	proximate of the hole or
		I <pwsid)< th=""><th></th><th></th><th></th><th></th><th>crack to deter</th><th>mine the area</th></pwsid)<>					crack to deter	mine the area
		- /			length(in) width (in	ofthebreak.	nsertthearea
Montn	March	-		Crack =	6	1 0.5	in the spreads	sheet below.
Year	2018			Area =	3	1sq. in.		
	2010	I	.,			' cii		
			:,		hole or	.;		Gallons
			- I-					Lost During
Date	Excavation Break Location	Excavator		Hole or	Area of	Å.	GPM	Break
3/6/2018	square lick		1444	Hole or crack	0.500	100	114	164,587
3/10/2018	us 60 pete littletons		3,60	Crack?	1.000	1 <u>2</u> 0	333	119,862
3/16/2018	wicker holler		1444	crack	0.250	140	67	97,371
3/24/2018	us 60 Diamond ridgo		1444	crack	0.500	140 80	135	194,742
3/25/2018	Diamond ridge		360	hole	1.000	00	272	97,867
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		-						
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Monthly E	Excavation Break Repo	ort					Area C	alculator
		_			diameter in	inches		
Rattlesn	ake Ridge Water District Ky0220555	j (name of Water System)		Area=	0.000	sq. in.	Insert the app dimensions of	
Montn	Aeril	j <u>(PWSID</u>) —		Crack=I	length (in)	width (in) ⁽	of the break. In in the spread	mine the area sert the area sheet below.
Year	2018			Area =I	<u> </u>	sq. in.	l	
	•			1				
			., .S	Hole or	Area of	(/) 11.		
								Collona
1			::,		hole or	oi		Gallons
				Crack?	crack	E		Lost During
Date	Excavation Break Location	Excavator				ž	GPM	Break
4/3/2018	Gregoryville 4 ' next to 2 '	1.67 CL	2888	crack	0.250	120	62	180,296
4/5/2018	DIAMOND RIDGE	1.31 CL	1444	crack	0.350	90	76	109,299
4/16/2018	Aden	1.38 CL	1444	crack	0.300	120	75	108,178
4/16/2018	Service line on 986	1.25 CL	1444	crack	0.250	120	62	90,148
4/23/2018 4/26/2018	Rt1 at ariffiths aregoryville 4 '	<u>1.32</u> 1.41	2888	crack	0.250	140	67	194,742
4/26/2018 4/30/2018	mike roaers	1.41	<u>1444</u> 2888	crack crack	0.500 0.150	120 130	125 	180,296 112,595
1/00/2010			2000	oradik	0.100	100		112,000
-								
-								
							+	
						+	+	
							+	
							1	
							+	
							1	

Kentucky Water Association

Total Gallons Lost Due to Excavation Breaks 97

<u>975,55</u>4

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Monthly Hydrant Flushing Report (Flushing for other than DBP maintenance)

1				
Rattlesnake Ridge Water District	name of Water System)	Month	Mav	
		Year	2018	

KY:0220555

j(PWSID)

					unit conve	rsion factor	29.83	
							0.95	
		Formula:	GPM = 2	9.83C,1 p	coeff	icient value		
		Reason	Total Minutes	Nozzle size (typically	Pitot		Gallons	Estimated Flow if Pitot
Date	Hvdrant Location and/or Number	Operated	Operated	2.5 or4.5)		GPM	Flowed	not used
5/15/2018	us 60	monthlv	30.00	2.5	100	1771	53,135	
5/18/18/	carter citr	air	30.00	2.5	100	1771	53,135	
5/25/2018	wi;llard	monthly	30.00	2.5	130	2019	60,583	
5/25/2018	crocket	monthlv	30.00	3.0	120	2794	83,817	
5/26/2018	corv ridae	monthlv	20.00	3.0	90	2420	48,392	
5/28/2018	carter citv	monthlv	30.00	2.5	110	1858	55,728	
• <u> </u>								
L								

Total Gallons for Month!

354.789

Monthly E	Excavation Break Repor	t					Area (Calculator
Rattlesn	ake Ridge Water District	(name of Water System)		Но	diameter in		Insert the ap	arovimete
c=	- Ky0220555	-l(PWSID)		Area=	0.000	sq. in.	dimensions of	of the hole or rmine the area
Montn -	June	-		Crack=I [.]	length (in) width (i 1 0.5		, Insert the area Isheet below.
Year	2018			Area=	<u>3</u>	sq. in.		
	1		2	Hole or	Area of	05 D		1
			,	THOSE OF	hole or	.;		Gallons
-Date	Excavation Break Location	Excavator	3:	Crack?	crack	E Z	GPM	Lost During Break
								Break
6/4/2018	Falls branch	1.23 cl	2888	crack	0.250	130	65	187,658
6/5/2018	esteps service	1.34	1444	crack	0.150	120	37	54,089
6/5/2018	bili stamper service	1.34	1444	crack	0.250	120	62	90,148
6/5/2018	seaaraves hollow service	1.09	1444	crack	0.150	100	34	49,376
6/5/2018	church ridge service	1.21	1444	crack	0.250	90	54	78,071
6/6/2018	huffs run service eddie	1.26	2888	crack	0.150	120	37	108,178
6/14/2018	harlin prichard service	1.35	2888	crack	0.250	125	64	184,014
6/19/2018	flovd bear	1.3	10108	crack	0.250	100	57	576,055
6/18/2018	mason lodge	1.25	1444	crack	0.250	125	64	92,007
6/21/2018	AJ Swimford huff run	1.25	1444	crack	0.150	140	40	58,423
6/22/2018	smith branch	1.21	1444	crack	0.250	100	57	82,294
5/23/2018	daws run service	1.31	2888	crack	0.150	125	38	110,408
6/24/2018	fallsbranch service	1.3	1444	crack	0.250	120	62	90,148
6/24/2018	fallsbranch service	1.24	1444	crack	0.350	120	87	126,207
<u>6/25/2018</u>	pallet mill rt 1	1.3	240	hole	2.000	120	666	159,816

Total Gallons Lost Dueto Excavation Breaks

2,046,891

	Excavation Break Repor	τ			diameter in	inches	Area C	alculator
Ratţlesna	ake Ridge Water District	<u>e</u> name of Water System)			∎ € €		uinnertsponso	5974inee#fole or
Montri Year	ку0220555 	(CPWSID)		Crack=! Area =	0	0.1) of the break.	mine the area Insert the area Isheet below.
Date	Excavation Break Location	Excavator	(1) (1) :, E	Hole or Crack?	Area of hole or crack	11. ,,, E o Z	GPM	Gallons Lost During Break
7/6/2018	dale littleton service		1444	crack	0.250	100	57	82,294
7/1/2018	service chaple cut	1.31	1444	crack	0.300	120	75	108.178
7/8/2018	below dam	1.36	1444	hole	0.500	70	127	183,601
7/10/2018	possum holler 6'	1.24	180	crack	3.000	130	780	140,354
7/11/2018	cli"" 6' david doves	1.38	1444	crack	0.250	130	65	93.829
7/11/2018	possum holler 6'	1.24	2888		0.250	130	<u>65</u>	187.658
7/11/2018	, possum holler 2'	1 24	2888		0.150	130	39	112,595
7/13/2018	986 service cora baliev	1.35	2888	hole	0.100	120		96,156
7/15/2018	front of bruin boat ramp	1.28	360	crack	2.000	150	558	201,019
7/16/2018	big run 8'	1.15	1444	crack	0.500	130	130	187,658
7/21/2018	bear ridae service	1.24	1444	crack	-0.250	- 130 - 90	<u> </u>	78,071
7/21/2018	bear ridge service	1.24	-1444	crack	-0.250	90 	54	78,071
7/22/2018	huffs run	1.24	-1444 	crack	-0.230 0.300	130		112,595
7/26/2018	Mavhew Flats 8'	1.31 1.48	300	hole	-2.000	100	608	
7/26/2018	Mavnew Flats service	1.48	1444		<u> </u>	100		182,364
7/26/2018 7/26/2018	RattlesnakeRidaefork 3'	1.48		crack			- 62	<u>90,148</u>
//20/2018 //211-``.Q18	Clinv service at church	1.2	<u>400</u> 1444	crack crack	0.300 0.150	$\frac{120}{100}$	75 34	29,966 49,376
-							-	
7/3 J18 7/31/2018	8' BIG RUN -	1.35	1444		0.400	150	112	161,262
	service at vounqs	1.29	7220	crack	0.250	<u>120</u>	62	450,740
								+

Total Gallons Lost Due to Excavation Breaks

	Excavation Break Repo	11			diameter in	inches	Area Calculator		
Rattlesn	ake Ridge Water District	_ <u>I<nam< u="">eofWaterSystem)</nam<></u>		Но		literies	Insert the ap	oproximate	
<u></u>	- Ky0220555			Area=		sq. in.	dimensions	of the hole or	
	-								
		j(PWSID)			la nath (in) u	vialth (im) C	crack to dete fthe break. In	ermine the are	
Month _	August	-		Crack=I	• • •	I 0.5	in the spread		
Year	2018			Area -	•	i 0.5		-	
				<u> </u>					
					Area of	C/J a.			
			\$,	Hole or Crack?		a. <ii< th=""><th></th><th>Gallons</th></ii<>		Gallons	
			::: :iE	Crack?	hole or crack	E		Lost Durin	
Date	Excavation Break Location	Excavator				0 Z	GPM	Break	
3/5/2018	willard lodge	1.31	1444	crack	0.150	120	37	54,089	
3/6/2018	us60 service	1.25	1444	crack	0.250	100	57	82,294	
3/7/2018	486 rooer ison service	1.05	2888	crack	0.150	110	36	103,572	
3/10/2018	us 60 handcock	1.2	2888	crack	0.200	100	46	131,670	
3/13/2018	wicker holler	1.25	180	crack	1.500	130	390	70,177	
3/14/2018	rattlesnake ridge	1.35	2888	crack	0.250	100	57	164,587	
3/14/2018	rattlesnake fork	1.26	1444	crack	0.150	100	34	49,376	
3/14/2018	rattlesnake ridge service	1.25	1444	crack	0.250	100	57	82,294	
8/15/2018	corp of eno req came loose	•	120	hole	2.000	130	693	83,171	
3/16/2018	rt 1025 meter busted		1444	crack	0.100	100	23	32,917	
3/20/2016	us 60 4' crack	1.34	1444	crack	0.250	130	65	93,829	
8/23/2018	willard 1 1/2 thomas	1.26	180	hole	1.000	120	333	59,931	
8/23/2018	RT 706 3 inch ' gillum' hit	1.18	120	hole	2.000	90	577	69,202	
8/24/2018	service kitchen holler	1.25	1444	crack	0.250	120	62	90,148	
8/25/2018	us 60 before wicker holler	1.31	180	crack	1.000	120	250	44,949	
8/27/2018 -	smith branch service kouns		1444	crack	0.250	100	57	82,294	
_§pP.,-'.(018	david bump service	1.22	1444	crack	0.250	90	54	78,071	
8/018 8/20/2018	sue stamper service	1.35	2888	crack	0.150	120	37	108,178	
8/29/2018	ron revnolds service	1.31	2888	crack	0.250	100	57	164,587	
8/31/2018	986 david doves	1.26	1444	crack	0.250	130	65	93,829	
8/31/2018	smiths rt 504 service	1.2	2888	crack	0.250	90	54	156,141	
8/31/2018	darrell thomas services	1.31	2888	crack	0.500	130	130	375,316	
			2000	oradic	0.000	100	100	070,010	
			· · ·						

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	Excavation Break Report		I					alculator
Rattlesn	akeRidgeWaterDistrict	<name of="" system)<="" th="" water=""><th>1</th><th></th><th>diameter in i</th><th>ncnes</th><th></th><th></th></name>	1		diameter in i	ncnes		
C = :				Area=	0.000	sq. in.	Insert the app dimensions of	
	Ку0220555							
	Ny0220355	<pwsid)< th=""><th></th><th></th><th>longth (in) w</th><th>idth (in) Of I</th><th colspan="2" rowspan="2">crack to determine the area n) of the break. Insert the area in the spreadsheet below.</th></pwsid)<>			longth (in) w	idth (in) Of I	crack to determine the area n) of the break. Insert the area in the spreadsheet below.	
Month	September			Crack =				
Year	2018			Area =		lsq. in.		
						,,,		
			< <u>1</u>)		Area of	11.		
			::,	Hole or	hole or	.;		Gallons
			::: :E	Crack?	crack	E		Lost During
Date	Excavation Break Location	Excavator			Clack	0 Z	GPM	Break
9/3/2018	elmer kinster service	1.25	2888	crack	0.250	90	54	450 444
9/3/2018	eff mabry service	1.25	2888	crack	0.250	90 90	54 108	156,141 312,282
9/3/2018	rav markwell service	1.24	2888	crack	0.250	90	54	156,141
9/4/2018	air release moraan cem rd		1444	crack	0.200	100	114	164,587
9/5/2018	willard in lane service	1.29	2888	crack	0.250	130	65	187,658
9/5/2018	service in front of iudvs	1.23	2888	crack	0.500	100	114	329,174
9/5/2018	4' little fork	1.28	2888	crack	0.150	120	37	108,178
9/10/2018	sinkina 6'	1.19	150	hale	3.000	120	999	149,827
9/10/2018	rt 2	1.21	300	crack	1.250	90	270	81,098
9/14/2018	possum holler	1.24	180	crack	1.300	130	338	60,820
9/12/2018	us 60 6'	1.16	180	crack	1.150	100	262	47,188
9/12/2018	us 60 6'	1.16	60	crack	1.150	100	262	15,729
9/2/2018	wicker holler	1.15	1444	crack	0.250	90	54	78,071
9/10/2018	areenhill rea busted		1444	crack	0.150	90	32	46,842
9/10/2018	walker meter bottom		1444	crack	0.150	70	29	41,311
9/10/2018	aumps aroc service	1.18	1444	crack	0.250	90	54	78,071
_§[JP-",018	1555 service	1.2	7220	crack	0.500	90	108	780,705
91., J18	2' on possum holler	1.23	2888	crack	0.150	130	39 37	112,595
9/21/2018	I davevs run	1.24	2888	crack		120		108,178
9/21/2018	davevs run kitchen boller	1.24	2888	crack	0.100	120	25	72,118
9/23/2018	st rt 504 slip	1.05	4332		0.100	100 40	23	98,752
9/26/2018	davevs run	1.15	1444		4.000	120	769 62	138,405 90,148
9/26/2018	st rt 504 slip	1.18	180	hole	4.000	40	769	138,405
9/22/2018	theodore wannner	1	1444		0.100	90	22	31,228
9/22/2018	rt 60 ailliums	1.2	1444		0.250	100	57	82,294
9/22/2018	willard church	1.25	2888		0.100	120	25	72,118
9/23/2018	falls branch service	1.21	7220		0.120	120	30	216,355
9/23/2018	contractors hit services	1.2	60	hole	0.750	120	250	14,983
<u>9/28/1/</u>	3' at darren carroll	1.1	7220	crack	0.150	100	34	246,881
	+							

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Month Year Oct Crack=I Tength (in) width (in) of the break. Insert the are in the spreadsheet below. Year 2018 Area=I 3 Isq. in. Image: Sign of the break in the spreadsheet below. Area of hole or	wonthly E	xcavation Break Report						Area C	Calculator
Ky0220555 I Ky0220555 I Ky0220555 I Ky0220555 I Ky0220555 Ky022055 Ky02205 Ky02	Rattleena	ke Rid9e Water District							
Month Year Oct 2018 Tength (m) width (m) beak ment the arc in the spreadsheetbelow in the spr	•		name or water System)		Area	0.000	sq. in.	Insert the ap dimensions	proximate of the hole or
Month Year Oct Crack=I Stract (S) 6 In the spreadsheet below Area=I In the spreadsheet below Area Date Excavation Break Location Image: Stract (S) S Hole or Image: Stract (S) S Image: Stract (S) Area Image: Stract (S) S	Ку0220555 I <p< th=""><th><pwsid)< th=""><th></th><th></th><th colspan="2" rowspan="2"></th><th colspan="2" rowspan="2">crack to determine the area of the break. Insert the area in the spreadsheet below.</th></pwsid)<></th></p<>		<pwsid)< th=""><th></th><th></th><th colspan="2" rowspan="2"></th><th colspan="2" rowspan="2">crack to determine the area of the break. Insert the area in the spreadsheet below.</th></pwsid)<>					crack to determine the area of the break. Insert the area in the spreadsheet below.	
Year 2018 Area=1 3 Isq. in. Date Excavation Break Location Excavator iii iiii a. iiiii a. iiiiii a. iiiiiiiiiiii a. iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Month	Oct							
Z018 Fitter S Interest of sighth area of hole or sighth s	Year					-		·	
Simulation Simulation Simulation Simulation Ande or hole or site Ande or hole or site Ande or hole or site Ande or hole or site Ande or site Ande or site Simulation Crack? Simulation Lost Dur Break 102/9/18 6' dudlev 1.25 10108 crack 0.250 150 70 706,62 10/9/2018 dudlev 3/4 1.25 60 crack 0.250 130 65 3,890 10/10/2018 kiser branch service 1.31 1444 crack 0.150 120 37 54,082 10/12/2018 estep onrsr service 1.34 2888 crack 0.150 100 34 98,75 10/12/2018 gdan rd service barber 1.2 1444 crack 0.250 100 57 82,29 10/17/2018 aden rd service barber 1.2 1444 crack 0.250 100 34 98,75 10/18/2018 rore wolds 1.1 1444 crack 0.100 32		2018			Alea-	5	тыч. пт. т		
Late Excavation Brack Location Excavator Location Excavator Location Location <thlocation< th=""> <thlocation< th=""> Location</thlocation<></thlocation<>				\$			a.		Gallons
Late Excavation Brack Location Excavator Location Excavator Location Location <thlocation< th=""> <thlocation< th=""> Location</thlocation<></thlocation<>				·iF	Crack?	crack	5		Lost Durin
10/9/2018 dudlev 3/4 1.25 60 crack 0.250 130 65 3,890 10/101/18 RT2 3' 1.18 180 hole 1.000 130 347 62,371 10/10/2018 kiser branch service 1.31 1444 crack 0.150 120 37 54,081 10/12/2018 estep onrsr service 1.34 2888 crack 0.150 100 34 98,75 10/12/2018 or arack 0.250 100 34 98,75 100/12/2018 30 nattlesnak fork 1.29 4332 crack 0.150 100 34 49,375 10/12/2018 aden rd service barber 1.2 1444 crack 0.150 100 34 49,375 10/15/187 aden road 4 'bell 1025 2888 crack 0.150 100 34 98,75 10/18/18 flow bear 1.1 1444 crack 0.100 100 23 32,91 10/18/2018 ror revnolds 1.2 10108 crack 0.100 100 23	Date	Excavation Break Location	Excavator				Ž	GPM	Break
10/9/2018 dudlev 3/4 1.25 60 crack 0.250 130 65 3,890 10/101/18 RT2 3' 1.18 180 hole 1.000 130 347 62,371 10/10/2018 kiser branch service 1.31 1444 crack 0.150 120 37 54,081 10/12/2018 estep onrsr service 1.34 2888 crack 0.150 100 34 98,75 10/12/2018 or arack 0.250 100 34 98,75 100/12/2018 30 nattlesnak fork 1.29 4332 crack 0.150 100 34 49,375 10/12/2018 aden rd service barber 1.2 1444 crack 0.150 100 34 49,375 10/15/187 aden road 4 'bell 1025 2888 crack 0.150 100 34 98,75 10/18/18 flow bear 1.1 1444 crack 0.100 100 23 32,91 10/18/2018 ror revnolds 1.2 10108 crack 0.100 100 23	102/9/18	6' dudlev	1 25	10108	crack	0.250	150	70	705 500
10/101/18 RT2 3' 1.18 180 hole 1.000 130 347 62,37 10/10/2018 kiser branch service 1.31 1444 crack 0.150 120 37 54,08 10/12/2018 estep onrsr service 1.34 2888 crack 0.150 100 34 98,75 10/12/2018 3' on rattlesnak fork 1.29 4332 crack 0.250 90 54 234,21 10/12/2018 pearl roe old house service 1.3 1444 crack 0.250 100 37 82,29 10/12/2018 aden rd service barber 1.2 1444 crack 0.250 100 57 82,29 10/15/187 aden road 4' bell 1025 2888 crack 0.150 100 34 98,75 10/18/18 flord bear 1.1 1444 crack 0.250 100 57 82,29 10/18/2018 ron revnolds 1.1 1444 crack 0.100 100 23 230,42 10/18/2018 nor revnolds 1.2 <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.200</td> <td></td> <td></td> <td>,</td>						0.200			,
10/10/2018 kiser branch service 1.31 1444 crack 0.150 120 37 54,08 10/12/2018 estep onrsr service 1.34 2888 crack 0.150 100 34 98,75 10/12/2018 3' onrattlesnak fork 1.29 4332 crack 0.250 90 54 234,21 10/12/2018 aden road of bouse service 1.3 1444 crack 0.150 100 34 49,37 10/12/2018 aden road 4 ' bell 1025 2888 crack 0.150 100 57 82,29 10/15/187 aden road 4 ' bell 1025 2888 crack 0.100 100 23 32,91 10/18/2018 ron revnolds 1.1 1444 crack 0.100 100 23 230,42 10/18/2018 ron revnolds 1.2 10108 crack 0.100 100 23 230,42 10/18/2018 hazel revnolds 1.2 10108 crack 0.100 120 25 36,05 10/18/2018 mike qoilihue huffs se						0.200			-,
10/12/2018 estep onrsr service 1.34 2888 crack 0.150 100 34 98,75 10/12/2018 3' on rattlesnak fork 1.29 4332 crack 0.250 90 54 234,21 10/12/2018 pearl roe old house service 1.3 1444 crack 0.150 100 34 49,37 10/12/2018 aden rd service barber 1.2 1444 crack 0.250 100 57 82,29 10/15/18/ aden road 4 'bell 1025 2888 crack 0.150 100 34 98,75 10/18/18 flow bear 1.1 1444 crack 0.100 100 23 32,91 10/18/2018 ron revnolds 1.1 1444 crack 0.100 100 23 32,94 10/18/2018 nrevnolds 1.2 10108 crack 0.100 100 23 230,42 10/18/2018 Rt706 service 1.35 1444 crack 0.100 120 25 36,05 10/18/2018 mike qollihue huffs service								0	1 '
10/12/2018 3' on rattlesnak fork 1.29 4332 crack 0.250 90 54 234,21 10/12/2018 pearl roe old house service 1.3 1444 crack 0.250 90 54 234,21 10/12/2018 aden rd service barber 1.2 1444 crack 0.250 90 54 234,21 10/12/2018 aden rd service barber 1.2 1444 crack 0.250 100 57 82,29 10/15/187 aden road 4 ' bell 1025 2888 crack 0.150 100 34 98,75 10/18/2018 flovd bear 1.1 1444 crack 0.100 100 23 32,91 10/18/2018 ron revnolds 1.1 1444 crack 0.100 100 23 230,42 10/18/2018 ron revnolds 1.2 10108 crack 0.100 120 37 54,08 10/18/2018 ratickson service 1.31 1444 crack 0.150 120 37 56,08 10/18/2018 mike qoillinue huffs ser								•.	- ,
10/12/018 pearl roe old house service 1.3 1444 crack 0.150 100 34 49,37 10/12/2018 aden rd service barber 1.2 1444 crack 0.150 100 34 49,37 10/12/2018 aden rd service barber 1.2 1444 crack 0.150 100 57 82,29 10/15/187 aden road 4 ' bell 1025 2888 crack 0.100 100 23 32,91 10/18/2018 for revnolds 1.1 1444 crack 0.250 100 57 82,29 10/18/2018 for revnolds 1.1 1444 crack 0.250 100 57 82,29 10/18/2018 for revnolds 1.2 10108 crack 0.100 100 23 230,42 10/18/2018 failsbranch tackson service 1.31 1444 crack 0.100 120 25 36,05 10/18/2018 mike qollihue huffs service 1.35 2888 crack 0.100 130 39 112,55 10/18/2018 prv at									
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Total Gallons Lost Due to Excavation Breaks! 4,541,148

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Monthly	Excavation Break Repo	rt			diameter in	inches	Area C	Calculator
Rattlesnake Ridge Water District		– j(name of Water System)					Insert the approximate dimensions of the hole or	
<u></u>	Ку0220555	_ i(PWSID)	length (in) width (in)			cracktodetenninethearea		
Montn	November	_				of the break. Insert the area in the spreadsheet below.		
			Crack=I 6 0.5					
Year	2018			Area=l <u>3</u> lsq. in.				
			• \$	Hole or	Area of	cii 11.		
			,		hole or	cii		Gallons
			,:	Crack?		Е		
Date	Excavation Break Location	Excavator	:E	Ordek :	crack	D Z	GPM	Lost During Break
11/1/2018	aden 4"	1.25	1444	crack	0.150	120	37	54,089
11/5/2018	aden 4"	1.28	360	crack	0.150	120	37	13,485
11/7/2018	service on 1662	1.16	360	crack	0.500	100	114	41,033
11/7/2018	Mcalone creek blowoff	1.25	43320	crack	0.100	100	23	987,523
11/7/2018	fred menifee service	1.15	1444	crack	0.150	120	37	54,089
11/7/2018	sue brvant	1.25	2888	crack	0.100	90	22	62,456
11/8/2018	3 pine	1.19	1444	crack	0.250	80	51	73,606
11/8/2018	adkins loop[3 inch	1.24	2888	crack	0.750	90	162	468,423
11/10/2018	us60	1.38	1444	crack	0.750	130	195	281,487
11/13/2018	brad brammell 1 inch	1.41	2888	crack	0.500	120	125	360,592
11/14/18/	rick mcdavid service	1.44	2888	hole	0.250	140	90	259,650
11/2/2018	mavhew flats service	1.25	2888	crack	0.150	100	34	98,752
11/15/2018	huffsrun 8'	1.32	240	crack	0.750	120	187	44,949
11/16/2018	popes fork 8'	1.24	1444	crack	0.500	100	114	164,587
11/19/2018	rt 504 service wa□□oner	1.15	1444	crack	0.250	90	54	78,071
11/20/2018	horton flats ole brothers	1.51	1444	crack	0.250	120	62	90,148
<i>J!l?rl-2</i> 0 1	8 horton flats lewis leadinaha	m1.49	240	crack	2.000	120	499	119.864
L018	tom flauaher 1 inch	1.23	43000	crack	0.250	120	62	2,684,46
11/28/2018	mike lawe service	1.24	2888	crack	0.250	80	51	147.211
11/29/2018	chuck themas service	1.28	1444	crack	0.150	120	37	54,089
11/30/2018	sue utlv service	1.21	1444	crack	0.250	100	57	82,294
11/30/2018	Ravmond bo⊓⊓s meter bus	t	1444	crack	0.150	90	32	46,842

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Monthly E	xcavation Break Repo	rt					Area Ca	alculator
Dettleon	ake Rid!!e Water District	<u> </u>			diameter in			
Rattlesna	ake Rid!!e water District	<u>l<name< u=""> of Water System)</name<></u>		Area=	0.000	sq. in.	Insert the app dimensions of	proximate
L	Ку0220555	l <pwsid)< td=""><td></td><td></td><td></td><td></td><td>crack to deter</td><td>mine the area</td></pwsid)<>					crack to deter	mine the area
Momn	December	_		Crack =	$\frac{\text{length}(\text{in})}{6}$	width (in 0.5	of the break. I in the spreads	Insert the area sheet below.
Year	2018			Area =	<u> 3 </u> s	sq. in.		
	'					iii		
			•• \$,	Hole or	Area of hole or	a. «i		Gallons
1			,::	Crack?		Е		Lost During
Date	Excavation Break Location -	Excavator	:E		crack		GPM	Break
_12/6/2018	Daniel Mcdavid service		1444	crack	0.150	120	37	54,089
_12/6/2018	Daniel Mcdavid service	1.25	1444	crack	0.250	120	62	90,148
_12/6/2018	chaple cut	1.42	2888	crack	0.250	120	62	180,296
-12/6/2018	rt 986	1.39	1444	crack	0.150	100	34	49,376
-12/10/2018	Fraley Branch	1.34	2888	crack	0.200	120	50	144,237
12/10/2018	4 mile bradshaw serv	1.2	1444	crack	0.150	90	32	46,842
12/11/2018	Lovd lowe	1.25	1444	crack	0.250	100	57	82,294
12/13/2018	tonv knipps service	1.36	7220	crack	0.150	100	34	246,881
12/19/2018	986 6 inch bell	1.51	2888	crack	0.500	160	144	416,376
<u>+2/21/2018</u>	Fralev Branch	1.49	1444	crack	0.250	160	72	104,094
12/28/2018	Fralev Branch tee broke	1.05	480	hole	0.750	120	250	119,862
<u>12/4/2018</u>	-3' cordel hit hitchins	1.25	60	hole	3.000	130	1040	62,378
<u>+12/20/2018</u>	tim lawson service	1.34	1444	crack	0.500	<u>-90</u>	108	156,141
12/21/2018	meter bottom okera lane		1444	crack	0.150	- 90	32	46,842
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12. See Attached Work Orders

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08:23:09

CHECKLIST/TYPE: CHECK SCHEDULED DATE: 01/29/18 SCHEDULED I TRUCTIONS: LEAK BY DRIVE HE MAN SON SPOKE TO DAVID SON SAID IT IS UNDER	
METER LOCATION: BELOW ROAD NEXT	IO TRAILER
	IN:

ACCOUNT:160-37410-01 CITY: OLI NAME :HOLBROOK, CHARLES S/ADDR: BEAR RIDGE PHONE :606 738 - 4048 OWNER PHONE:	VE HILL, KY 41164 OWNER: OWNER O/ADDR:
ISSUED: 01/29/18 BY: CAROLYN	COMPLETED:
**************************************	CURRENT * MAKE SERIAL REMOTE MXUID
* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *
HISTORY: DATE CURRENT PREVIOU	S USAGE PRIOR W/O DATE TYPE
02/18/19 42467 4191	
01/09/19 41914 4170 12/21/18 41703 4135	
11/26/18 41353 4076	

WORK COMPLETED:

NEW SET : _____ SERIAL NO: _____ REMOTE NO: _____ READ: ____ MATERIAL: ITEM# PART DESCRIPTION QUANTITY

08:36:03

CHECKLIST/TYPE: CHECK WORK ORDER NO: 10486 SCHEDULED DATE: 10/04/18 SCHEDULED TIME: PM: INSTRUCTIONS: SAYS THAT WE KEEP FIXING A LEAK THERE AND IT JUST KEEPS LEAKING AND HE CANT GET THRU HIS DRIVEWAY TO THE FIELD TRACTOR IS GETTING STUCK METER LOCATION: ABOVE BLOW-OFF IN: ACCOUNT:160-24600-00 CITY: OLIVE HILL, KY 41164 NAME :REYNOLDS, HAZEL OWNER: OWNER S/ADDR: BINION BRANCH O/ADDR: PHONE OWNER PHONE: ISSUED: 10/04/18 BY: RAK COMPLETED: *******OLD METER INFORMATION************************************
IN: ACCOUNT:160-24600-00 CITY: OLIVE HILL, KY 41164 NAME :REYNOLDS, HAZEL OWNER: OWNER S/ADDR: BINION BRANCH O/ADDR: PHONE OWNER PHONE: ISSUED: 10/04/18 BY: RAK COMPLETED: ********OLD METER INFORMATION************************************
ACCOUNT:160-24600-00 CITY: OLIVE HILL, KY 41164 NAME :REYNOLDS, HAZEL OWNER: OWNER S/ADDR: BINION BRANCH O/ADDR: PHONE OWNER PHONE: ISSUED: 10/04/18 BY: RAK COMPLETED: ********OLD METER INFORMATION************************************
<pre>************************************</pre>
SIZE: 5/8 in. TY: GUSE: 128 03/11 * MAKE SERIAL REMOTE MXUID CURRENT * MAKE SERIAL REMOTE MX 1: 55093831 4392008 41467 A* * * * * 2: * * * * * * * * 3: * * * * * * * * * * HISTORY: DATE CURRENT PREVIOUS USAGE PRIOR W/O DATE TY
2: * 3: * 4: * HISTORY: DATE CURRENT PREVIOUS USAGE PRIOR W/O DATE TY
HISTORY: DATE CURRENT PREVIOUS USAGE PRIOR W/O DATE TY
01/09/19 41178 41131 47 A 9379 08/28/17 CH 12/03/18 41131 40968 163 E 11/26/18 40968 40763 205 A

WORK COMPLETED:
NEW SET: SERIAL NO: REMOTE NO:READ:
MATERIAL: ITEM# PART DESCRIPTION QUANTIT

SIGNATURE: _____ DATE: _____ TIME: _____

CHECKLIST/TYPE: SCHEDULED DATE:	CHECK 01/04/19 SC	NEW WORK HEDULED TIM	WOR	K ORDER NO	08:36:08 : 10692
INSTRUCTIONS: METER LOCATION:	SAYS THAT WE RIVEWAY AND SUNKEN HOLE LEAKING. WAI WAS JAMES	THE PLACE W AND STAYS W	HERE IT WAS ET. THINKS I	FIXED IS N IT MAY STIL	IOW A L BE 82.948290
**************************************)-00 CI HALLIE N - 2282	TY: GRAYSON OWN O/A	N, KY 41143 HER: OWNER LDDR:	IN: *****	****
**************************************	TY: GUSE: REMOTE MXU	259 03, JID CUR	/04 *		NFORMATION****** L REMOTE MXUID
**************************************	TE CURRENT 1/19 46739 2/19 46549 3/18 46279 1/18 45889	PREVIOUS 46549 46279 45889 45619	USAGE 190 A 270 A 390 A 270 A	PRIOR W/O 8083 7565 7139	DATE TYPE 05/13/16 CHECK 01/19/16 CHECK 10/08/15 CHECK
**************************************	*** <u>***</u> *_* *****	******	*******	******	****
WORK COMPLETED:	SERIAL	NO:	REMOTE	NO:	READ:
	ITEM# P				QUANTITY

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SIGNATURE:	DATE:	TIME	
	-		

08:23:32

CHECKLIST/TYPE: CHECK SCHEDULED DATE: 02/08/19 SCHEDULED Il:,J.STRUCTIONS: CHECK FOR LEAK CANT SEE METER FACE PLEASE ALSO GET REA	ITS FOGGED UP
METER LOCATION: EDGE OF YARD RIG	GHT SIDE
**************************************	IN: ************************************
ISSUED: 02/08/19 BY: CAROLYN	COMPLETED:
SIZE: 5/8 in. TY: GUSE: 352	CHRRENT * MAKE SERIAL REMOTE MYLLID
HISTORY: DATE CURRENT PREVIOU 02/13/19 51342 5130 01/10/19 54305 4972 12/21/18 49728 4925 11/28/18 49254 4820	05 37 A 28 4577 A
****	****

NEW SET: _____ SERIAL NO: _____ REMOTE NO: _____ READ: ____ MATERIAL: ITEM# PART DESCRIPTION QUANTITY

LABOR

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NEW V	VORK ORDERS 08	:23:32						
SCHEDULED DATE: INSTRUCTIONS: SAID THERE IS WATER PLEASE CHECK METER COME OUT TO LOOK FO OUGHT THERE WAS SOM RIGHT SIDE RESID	CHECK WORK ORDER NO: 10803 CKLIST/TYPE: 02/22/19 SCHEDULED TIME: PM: CDULED DATE: SAID THERE IS WATER LEAKING FROM METER							
METER LOCATION:								
IN: ************************************								
ACCOUNT:140-10000-01 CITY: WIL NAME :GRIFFITH, BRETT S/ADDR: ROUTE 1 PHONE :606 475 - 3027 OWNER PHONE:	LARD, KY 41181 OWNER: OWNER O/ADDR:							
ISSUED: 02/22/19 BY: CAROLYN	COMPLETED:							
********OLD METER INFORMATION************************************								
MAKE SERIAL REMOTE MXUID	-	DTE MXUID						
* * * * * * * * * * * * * * * * * * * *								
HISTORY: DATE CURRENT PREVIOU 02/04/19 35547 3501 01/03/19 35018 3445 12/04/18 34451 3391 11/02/18 33912 3346	8 529 A 8159 06/01/ 51 567 A 10033 04/24/ .2 539 A 9204 06/26/ .8 .444 A 9037 03/27/	17 CHECK						
",1::	به مله مله مله	··· UTEUN						

WORK COMPLETED:

NEW SET: _____ SERIAL NO: _____ REMOTE NO: _____ READ:____ MATERIAL: ITEM# PART DESCRIPTION QUANTITY

13. We do not have a operating procedure in place but our number one priority is to get our customers back in service as soon as possible so we send enough personal to get the job done safe and quickly.

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14. The District has purchased a Waterpoint PLD listening device and also a portable flow meter to assist in leak detection. We have also purchased three metal detectors.

15. See Attached Files

TRAINING CERTIFICATE	
This Certificate is presented to	
Shannon Porter	
Rattlesnake Ridge Water District	
In recognition of your participation in: "DEVELOPMENT, PLANNING ft SET-UP OF SYSTEM W/PORTABLE FLOW METERS,	
"DEVELOPMENT, PLANNING ft SET-UP OF SYSTEM W/PORTABLE FLOW METERS,	
Ba Ba	
Second	
Servin[< 1he Ohio Valley Automatic Controls Company,	
we we and	

MANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANANTAANA	
TRAINING CERTIFICATE	
This Certificate is presented to	
Willie Gilbert	
Rattlesnake Ridge Water District	
In recognition of your participation in: "Development, planning & Set-up of System W/Portable flow meters,	
LISTENING DEVICES FOR LEAK DETECTION"	
Badger Meter	
Se1Ti11g the Ohio Valley Automatic ControlsCompany 64.5eC01dS	
MAMMUM 5 PDH	

TRAINING CERTIFICATE	
This Certificate is presented to	
David Gifford	
Rattlesnake Ridge Water District	
In recognition of your participation in: "DEVELOPMENT, PLANNING & SET-UP OF SYSTEM W/PORTABLE FLOW METERS,	
LISTENING DEVICES FOR LEAK DETECTION	
Badger Meter	
Automatic Controls Company 64.5econds	
Beech	
Date- Date- Date-	

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16. Our billing has a program to run that shows meters missed as estimates. See attachment. UMTRDEXQ 2019/03/22 10:28:44

RATTLESNAKE RIDGE WATER DISTRI

Page: 1

METER READING EXCEPTION REPORT

ACCOONT	NAME	METER			PREVIOUS READING		CHANGE ESTIMATE FINAL ROLLOVER:
110-06670-00	ELLIOTT, LAUREL C GREGORY HOLLOW	1	03/01/2019	75158	74826	331	Х
110-07000-00	LAMBERT, MARY GREGORY HOLLOW	1	03/01/2019	77334	77153	11	Х
112-07300-00	DAVIS, EARNEST K RT 182	1	03/05/2019	1308	1277	31	Х
112-08610-00) JENKINS, JOHNS SAND RIDGE	1	03/01/2019	14946	14501	444	х
112-19400-01	MABRY #2, JAMES SAND RIDGE	1	03/01/2019	461	461		x
113-15390-01	CRUMP, JARRELL GESLING	1		7898	7898		х
114-02600-00	BURTON, BRIAN RT 1025	1	03/01/2019	69320	69158	842	Х
114-09810-00	JONES, RONALD PR.ATER ROAD	1	03/01/2019	38479	38310	209	Х
114-12600-00	BURTON, ERNEST PRATER ROAD	1	03/01/2019	25163	25081	83	Х
115-40410-00) OWENS, JUDY ROSE RIDGE	1	03/21/2019	585	506	79	Х
115-72000-00) HAMILTON #2, BARRY WALNUT GROVE	1	03/01/2019	54239	54019	144	х
115-79600-00) REEDER, HAROLD REEDER ROAD	1	03/01/2019	24217	24216		X
116-30400-0	0 MCCORMICK, WILLIAM RT 474	1	03/01/2019	27851	27851		X
144-34615-0	O SCHUELER, PAUL GREENBRIAR RD	1	03/01/2019	15	15		Х
150-02400-0	5 BUSH, JOSH RT7	1	03/21/2019	4704	4670	34	Х
160-03250-0	0 HAMRIC, JAMES B ROUTE 182	1	03/01/2019				X
15r,i00	D-OlWALL, MAURICE ROUTE 986	1	03/01/2019	77667	77428	296	X
160-13670-0	0 NEWELL, JEFFERY ROUTE 986	1	03/05/2019	3039:	2 30376	32	X

UMTRDEXQ 2019/03/22 10:28:44

RATTLESNAKE RIDGE WATER DISTRI

Page:

METER READING EXCEPTION REPORT

ACCOUNT	NAME	METER	READING DATE			USAGE	CHANGE ESTIMATE FINAL ROLLOVER OUT
180-07100-00	HARPER, GLEN ALLEN RT 504 EAST	1	03/01/2019	1	1		Х
181-12001-00	HOLBROOK #2, AANDY RT 504 W	1	03/01/2019	64953	64883		Х
182-06200-00	MOORE, MICHAEL & CHRYSTAL STARK RIDGE-RANDOL	1	03/01/2019	142609	141785	885	X
182-12610-00) ORRICK, JIM B STARK RIDGE	1	03/01/2019	3948	3941		х
182-12800-00	FLAIfflery, JR STARK RIDGE	1	03/01/2019	60595	60257	341	х
182-17500-0	L CARTER, NATHANIEL STARK RIDGE	1	03/01/2019	52967	52637	325	Х
_	O GIVENS #3, BRIAN STARK RIDGE	1	03/01/2019				Х
, !1210-0	7 SLONE, DONNA STARK RIDGE	1	03/01/2019	68820	68413	440	х

TOTAL NUMBER OF ACCOUNTS: 26

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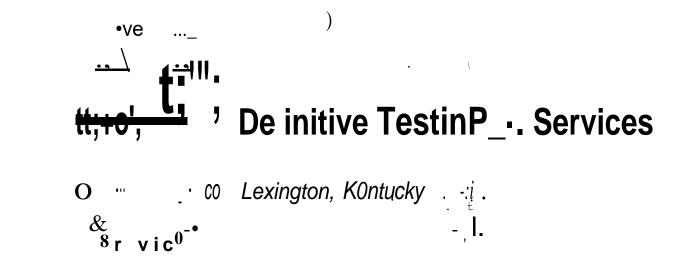
USAGE: 4527

 $^{\star}\,{\rm End}$ of Report: Rattlesnake Ridge Water Distri *

7.

17. The plant meter has not been tested because it doesn't have test ports on it but the meter was replaced in 2014.

18. See Attached Files

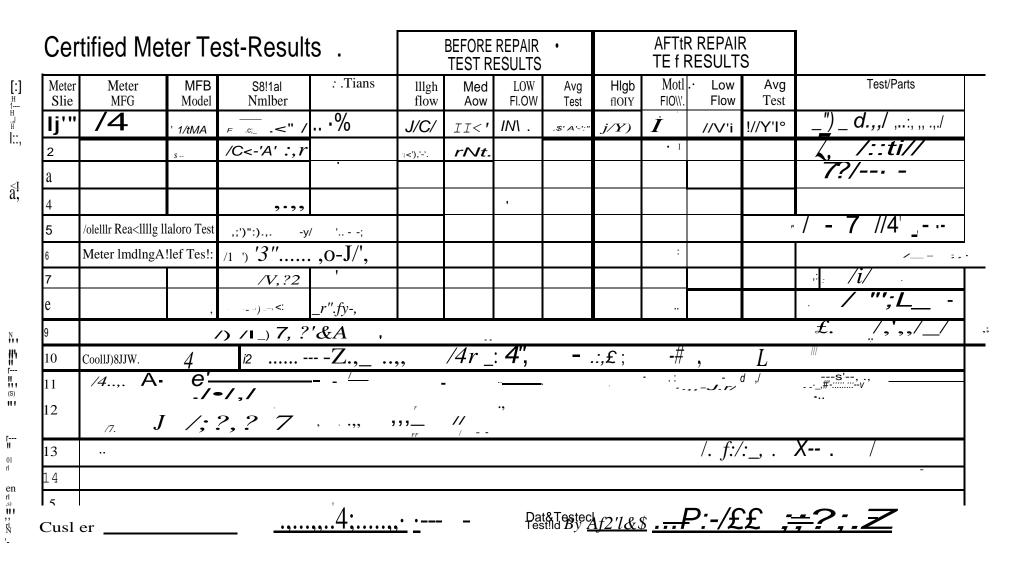


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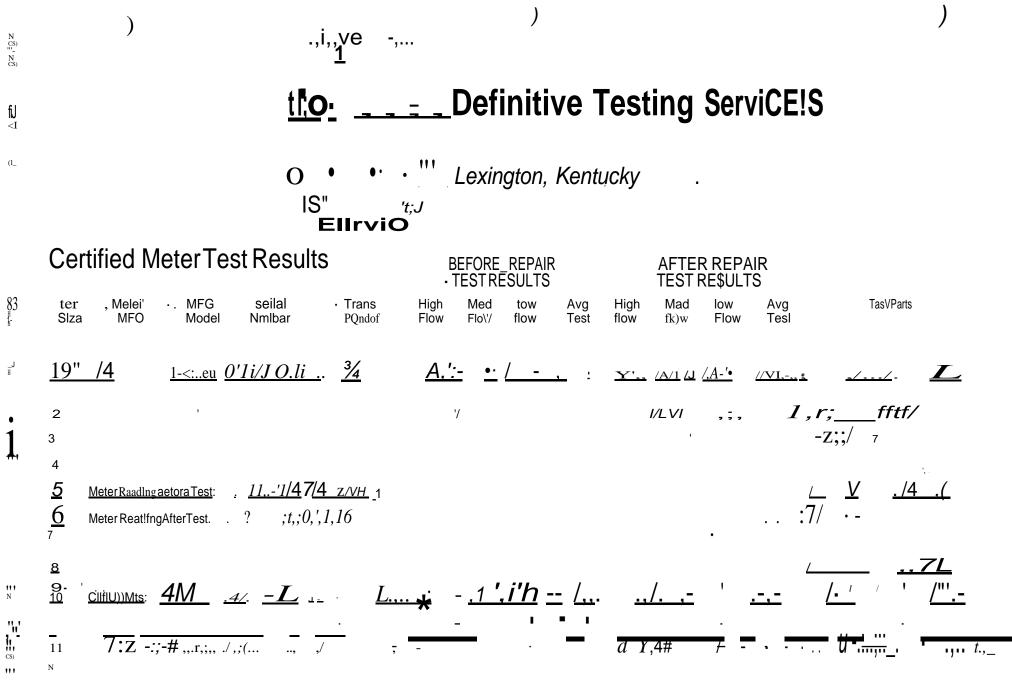
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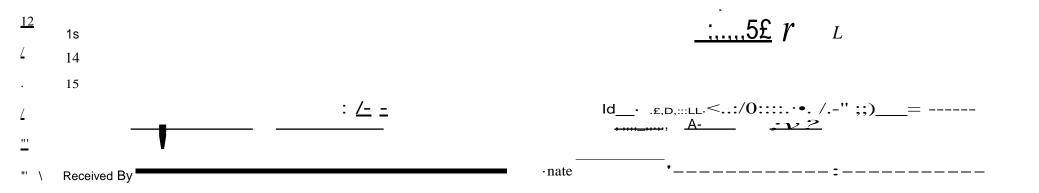
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19. The District uses Definitive Testing of Lexington KY to test all of our meters. We try to pull as many residential meters a month as we can to have tested and our commercial meters are tested and repaired on site.

20.156

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^{/""""} Rattlesnake Ridge Response to Appendix C

21. Rattlesnake Ridge Water District uses Sensus brand meters model SR2 AMR for all of our system. We currently have 4045 residential customers and 15 commerical customers.

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22. The District has a SCADA system that monitors all tanks ,pumping stations and valves that fill tanks. We have an employee at our water plant 24/7 to monitor the SCADA system and to call someone immediately if the need arises.

23. Yes the utility has telemetry on all of its sites as explained in Appendix C question 22.

24. Yes all the meters in our District are read monthly.

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25. Yes, all of our meter readers are trained by Sensus personal and CI Thornburg CO.

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26. No, we do not have master meter zone meters but are looking to install them in future.

27. The District does pressure surveys in our entire system to record pressure at different areas to allow us to monitor pressure so if we start dropping pressure in certain areas we know where we have a problem.

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28. Yes, The board gets a copy of water loss, leaks, flushing and any other water loss at every monthly board meeting, and it is discussed at every meeting.

29. The District does not have a target date on a reduction of water loss, but the board addresses this issue at every monthly meeting and makes it our top priority.

30. 1. Service line replacement is our number 1 priority.
2.Meter change out is the 2°d priority because of slow meters.
3.Up grading our telemetry to prevent tank overflows

31. See attachments

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31. The salary for the Manager for 2017 and 2018 is\$ 65,769.60 per year.

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32. There is no employment contract between the manager/superintendent and the utility.

33. A large number of our main lines have been in the ground since 1985 with other projects coming on in 1990,1992 and many other projects coming on over the years up to the most recent project in 2018. The district tries to get potable water to customers in rural areas where potable drinking is not available.

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34. Most of our service lines have been in since 1985 and a lot of our leaks are on service lines but we fix them as soon as we find them or a customer reports it.

35. Most of our service lines have been in since 1985 and a lot of our leaks are on service lines but we fix them as soon as we find them or a customer reports it. We are making plans and mapping out areas that we need to replace service lines.

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36. The District has a computer print out each month of accounts that are not active, if the meter Shows usage, a work order is issued and someone goes out to check the meter for theft.

37. The District does not have a lot of theft of water and we have checked into prosecuting but the cost of legal fees is much higher and is not feasible, However we always leave the meter in place so that we can keep track of how much water was stolen and when that meter is reconnected again we can collect revenue for water that was stolen.

37. a. The District has not provided any of this information to the county attorney or commonwealth attorney. We consulted our attorney on this matter who advised us that the legal fees would be more expensive than water lost.

37. b .The district consulted our attorney on this matter at one of our regular board meetings and was advised of the cost to prosecute the small amount of theft that we have.

38. The District adjusts the customer's bill if the bill has doubled due to a leak and we allow two adjustments in a five year period. The District works with the customer as much as possible to set up a-payment arrangement on the remaining balance. The District does not give adjustments for filling swimming pools or water that is not leaked. The Manager "W.C Gilbert" is the person who approves all adjustments.

39. The District does not hive adjustments on late fees on leak adjustments. See attached form on tariff\$.

	FOR <u>Ca1t r. Elliot Lawrence & Morgan Counties Kentuckv</u> Community, Town or City
	P.S.C KYNO.
	SHEET NO
<u>R attles mike Ri</u> <u>W ter D Jric t</u> _	CANCELLING P.S.C. KY. NO
(Name of Utility)	SHEET NO,,

Leak Adjustment Policy.

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While a utility is not required to have a leak adjustment policy to adjust bills due to a water leak, this utility chooses to offer a leak adjustment to its residential and commercial customers under the following conditions:

- 1. The customer's bill for the month in which a leak adjustment is requested must be at least 2 times the customer's average monthly bill, which is calculated over a three- month period.
- 2. The customer must provide a plumber's statement or other proof showing the leak has been repaired.
- 3. The customer's bill will be based on two components. The first step will be to calculate the customer's average monthly usage over a three-month period. The second step will be to deduct the customer's average monthly usage (as calculated above) from the total amount of water that passed through the meter. The usage calculated in step one will be billed at the utility's regular rates, while the remaining usage will be billed at the utility's current cost of production per 1,000 gallons.
- 4. If meter readings are not available for an entire three-month period, the average usage of similar customer loads shall be used for comparison purposes for the calculation.
- 5. Only two (2) leak adjustments per customer will be allowed during any given five (5) year period.

DATE OF ISSUE <u>.:f-2b</u> <u>fJ.5</u> <u>d</u> $a_{\text{Mo-n',th}_D_a_{\text{te_i}}_{\text{vea}_r}}$	1	KENTUCKY
DATE EFFECTIVE A .:1L .014	ارا ۲' 7:	PUBLIC SERVICE COMMISSION JEFF R. DEROUEN EXECUTIVE DIRECTOR TARIFF BRANCH
TITLE / <u>;) C,<i>IJ' 1'<-"i'-N</i> 1</u>	11	<u>&d-</u>
BY AUTHORITY OF ORDER OF THE PUBLIC SERVICE COMMISSION IN CASE NODATED	 ř i:	EFFECTIVE $4!'!/2014$ pursuant to 807 kar 5:011 section 9 (1)

(N)

40. The District does not use Microsoft Excel for our Leak Adjustment Worksheet we use our own in house form. See attached form.

EhK ADJUSTMENT SHEET

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41. The District does not do a comprehensive water audit.

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42. The fire departments in our District does not report to us. We have asked them several times to report to us. We use the Water Usage Report Form KRS 278.170{3} 807KAR5:095 Section 9 to calculate the water usage for fire departments, please see attached form.

Fire Department - Water Usage Report Form KRS 278.170(3) 807 KAR5:095 Section 9

Any city, county, urban-county, charter county, fire protection district, or volunteer fire protection district (uUser") may withdraw water from the utility's water distribution system for the purpose of fighting fires or training firefighters at no charge on the condition that it maintains estimates of the amount of water used for fi i:otection and training during the calendar month and reports the amount of this water usage to the utility no later than the 15th day of the following cale 11onth.

Any city, county, urban-county, charter county, fire protection district, or volunteer fire protection district that withdraws water from the utility's water distribution system for fire protection or training purposes and fails to submit the required report on water usage in a timely manner shall be assessed the cost of this water.

A non-reporting user's usage shall be presumed to be 0.3 percent of the utility's total water sales for the calendar month.

all depts in system		<u>!(name</u> of Fire Department) _(name of Water System)			Month Year		12/1/18-2/28/19 2018-2019	
	1		yotom)			rsion factor icient value	29.83 0.95	
Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitot not used
1/1/2018 2/1/2018 3/1/2018 4/1/2018								47,331 59,076 35,250 46,850
5/1/2018 5/1/2018 6/1/2018 7/1/2018								40,947 40,947 53,410 97,141
8/1/2018 9/1/2018 10ra								39,842 58,558 38.200
11, J18 12/1/2018								71,702 41,300
1/1/2019 2/1/2019								36,928 47,300

Total Gallons for Month!

713,835

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43. The District uses a form obtained from Rural Water to calculate flushing. See attached form.

Monthly Hydrant Flushing Report

(Flushing for other than DBP maintenance)

Rattlesnake Ridge Water District !(name of Water System) Month **January** Year 2019 1Kv0 0555 i(PWSJD) 29.83 unitconversionfactor Formula: GPM - 29.83 cd² p coefficient value 0.95 Nozzle Estimated Total Flow if size Reason Minutes Pitot (typically Gallons Pitot not Date Hydrant Location and/or Number Operated Operated 2.5or4.5) GPM Pressure Flowed used 1/3/2019 us60 monthly 30.00 53,135 2.5 100 1771 1/9/2019 carter city monthly 30.00 3.0 90 2420 72,588 1/16/2019 willard 45.00 1940 monthly 2.5 120 87,309 1/24/2019 504 monthly 30.00 2.5 80 1584 47,525 1/22/2019 Gree Greenhill leak 60.00 2.0 130 1292 77,546 Daveys run 1/24/2019 30.00 3.0 120 2794 83,817 leak 1/28/2019 100 us60 leak 30.00 2.5 1771 53,135 1/28/2019 possum holler 130 1292 leak 60.00 2.0 77,546 1/28/2019 adkins loop leak 30.00 2.5 90 1680 50,408 1/28/2019 us60 monthlv 45.00 2.5 100 1771 79,702

Total Gallons for Month

682,710

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44. The District just uses gate valve wrenches and hydrant wrenches to flush hydrants and blow-offs.

45. See attachments.

	e Ridge Water District	(<u>name</u> of Water S	system)			- Month Year	<u>Janı</u> 20	
&92.20555](PWSID)				-		7
							29.83	
· · · · · · · · · · · · · · · · · · ·						rsion factor	0.95	
		Formula:	GPM=2 Total	9.83 cd ² p Nozzle size	coeff	icient value		Estimated Flow if
Date	Hydrant Location and/or Number	Reason Operate,d	Minutes Operated	(typically 2.5 or4.5)	Pitot Pressure	GPM	Gallons Flowed	Pitot not used
1/22/2018	woods prooeriy	air	30.00	2.5	100	1771	53,135	
1/16/2018	RT60	random	30.00	3.0	90	2420	72,588	
1/17/2018	carter city	random	30.00	3.0	100	2550	76,514	
1/20/2018	willard	random	40.00	2.5	100	1771	70,846	
1/20/2018	adkins loop	air	30.00	3.0	80	2281	68,436	
1/23/2018	oakland ridae	random	30.00	3.0	80	2281	68,436	
-								

Total Gallons for Month

<u>409.955</u>

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Monthly Hydrant Flushing Report

(Flushing for other than DBP maintenance)

Rattlesnake Ridge Water District	
Tratticshake Mage Water District	

(name of Water System)

Month Year

Eebruary 2018

IKyP"-"0555

]CPWSID)

IKyP"-"055	5	CPWSID)					00.00	1
				.0		rsion factor	. 29.83	
	1	Formula:	GPM = 2	29.83 cd ² p	coeff	icient value	0.95	
Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or 4.5)		GPM	Gallons Flowed	Estimated Flow if Pitotnot used
2/3/2018	willard	montniy	30.00	2.5	130	2019	60,583	
2/3/2018	us 60	monthly	30.00	2.5	100	1771	53,135	
2/13/2018	biQ run	leak	30.00	2.5	130	2019	60,583	
2/20/2018	carter city	monthly	30.00	2.5	100	1771	53,135	
2/22/2018	diamond ridQe	monthly	15.00	3.0	80	2281	34,218	
2/23/2018	canes creek	leak	30.00	3.0	120	2794	83,817	
2/1/2018	pumo stations for fresh water	monthly	1444.00	0.5	50	50	72,338	
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Total Gallons for Month!

417.808

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Rattlesnake Ridge Water District		<u>I<name< u=""> of Water _ (PWSID)</name<></u>	System)			Month Year	Mai 20	
	-	Formula:	GPM =2	29.83 c,f p	Unit conve coef	ersion factor ficient value	29.83 0.95	
Date 3/6/2018	Hydrant Location and/or Number	Reason Operated leak	Total Minutes Operated 90.00	Nozzle size (typically 2.5 or 4.5) 2.5	Pitot Pressure 100	GPM	Gallons Flowed 159,404	Estimated Flow if Pitot not used
3/7/2018	willard	monthly	30.00	2.5	130	2019	60,583	
3/12/2018	adkins loop	air	30.00	2.5	80	1584	47,525	
3/15/2018	crocket	monthly	15.00	2.5	100	1771	26,567	
3/28/2018	flat fork	monthly	20.00	2.5	90	1680	33,605	
5/20/2018		понану	20.00	2.5	90	1080	33,005	
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						+ +		

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Total Gallons for Month

327.685

Rattlesnak	e Ridge Water District	<u>j(name</u> of Water S	system)			Month	Ae	
Ky07 0555](PWSID)				Year	20	18
		<i>)</i>			unitconve	rsion factor	29.83	
				T			0.95	
		Formula:	GPM=2	9.83 ccJ2 p Nozzle	coeff	cient value		F atimata
Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	size (typically 2.5 or4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitotnot used
4/3/2018 4/16/2019		leak	30.00	3.0	100	2000	70,514	
4/16/2018 4/23/2018	Aden RT 1	leak	30.00	2.5	110	1858	55,728	
4/23/2018		leak	30.00	2.5	130	2019	60,583	
								ļ
	-							

Total Gallons for Month!

192,825

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Rattlesnake Ridge Water District	<u>I<name< u=""> of Water System)</name<></u>	Month	Mav
-		Year	2018
1&0?.20555	I(PWSID)		

29.83 unit conversion factor Formula: $GPM = 29.83 \text{ cd}^2 \text{ p}$ coefficient value 0.95 Nozzle Total Estimated size Reason Minutes Pilot Flow if Pilot (typically Gallons Date Hvdrant Location and/or Number Operated Operated 2.5 or 4.5) Pressure GPM Flowed not used 5/15/2018 us 60 monthlv 30.00 2.5 100 53,135 1771 carter citr 30.00 2.5 5/18/18/ air 100 1771 53,135 5/25/2018 wi;llard 2.5 monthlv 30.00 130 2019 60,583 5/25/2018 30.00 3.0 120 2794 83,817 crocket monthly 5/26/2018 corv ridoe 20.00 3.0 90 2420 48,392 monthlv monthly 5/28/2018 30.00 2.5 110 1858 carter citv 55,728

Total Gallons for Month

<u>354,789</u>

Kentuel. !' Rural Water Association

Monthly Hydrant Flushing Report

(Flushing for other than DBP maintenance)

Rattlesnake Ridge Water District

I<name of Water System)

Month Year

0555 <u>l(</u>PWSID)

					unit conver	sion factor	29.83	
		Formula:	GPM = 29	.83 c.J2 n	coeffic	ient value	0.95	
Date	Hydrant Location and/or Number	Reason Operated	Total Minutes	Nozzle size (typically 2.5 or4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitot not used
6/4/2018	falls branch	leak	30.00	2.5	120	1940	58,206	
6/5/2018	willard	monthly	30.00	4.5	120	6286	188,588	
6/17/2018	us 60	monthly	30.00	2.5	100	1771	53,135	
6/19/2018	crockett end of line	monthly	30.00	2.5	100	1771	53,135	
6/19/2018	diamond ridae	monthly	30.00	2.5	80	1584	47,525	
6/19/2018	carter city brushy	monthly	30.00	2.5	70	1482	44,456	
6/21/2018	flat fork	monthlv	30.00	2.5	80	1584	47,525	
6/25/2018	rt 1 pallet mill	leak	30.00	2.5	120	1940	58,206	
6/26/2018	plant	monthly	30.00	4.5	140	6790	203,698	
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Total Gallons for Month

<u>754,474</u>

<u> Rattlesnake Ridge Water District</u>	<u>I<name< u=""> of Water System)</name<></u>	Month	JULY
-		Year	2018

<u> IKyo:> 0555</u>

_____](PWS!D)

					unitconversionfactor		29.83]
		Formula:	GPM - 29	9.83 cd ² p	coeffi	cient value	0.95	
Dete		Reason	Total Minutes	Nozzle size (typically	Pitot	0.014	Gallons	Estimated Flow if Pitot not
Date	Hydrant Location and/or Number	Operated	Operated	2.5or4.5)	Pressure	GPM	Flowed	used
7/10/2018	adkins loop	leak	30.00	2.5	90	1680	50,408	
7/11/2018	cliftv	leak	30.00	2.5	130	2019	60,583	
7/11/2018	possum holler	leak	30.00	3.0	120	2794	83,817	
7/15/2018	across from bruin boat ramp 10'	leak	30.00	4.5	150	7028	210,848	
7/16/2018	bia run 8'	leak	15.00	4.5	130	6543	98,144	
7/26/2018	Mavhew Flats 8'	leak	30.00	2.5	100	1771	53,135	
7/26/2018	Rattlesnake fork 3'	leak	30.00	2.5	90	1680	50,408	
7/31/2018	Bia Run 8'	leak	15.00	2.5	130	2019	30,291	

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Total Gallons for Month

<u>637.634</u>

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I		l <u>≺name</u> ofWaterS	System)			Month Year		<u>IIUSt</u> 18
Ky!P.!10555		[{PWSID)				1		
					unitconve	rsion factor	29.83	
		Farmula	0.514				0.95	
		Formula:	GPM = 2	9.83 c,f p Nozzle	coef	icient value		Estimated
			Total	size				Flow if
		Reason	Minutes	(typically 2.5 or 4.5)	Pitot		Gallons	Pitot not
Date	Hydrant Location and/or Number	Operated	Operated			GPM	Flowed	used
8/6/2018	wicker holler	leak	30.00	2.5	100	1771	53,135	
8/13/2018	rsr	leak	30.00	2.5	120	1940	58,206	
8/14/2018 8/20/2018	rattlesnake fork us60	leak	30.00	2.2	100	1372	41,148	
	706	monthly	15.00	2.5	90	1680	25,204	
8/23/2018		leak	30.00	2.5	90	1680	50,408	
8/24/2018	willard	monthly	30.00	4.5	100	5739	172,156	
8/27/2018	us 60	monthly	30.00	2.5	90	1680	50,408	
8/28/2018	biQ run	monthly	30.00	4.5	120	6286	188,588	
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<u>639,253</u>

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<u>Rattlesnake</u>	e Ridge Water District	<u>!(name</u> of Water S		Month	Sep tember			
KyO-?:wss	<u> </u>](PWSID)				Year	20	<u>18</u>
<u>ityo</u>	5	J(FVVSID)					29.83	
					unitconve	rsionfactor	0.95	
		Formula:	GPM=2	9.83 cd ² p		icient value	0.70	
				Nozzle				Estimated
		Reason	Total	size	-			Flow if
Date	Hydrant Location and/or Number	Operated	Minutes	(typically 2.5 or 4.5)	Pitot	GPM	Gallons	Pitot not used
9/5/1/	little fork	leak	Operated 30.00	2.5	Pressure 100	1//1	Flowed 53,135	uscu
9/10/2018	us60	leak	30.00	4.5	100	5739	172,156	
9/23/2018	rt 504	leak	30.00	2.5	80	1584	47,525	
9013/18	willard	monthly	30.00	2.5	120	1940	58,206	
9/24/2018	us60	monthly	30.00	2.5	90	1680	50,408	
9/24/2018	plant	monthly	45.00	2.5	150	2169	97,615	
9/26/2018	biq run	monthly	30.00	2.5	130	2019	60,583	
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Total Gallons for Month <u>539,628</u> 1

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Rattlesnake Ridge Water District	!(name of Water System)	Month	Oct
		Year	2018
[<u>\$0.</u>	l(PWSID)		

						rsion factor	29.83]
		Formula	GPM - 2	9.83c,J2 p	coeff	icient value	0.95	
Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitot not used
10/9//18	church ridae	leak	60.00	2.5	80	1584	95,050	
	rattlesnake fork	leak	30.00	2.5	80	1584	47,525	
	aden	leak	30.00	2.5	90	1680	50,408	
	willard	monthly	30.00	2.5	100	1771	53,135	
10/19/2018	cliftv	leak	30.00	2.5	120	1940	58,206	
10/23/2018	us60	leak	30.00	2.5	100	1771	53,135	
10/25/2018	Mayhew Flats	leak	15.00	2.5	120	1940	29,103	
10/29/2018	carter citv	monthIY	30.00	2.5	130	2019	60,583	
10/30/2018	crocket	monthly	60.00	2.5	100	1771	106,269	
10/31/2018	fallsbranch	monthlY	30.00	2.5	120	1940	58,206	
10/31/2018	us60	monthly	60.00	2.5	100	1771	106,269	
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Total Gallons for Month!

<u>717.890</u>

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Monthly Hydrant Flushing Report

(Flushing for other than DBP maintenance)

Rattlesnake Ridge Water District

I<name of Water System)

Month Year November 2018

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j(PWSID)

11/5/2018 a	lydrant Location and/or Number Iden Is60	Formula: Reason Operated leak monthv	GPM=2 Total Minutes Operated 30.00	9.83 e <f p<br="">Nozzle size (typically</f>	o coeff Pitot	icient value	0.95	Estimated Flow if
11/5/2018 a	iden	Operated leak	Minutes Operated	size (typically	Pitot			
				2.5 or 4.5)	Pressure	GPM	Gallons Flowed	Pitot not used
11/13/2018 u	IS60	monthv	30.00	2.5	100	1771	53,135	
			30.00	3.0	120	2794	83,817	
11/13/2018 h	nuffs run	leak	15.00	3.0	150	3124	46,855	
11/16/2018 8	³ popes fork	leak	30.00	2.5	120	1940	58,206	
11/20/2018 h	norton flats	leak	30.00	2.5	100	1771	53,135	
11/26/2018 h	norton flats	leak	30.00	3.0	100	2550	76,514	
1128/18 m	nik !owes service						·	

Total Gallons for Month

<u>371.661</u>

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Rattlesnake Ridge Water District	l(name of Water System)	Month	December
		Year	2018
1 <u>§02-20555</u>](PWSID)		

						rsion factor	29.83]
		Formula:	GPM = 2	29.83cd ² p	coeff	icient value	0.95	
Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or4.5)	Pitot Pressure	GPM	Gallons	Estimated Flow if Pitot not used
12/4/2018	us60	monthly	30.00	2.5 014.3)	120	1940	Flowed 58,206	useu
12/6/2018	willard	monthly	30.00	2.5	130	2019	60,583	
	carter citv	monthly	30.00	2.5	100	1771	53,135	
	adkins loop	air	30.00	2.5	90	1680	50,408	
12/14/2018	Rattlesnake Ridge	monthly	30.00	2.5	120	1940	58,206	
12/19/2018	986	air	30.00	2.5	150	2169	65,076	
12/26/2018	corv	monthly	30.00	2.5	90	1680	50,408	
12/26/2018	brushy creek	air	30.00	2.5	100	1771	53,135	
12/20/2010		all	30.00	2.0	100	1771	55,155	
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Total Gallons for Month

449,157

Rattlesnake	Ridge Water District	<u><name< u=""> of Water S</name<></u>	System)			Month	Janu	ary
						Year _	201	19
[<u>&,0 20555</u>]	(PWSID) Formula:	GPM = 2	29.83cd² p		ersion factor ficient value	29.83 0.95]
Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitotnot used
1/3/2019	us60	monthlv	30.00	2.5	100	1771	53,135	
1/9/2019	carter citv	monthlv	30.00	3.0	90	2420	72,588	
1/16/2019	willard	monthly	45.00	2.5	120	1940	87,309	
1/24/2019	504	monthlv	30.00	2.5	80	1584	47,525	
1/22/2019	Gren Greenhill	leak	60.00	2.0	130	1292	77,546	
1/24/2019	Davevs run	leak	30.00	3.0	120	2794	83,817	
1/28/2019	us 60	leak	30.00	2.5	100	1771	53,135	
1/28/2019	possum holler	leak	60.00	2.0	130	1292	77,546	1
1/28/2019	adkins loop	leak	30.00	2.5	90	1680	50,408	
1/28/2019	us 60	monthlv	45.00	2.5	100	1771	79,702	
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<u>682.710</u>

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Rattlesnake Ridge Water District	<u>I<name< u=""> of Water System)</name<></u>	Month	Feb
		Year	2019

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					unit conve	rsion factor	29.83	
		Formula:	GPM=2	9.83 ccJ2 p	coeffi	cient value	0.95	
Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitotnot used
2/6/2019	Davevs run	leak	30.00	2.5	100	1771	53,135	
2/6/2019	Hitchins	leak	15.00	2.5	100	1771	26,567	
2/13/2019	RT5044' slip	leak	30.00	2.5	120	1940	58,206	
2/8/2019	aden	leak	30.00	3.0	100	2550	76,514	
2/16/2019	Sauire Lick	leak	30.00	3.0	90	2420	72,588	
2/25/2019	Ross Chapel	leak	30.00	3.0	80	2281	68,436	
2/26/2019	Gre⊔oMi ille	leak	15.00	2.5	100	1771	26,567	
2/27/2019	willard	monthlv	15.00	3.0	120	2794	41,908	
2/28/2019	mcalone creek	air	30.00	2.5	100	1771	53,135	
2/28/2019	•ordan fork	air	30.00	2.5	90	1680	50,408	
2/28/2019	brushv creek	air	30.00	3.2	100	2902	87,056	
2/28/2019	us60 hvdrant	monthlv	45.00	2.5	100	1771	79,702	
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Total Gallons for Month

694.222

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