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 long-range 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.

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.

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.

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.

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

Monthly **Water** Use Report

Water Utility: Rattlesnake Ridge Water District **PWSID:** Ky0220555

For the Month of: January **Year:** 2018

1	**PRODUCTION COST PER THOUSAND**			
2	**PURCHASE COST PER THOUSAND**	(insert cost) (insert cost) ----------		
			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		53,814,000	99.7%
4	Water Purchased		165,000	0.3%
5		**TOTAL PRODUCED AND PURCHASED**	53,979,000	
6		**TOTAL COST** #VALUE!		
	WATER SOLD			
			12,798,780	
7	Residential		2,978,500	
8	Commercial			
9	Industrial			
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)			
13		**TOTAL WATER SOLD**	15,777,280	29.2%
14		**TOTAL WATER NOT SOLD**	38,201,720	**70.8%**
	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plan			
16	Wastewater Treatment			
17	System Flushing			#VALUE!
18	Fire Department Usage		180,000	#VALUE!
19	DBP Flushing		409,955	
			47,331	
		DBP Maintenance	0	
20		**TOTAL USAGE**	637,286	
21		**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		69.6%
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		1,451,411	#VALUE!
24	Repaired Line Breaks		0	
25	Unknown Loss		36,113,023	**66.9%**
26		**TOTAL WATER NOT SOLD OR USED**	**37,564,434 #VALUE!**	
27		**COST OF WATER NOT SOLD OR USED**		

	"UNKNOWN LOSS" FLOW RATE AND COST:		
28		"Unknown Loss"	36,113,023
29		% "Unknown Loss"	66.9%
30		Number of Days in Period!	31
31		"Unknown Loss" per Day (Gallons per Day)	1,164,936
32		"Unknown Loss" per Minute (GPM)	808.98
33		"Unknown Loss" Cost for Month	#VALUE!

Monthly **Water** Use Report

Monthly **Water** Use Report

Water Utility: Rattlesnake Rids_e Water District **PWSID:** **Ky0220555**

For the Month of: February **Year:** **2018**

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

			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		41,893,000	98.3%
4	Water Purchased		720,000	1.7%
5		**TOTAL PRODUCED AND PURCHASED**	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**	19,692,204	46.2%
14		**TOTAL WATER NOT SOLD**	22,920,796	**53.8%**
	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plant		2,000,000	
16	Wastewater Treatment			
			417,,8088	
17	System Flushing		**59,076**	#VALUE!
18	Fire Department Usage	DBP Maintenance	0	#VALUE!
19	DBP Flushing			
20		**TOTAL USAGE**	2,476,884	
21		**WATER LOSS PERCENTAGE FOR RATE PURPOSES**	**48.6%**	
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		1,518,11	#VALUE!
24	Repaired Line Breaks			
25	Unknown Loss		18,925,767	**44.4%**
26		**TOTAL WATER NOT SOLD OR USED**	**20,443,912**	
27		**COST OF WATER NOT SOLD OR USED**	**#VALUE!**	

	"UNKNOWN LOSS" FLOW RATE AND COST:	
28	"Unknown Loss"	18,925,767
29	% "Unknown Loss"	44.4%
30	Number of Days in Period	28
31	"Unknown Loss" per Day (Gallons per Day)	675,920
32	"Unknown Loss" per Minute (GPM)	469.39
33	"Unknown Loss" Cost for Month	#VALUE!

Monthly **Water** Use Report

Monthly Water Use Report

Utility: Rattlesnake Ridge Water District **PWSID:** Ky0220555

For the Month of: March **Year:** 2018

1	**PRODUCTION COST PER THOUSAND**	('insert cost)		
2	**PURCHASE COST PER THOUSAND**	(insert cost).		
			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		45,460,0001	100.0%
4	Water Purchased			0.0%
5		**TOTAL PRODUCED AND PURCHASED**	45,460,000	
6		**TOTAL COST** #VALUE!		
	WATER SOLD			
7	Residential		9,766,790	
8	Commercial		1,985,450	
9	Industrial			
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)			
13		**TOTAL WATER SOLD**	11,752,240	25.9%
14		**TOTAL WATER NOT SOLD**	33,70'i',760	**74.1%**
	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plant		2,000,000	
16	Wastewater Treatment Plant			
17	System Flushing		327,685	#VALUE!
18	Fire Department Usage		35,250	#VALUE!
19	DBP Flushing	DBP Maintenance	0	
20		**TOTAL USAGE**	2,362,935	
21		**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		69.0
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		674,429	#VALUE!
24	Repaired Line Breaks		0	
25	Unknown Loss		30,670,396	**67.5%**
26		**TOTAL WATER NOT SOLD OR USED**	**31,344,825**	
27		**COST OF WATER NOT SOLD OR USED**	**#VALUE!**	
	"UNKNOWN LOSS" FLOW RATE AND COST:			
28		**"Unknown Loss"**	30,670,396	
29		% "Unknown Loss"	67.5%	
30		Number of Days in Period	31	
31		"Unknown Loss" per Day (Gallons per Day)	989,368	
32		"Unknown Loss" per Minute (GPM)	687.06	
		"Unknown Loss" Cost for Month	#VALUE!	

Monthly Water Use Report

Utility: Rattlesnake Ridge Water District **PWSID:** Ky0220555

For the Month of: April **Year:** 2018

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

			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		46,774,000	99.2%
4	Water Purchased		400,000	0.8%
5		**TOTAL PRODUCED AND PURCHASED**	47,174,000	
6		**TOTAL COST** #VALUE!		
	WATER SOLD			
7	Residential		12,536,640	
8	Commercial		3,080,560	
9	Industrial			
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)			
13		**TOTAL WATER SOLD**	15,617,200	33.1%
14		**TOTAL WATER NOT SOLD**	31,556,800	**66.9%**
	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plan		3,000,000	
16	Wastewater Treatmen			
17	System Flushing		192,,8255	#VALUE!
18	Fire Department Usage		**46,850**	#VALUE!
19	DBP Flushing	DBP Maintenance	0	
20		**TOTAL USAGE**	3,239,675,..... ,,.,.,	
21		**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		60.0¾i
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		975,554	#VALUE!
24	Repaired Line Breaks			
25	Unknown Loss		27,341,571	**58.0%**
26		**TOTAL WATER NOT SOLD OR USED**	**28,317,125**	
27		**COST OF WATER NOT SOLD OR USED**	**#VALUE!**	

	"UNKNOWN LOSS" FLOW RATE AND COST:	
28	"Unknown Loss"	27,341,571
29	% "Unknown Loss"	58.0%
30	Number of Days in Period	301
31	"Unknown Loss" per Day (Gallons per Day)	911,386
32	"Unknown Loss" per Minute (GPM)	632.91
33	"Unknown Loss" Cost for Month	#VALUE!

Monthly Water Use Report

Monthly Water Use Report

W r Utility: Rattlesnake Rid.9.e Water District PWSID: Ky0220555

For the Month of: May Year: 2018

1 PRODUCTION COST PER THOUSAND (insert cost)

2 PURCHASE COST PER THOUSAND (insert cost)_

			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		48,142,0001	100.0%
4	Water Purchased			0.0%
5		**TOTAL PRODUCED AND PURCHASED**	48,142,000	
6		**TOTAL COST** #VALUE!		
	WATER SOLD			
7	Residential			
8	Commercial		10,969,870	
9	Industrial		2,679,210	
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)			
13		**TOTAL WATER SOLD**	13,649,080	28.4%
14		**TOTAL WATER NOT SOLD**	34,492,920	**71.6%**
	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plan		2,500,000	
16	Wastewater Treatmen		354,789	
17	System Flushing		0	#VALUE!
18	Fire Department Usage		0	
19	DBP Flushing	DBP Maintenance		
20		**TOTAL USAGE**	2,854,789	
21		**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		65.7%i
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		361,033	, #VALUE!
24	Repaired Line Breaks			
25	Unknown Loss		31,277,098	**65.0%**
26		**TOTAL WATER NOT SOLD OR USED**	**31,638,131**	
27		**COST OF WATER NOT SOLD OR USED**	**#VALUE!**	

"UNKNOWN LOSS" FLOW RATE AND COST:

28		"Unknown Loss"	31,277,098
29		% "Unknown Loss"	65.0%

Monthly Water Use Report

30	(insert days of operation during month)	Number of Days in Period
31	"Unknown Loss" per Day (Gallons per Day)	
32	"Unknown Loss" per Minute (GPM)	
33	"Unknown Loss" Cost for Month	#VALUE!

Monthly Water Use Report

Utility: Rattlesnake Ridge Water District **PWSID:** Ky0220555

For the Month of: June **Year:** 2018

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

			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		45,787,000	99.3%
4	Water Purchased		310,000	0.7%
5		**TOTAL PRODUCED AND PURCHASED**	46,097,000	
6		**TOTAL COST** #VALUE!		
	WATER SOLD			
7	Residential		14,917,280	
8	Commercial		2,888,740	
9	Industrial		0	
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)	TOTAL WATER SOLD		
13		**TOTAL WATER SOLD**	17,806,020	38.6%
14		**TOTAL WATER NOT SOLD**	28,290,980	**61.4%**
	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plan			
			2,000,000	
16	Wastewater Treatment Plant		754,474	
17	System Flushing		53,410	#VALUE!
18	Fire Department Usage		0	#VALUE!
19	DBP Flushing	DBP Maintenance		
20		**TOTAL USAGE**	2,807,884	
21		**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		55.3%i
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)		50,000	#VALUE!
23	Excavation Breaks		2,046,891	#VALUE!
24	Repaired Line Breaks		0	
25	Unknown Loss		23,386,205	**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"	50.7%
30	(insert days of operation during month)	Number of Days in Period	
		"Unknown Loss" per Day (Gallons per Day)	
		"Unknown Loss" per Minute (GPM)	

Monthly Water Use Report

31
32
33

Monthly Water Use Report

Utility: Rattlesnake Rid.9.e Water District PWSID: Ky0220555

For the Month of: JULY Year: 2018

1	PRODUCTION COST PER THOUSAND	(insert cost)		
2	PURCHASE COST PER THOUSAND	(insert cost)		
			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		55,384,000	99.6%
4	Water Purchased		220,000	0.4%
5		TOTAL PRODUCED AND PURCHASED	55,604,000	
6		TOTAL COST #VALUE!		
	WATER SOLD			
7	Residential			
8	Commercial		15,336,890	
9	Industrial		17,_043,630	
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)			
13		TOTAL WATER SOLD	32,380,520	58.2%
14		TOTAL WATER NOT SOLD	23,223,480	**41.8%**
	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plan		1,500,000	
16	Wastewater Treatment			
17	System Flushing		637,634	#VALUE!
18	Fire Department Usage		0	
19	DBP Flushing	DBP Maintenance	0	
20		TOTAL USAGE	2,137,634	
21		WATER LOSS PERCENTAGE FOR RATE PURPOSES(		37.9%(
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		2,625,933	#VALUE!
24	Repaired Line Breaks		0	
25	Unknown Loss		18,459,913	**33.2%**
26		TOTAL WATER NOT SOLD OR USED	**21,085,846**	
27		COST OF WATER NOT SOLD OR USED	**#VALUE!**	

	"UNKNOWN LOSS" FLOW RATE AND COST:		
28		"Unknown Loss"	18,459,913
29		% "Unknown Loss"	33.2%
30	(insert days of operation during month)	Number of Days in Period	
31		"Unknown Loss" per Day (Gallons per Day)	
32		"Unknown Loss" per Minute (GPM)	
		"Unknown Loss" Cost for Month	#VALUE!

Monthly Water Use Report

Monthly Water Use Report

W;,.•.-.r Utility: Rattlesnake Ridge Water District **PWSID:** Ky0220555

For the Month of: August **Year:** 2018

1	**PRODUCTION COST PER THOUSAND**			
2	**PURCHASE COST PER THOUSAND**	(insert cost)		
		(insert cost)		
			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		52,562,0001	100.0%
4	Water Purchased			0.0%
5		**TOTAL PRODUCED AND PURCHASED**	52,562,000	
6		**TOTAL COST** #VALUE!		
	WATER SOLD			
7	Residential		9,844,290	
8	Commercial		3,296,230	
9	Industrial			
1O	Bulk Loading Stations			
11	Wholesale·			
12	Other Sales (explain)			
13		**TOTAL WATER SOLD**	13,140,520	25.0%
14		**TOTAL WATER NOT SOLD**	39,421,480	**75.0%**
	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plan		2,000,000	
16	Wastewater Treatmen		639,225533	
17	System Flushing		**39,842**	#VALUE!
18	Fire Department Usage	DBP Maintenance	0	#VALUE!
19	DBP Flushing			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		2,270,621	#VALUE!
24	Repaired Line Breaks		0	
25	Unknown Loss		34,471,764	**65.6%**
26		**TOTAL WATER NOT SOLD OR USED**	**36,742,385**	
27		**COST OF WATER NOT SOLD OR USED**	**#VALUE!**	

"UNKNOWN LOSS" FLOW RATE AND COST:

28	"Unknown Loss"	34,471,764
29	% "Unknown Loss"	65.6%
30	Number of Days in Period)	31
31	"Unknown Loss" per Day (Gallons per Day)	1,111,992
32	"Unknown Loss" per Minute (GPM)	772.22
	"Unknown Loss" Cost for Month	#VALUE!

Monthly Water Use Report

33

Monthly Water Use Report

W.;,.,,.,. Utility: Rattlesnake Rid.9.e Water District **PWSID:** Ky0220555

For the Month of: September **Year:** 2018

1	**PRODUCTION COST PER THOUSAND**	(insert cost)		
2	**PURCHASE COST PER THOUSAND**	(insert cost) ==========		
			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		52,600,000	99.6%
4	Water Purchased		235,000	0.4%
5		**TOTAL PRODUCED AND PURCHASED**	52,835,000	
6		**TOTAL COST** #VALUE!		
	WATER SOLD			
7	Residential			
8	Commercial		14,174,290	
9	Industrial		5,345,130	
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)			
13		**TOTAL WATER SOLD**	19,519,420	36.9%
14		**TOTAL WATER NOT SOLD**	33,315,580	**63.1%**
	BREAKDOWN OF WATER USAGE			
5	Water Treatment Plan		2,500,000	
16	Wastewater Treatment			
17	System Flushing		539,628	#VALUE!
18	Fire Department Usage		58,558	#VALUE!
19	DBP Flushing	DBP Maintenance	0	
20		**TOTAL USAGE**	3,098,186	
21		**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		57.2%i
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		4,216,2831	#VALUE!
24	Repaired Line Breaks		0	
25	Unknown Loss		26,001,111	**49.2%**
26		**TOTAL WATER NOT SOLD OR USED**	**30,217,394**	
27		**COST OF WATER NOT SOLD OR USED**	**#VALUE!**	

	"UNKNOWN LOSS" FLOW RATE AND COST:		
28		"Unknown Loss"	26,001,111
29		% "Unknown Loss"	
30	(insert days of operation during month)	Number of Days in Period	49.2%
31		"Unknown Loss" per Day (Gallons per Day)	
32		"Unknown Loss" per Minute (GPM)	
33		"Unknown Loss" Cost for Month	#VALUE!

Monthly Water Use Report

Monthly Water Use Report

W Utility: Rattlesnake Ridge Water District **PWSID:** Ky0220555

For the Month of: Oct **Year:** 2018

1	**PRODUCTION COST PER THOUSAND**	(insert cost)		
2	**PURCHASE COST PER THOUSAND**	(insert cost)	==========	
			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		53,726,000	99.5%
4	Water Purchased		260,000	0.5%
5	**TOTAL PRODUCED AND PURCHASED**		53,986,000	
6	**TOTAL COST**	#VALUE!		
	WATER SOLD			
7	Residential		9,057,120	
8	Commercial		3,678,570	
9	Industrial			
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)			
13	**TOTAL WATER SOLD**		12,735,690	23.6%
14	**TOTAL WATER NOT SOLD**		41,250,310	**76.4%**
	BREAKDOWN OF WATER USAGE			
	Water Treatment Plan		3,000,000	
16	Wastewater Treatment			
17	System Flushing		717,890	#VALUE!
			38,200	
18	Fire Department Usage	DBP Maintenance	0	#VALUE!
19	DBP Flushing			
20	**TOTAL USAGE**		3,756,090	
21	**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		69.5%	
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)		20,000	#VALUE!
23	Excavation Breaks		4,541,148	#VALUE!
24	Repaired Line Breaks		0	
25	Unknown Loss		32,933,073	**61.0%**
26	**TOTAL WATER NOT SOLD OR USED**		**37,494,220**	
27	**COST OF WATER NOT SOLD OR USED**		**#VALUE!**	

	"UNKNOWN LOSS" FLOW RATE AND COST:	
28	"Unknown Loss"	32,933,073
29	% "Unknown Loss"	61.0%
30	Number of Days in Period	31
31	"Unknown Loss" per Day (Gallons per Day)	1,062,357
	"Unknown Loss" per Minute (GPM)	737.75

Monthly Water Use Report

32
33
/"""'.

Monthly Water Use Report

W Utility: Rattlesnake Ridge Water District **PWSID:** Ky0220555

For the Month of: November **Year:** 2018

1	**PRODUCTION COST PER THOUSAND**	(insert cost)		
2	**PURCHASE COST PER THOUSAND**	(insert cost)	==========	
			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		53,726,000	100.0%
4	Water Purchased			0.0%
5		**TOTAL PRODUCED AND PURCHASED**	53,726,000	
6		**TOTAL COST** #VALUE!		
	WATER SOLD			
7	Residential		19,863,540	
8	Commercial		4,037,390	
9	Industrial			
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)			
13		**TOTAL WATER SOLD**	23,900,930	44.5%
14		**TOTAL WATER NOT SOLD**	29,825,070	**55.5%**
	BREAKDOWN OF WATER USAGE			
,...-...,5	Water Treatment Plan		2,500,000	
i6	Wastewater Treatmen			
17	System Flushing		371,6611	#VALUE!
			71,702	
18	Fire Department Usage	DBP Maintenance	0	#VALUE!
19	DBP Flushing			
20		**TOTAL USAGE**	2,943,363	
21		**WATER LOSS PERCENTAGE FOR RATE PURPOSES**	**50.00%**	
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		6,267,7061	#VALUE!
24	Repaired Line Breaks		0	
25	Unknown Loss		20,614,001	**38.4%**
26		**TOTAL WATER NOT SOLD OR USED**	**26,881,707**	
27		**COST OF WATER NOT SOLD OR USED**	**#VALUE!**	

	"UNKNOWN LOSS" FLOW RATE AND COST:		
28	"Unknown Loss"	20,614,001	
29	% "Unknown Loss"	38.4%	
30	Number of Days in Period	31J	
31	"Unknown Loss" per Day (Gallons per Day)	664,968	
	"Unknown Loss" per Minute (GPM)	461.78	
	"Unknown Loss" Cost for Month	#VALUE!	

Monthly Water Use Report

32
33

c:· 201-+ ..... Kcntud.. · Rural Water Associ:.ition

Monthly Water Use Report

vy:at r Utility: Rattlesnake Rid.9.e Water District | PWSID: Ky0220555

For the Month of: December | Year: 2018

1 PRODUCTION COST PER THOUSAND (insert cost)

2 PURCHASE COST PER THOUSAND (insert cost)

		GALLONS	
	WATER PRODUCED or PURCHASED		
3	Water Produced	52,830,000	99.1%
4	Water Purchased	500,000	0.9%
5	**TOTAL PRODUCED AND PURCHASED**	53,030,000	
6	**TOTAL COST** #VALUE!		
	WATER SOLD		
7	Residential	11,112,040	
8	Commercial	2,656,560	
9	Industrial		
10	Bulk Loading Stations		
11	Wholesale		
12	Other Sales (explain)		
13	**TOTAL WATER SOLD**	13,768,600	26.0%
14	**TOTAL WATER NOT SOLD**	39,261,400	**74.0%**
	BREAKDOWN OF WATER USAGE		
15	Water Treatment Plant	2,000,000	
16	Wastewater Treatment Plant		
17	System Flushing	449,157	#VALUE!
18	Fire Department Usage	41,300	#VALUE!
19	DBP Flushing DBP Maintenance	0	
20	**TOTAL USAGE**	2,490,457	
21	**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		69.3%
	BREAKDOWN OF WATER LOST		
22	Tank Overflows (other than for DBP maintenance)		
23	Excavation Breaks	1,799,856	#VALUE!
24	Repaired Line Breaks	0	
25	Unknown Loss	34,971,087	**65.9%**
26	**TOTAL WATER NOT SOLD OR USED**	**36,770,943**	
27	**COST OF WATER NOT SOLD OR USED**	**#VALUE!**	

"UNKNOWN LOSS" FLOW RATE AND COST:

28	"Unknown Loss"	34,971,087
29	% "Unknown Loss"	65.9%
30		
31		
32		

Monthly Water Use Report

r Day) "Unknown Loss" per Minute (GPM)

"Unknown Loss" Cost for Month #VALUE!

(inse trt ays of oper ation durin g mont h)

Nu mb er of Day s in Peri od

" U n k n o w n L o s s " p e r D a y (G a l l o n s p e

Monthly Water Use Report

W?'='- Utility: Rattlesnake Ridge Water District **PWSID:** Ky0220555

For the Month of: January **Year:** 2019

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

		GALLONS	
	WATER PRODUCED or PURCHASED		
3	Water Produced	56,099,000	100.0%
4	Water Purchased		0.0%
5	**TOTAL PRODUCED AND PURCHASED**	56,099,000	
6	**TOTAL COST** #VALUE!		
	WATER SOLD		
7	Residential		
8	Commercial	9,656,250	
9	Industrial	2,653,410	
10	Bulk Loading Stations		
11	Wholesale		
12	Other Sales (explain) ----------		
13	**TOTAL WATER SOLD**	12,309,660	21.9%
14	**TOTAL WATER NOT SOLD**	43,789,340	**78.1%**
	BREAKDOWN OF WATER USAGE		
5	Water Treatment Plan	3,000,000	
16	Wastewater Treatment		
17	System Flushing	682,7101	#VALUE!
		36,928	
18	Fire Department Usage DBP Maintenance	0	#VALUE!
19	DBP Flushing		
20	**TOTAL USAGE**	3,719,638	
21	**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		71.4%
	BREAKDOWN OF WATER LOST		
22	Tank Overflows (other than for DBP maintenance)		
23	Excavation Breaks	5,958,9741	#VALUE!
24	Repaired Line Breaks	0	
25	Unknown Loss	34,110,728	**60.8%**
26	**TOTAL WATER NOT SOLD OR USED**	**40,069,702**	
27	**COST 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	#VALUE!

Monthly Water Use Report

Monthly Water Use Report

W Utility: Rattlesnake Rid.9.e Water District **PWSID** Ky0220555

For the Month of: Feb **Year:** 2019

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

			GALLONS	
	WATER PRODUCED or PURCHASED			
3	Water Produced		51,973,000	99.5%
4	Water Purchased		275,000	0.5%
5		**TOTAL PRODUCED AND PURCHASED**	52,248,000	
6		**TOTAL COST** #VALUE!		
	WATER SOLD			
7	Residential			
8	Commercial		13,791,118	
9	Industrial		2,985,850	
10	Bulk Loading Stations			
11	Wholesale			
12	Other Sales (explain)			
13		**TOTAL WATER SOLD**	16,776,968	32.1%
14		**TOTAL WATER NOT SOLD**	35,471,032	**67.9%**
	BREAKDOWN OF WATER USAGE			
15	Water Treatment Plan		3,000,000	
16	Wastewater Treatment			
17	System Flushing		694,222	#VALUE!
18	Fire Department Usage		47,300	#VALUE!
19	DBP Flushing	DBP Maintenance	0	
20		**TOTAL USAGE**	3,741,522	
21		**WATER LOSS PERCENTAGE FOR RATE PURPOSES**		60.7%1
	BREAKDOWN OF WATER LOST			
22	Tank Overflows (other than for DBP maintenance)			
23	Excavation Breaks		4,128,663	#VALUE!
24	Repaired Line Breaks		0	
25	Unknown Loss		27,600,847	**52.8%**
26		**TOTAL WATER NOT SOLD OR USED**	**31,729,510**	
27		**COST OF WATER NOT SOLD OR USED**	**#VALUE!**	

	"UNKNOWN LOSS" FLOW RATE AND COST:		
28		"Unknown Loss"	27,600,847
29		% "Unknown Loss"	52.8%
30			
31			
32			
33			

Monthly Water Use Report

(insert days of operation during month)

er Minute (GPM)

"Unknown Loss" Cost for Month #VALUE!

Number of Days in <u>Period</u>!

"

"Unknown Loss" per Day (Gallons per Day) "Unknown Loss" p

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

3. Yes, See attached form

,,--__.

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.

r---.

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

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

Type: ( ) Centrifugal Pump ( ) Axial Flow Pump
( ) Vertical Turbine Pump ( ) Immersible Pump

Location:._____

Number of pumps in station:._____--,-_____

Size motor: Rating of pump:_____

Year pump station was constructed:._____

1. Any visible signs of wear and tear or problem? ( ) Yes ( ) No

   If yes, explain:._____

   _____

2. Are there any coupling alignment problems? ( ) Yes ( ) No

   If yes, explain:

   a. Does coupling require grease? ( ) Yes ( ) No

3. Have bearings been greased? ( ) Yes ( ) No

4. Is there sufficient packing? ( ) Yes ( ) No

5. Are there any violations? ( ) Yes ( ) No

   a. Are all hold-down bolts on pumps and motors tightened properly?

   ( ) Yes ( ) No

6. Is there an excessive noise from the pump? ( ) Yes ( ) No

7. Is there any repainting needed? ( ) Yes ( ) No

8. Are there any visible signs of corrosion? ( ) Yes ( ) No

   If yes, where:

9. Will one pump meet the demand from customers for water service?

   ( ) Yes ( ) No

10. Do both pumps need to be operated together? ( ) Yes ( ) No

RATER STORAGE INSPECTION

Type: Elevated ( ) Standpipe
Ground Storage (- · ·) Clearwell

Size: _____ Location: _____

Date Constructed: _____

Type Tank: Welded Metal) Steel-lined glass
Concrete

SITE:

1. Does site slope away from bank? ( ) Yes ( ) No
2. Is ground soft or soggy? ( ) Yes (_) No

FOUNDATIONS:

1. Is the concrete foundation cracked? ( ) Yes (l No
2. Is the concrete foundation level? ( ) .Yes ( ) No
3. Is there a gap between riser base and the concrete?
( ) Yes ( ) No

4. Condition of anchor bolts? (l Yes No ·

COLUMNS: (Elevated Tanks Only)

1. Is there condensation on columns? ( ) Yes ( ) No
2. Are they straight? ( ) Yes ( ) No
3. Is there any slack in the diagonal X-rods? (Yes) No
4. Condition of bolted connection on riser rods?
( ) Fair ( ) Poor

TANK OR SRELL:

1. Any disfiguration in tank bottom, shell, roof or irregularities in the contour of the steel? ( ) Yes ( ) No
2. Are any weld seams concave? ( ) Yes (·) No

   a. Are there any rust streaks originating from the weld seams?
   ( ) Yes ( ) No
   b. Any evidence of water leaking from tank? ( ) Yes ( ) No

3. ·Is there any metal loss by pitting? ( ) Yes ( ) No
4. Condition of finish coat? ( ) Good ( ) Fair ( ) Bad.
5. Condition of intermediate coat?· ( ) Good, ( ) Fair
( ) Bad
6. condition of primer coat? ( ) Good ( ) Fair ( ) Bad
7. Amount of surface area showing rust? _____
8. Any water ponding.on roof? ( ) Yes ( ) No

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. Does the utility have a climbing harness? ( ) Yes ( ) No
4. Row often does the utility climb tank? ( ) day) week
   {) month ( ) other

5. What is the condition of the overflow?--- - - - - - - - - - - - -
   ( ) Good ( ) Fair {) Poor

   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

COMMENTS: _____

_____

_____

_____

_____

Rattlesnake Ridge Response to Appendix C

9. WC Gilbert-Manager

David Gifford -Assistant Manager

Jerry Callihan Field Foreman

r--,

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

11. **See Attached** Files

,,--,

'

Mo!lthly Excavation Break Report

Rattlesnake Ridge Water District (name of Water System)

Ky:0220555 l(PWSID)

Month Year **Janua!)[2018**

Area Calculator

diameter in inches

Hole=
Area= 0.000 sq. in.

	length (in)	width (in)
Crack=	3	0.2
Area=	0.6	sq. in.

Insert the approximate dimensions of the hole or crack to determine the area of the break. Insert the area in the spreadsheet below.

Date	Excavation Break Location	Excavator		Hole or Crack?	Area of hole or crack		GPM	Gallons Lost During 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		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

Total Gallons Lost Due to Excavation Breaks! **1.451.411**

Monthly Excavation Break Report

Rattlesnake Ridge Water District ~~j(name~~ of Water System)

C: **K}'.0220555** ~~j(PWSID)~~

Month **February**

Year **2018**

Area Calculator

diameter in inches

Hole= **Area=** 0.000 sq. in.

Insert the approximate dimensions of the hole or crack to determine the area of the break. Insert the area in the spreadsheet below.

	length (in)	width (in)
Crack=	6	0.5
Area=	3	sq. in.

Date	Excavation Break Location	Excavator		Hole or Crack?	Area of hole or crack		GPM	Gallons Lost During Break
2/3/2018	webbville post office	1.25	2888	crack	0.150	120	37	108,178
2/3/2018	san branch	1.08	1444	crack	0.150	120	37	54,089
2/6/2018	edison rd service		2888	crack	0.250	100	57	164,587
2/6/2018	Grea areenhill 2"	1.23	1444	crack	0.250	90	54	78,071
2/6/2018	·ordon fork service		1444	crack	0.150	100	34	49,376
2/12/2018	charlev iohnson ser		1444	crack	0.250	80	51	73,606
2/12/2018	holbrook rd ser		1444	crack	0.250	100	57	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

Total Gallons Lost Due to Excavation Breaks! **1.518.144**

Monthly Excavation Break Report

Rattlesnake Rid9e Water District (Name of Water System)

Ky0220555 (PWSID)

Montn March

Year 2018

Area Calculator

diameter in inches

Hole= Area= 0.000 sq. in.

Insert the approximate dimensions of the hole or crack to determine the area of the break. Insert the area in the spreadsheet below.

Crack = length (in) 6 | width (in) 0.5

Area = 3 sq. in.

Date	Excavation Break Location	Excavator		Hole or Crack?	Area of hole or crack		GPM	Gallons Lost During Break
3/6/2018	square lick		1444	crack	0.500	100	114	164,587
3/10/2018	us 60 pete littletons		360	hole	1.000	120	333	119,862
3/16/2018	wicker holler		1444	crack	0.250	140	67	97,371
3/24/2018	us 60		1444	crack	0.500	140	135	194,742
3/25/2018	Diamond ridqe		360	hole	1.000	80	272	97,867

Total Gallons Lost Due to Excavation Breaks 674,429

Monthly Excavation Break Report

Rattlesnake Ridge Water District j(name of Water System)

C:::: Ky0220555 j(PWSID)

Montn Acril

Year 2018

Area Calculator

diameter in inches

Hole=

Area= 0.000 sq. in.

Insert the approximate dimensions of the hole or crack to determine the area of the break. Insert the area in the spreadsheet below.

	length (in)	width (in)
Crack=I	6	1 0.5

Area =I 3 lsq. in.

Date	Excavation Break Location	Excavator	S	Hole or Crack?	Area of hole or crack		GPM	Gallons Lost During 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	Rt1 at ariffiths	1.32	2888	crack	0.250	140	67	194,742
4/26/2018	aregoryville 4 '	1.41	1444	crack	0.500	120	125	180,296
4/30/2018	mike roaers	1.43	2888	crack	0.150	130	39	112,595

Total Gallons Lost Due to Excavation Breaks 975,554

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

Rattlesnake Ridge Water District name of Water System)

Month **May**
Year **2018**

KY:0220555 j(PWSID)

--

unit conversion factor 29.83
0.95

Formula: GPM = 29.83 C,I p **coefficient value**

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
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	monthlv	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	

Total Gallons for Month! **354.789**

Monthly Excavation Break Report

Area Calculator

Rattlesnake Ridge Water District (name of Water System)

Ky0220555 (PWSID)

Month / Year: June 2018

diameter in inches

Hole= Area= 0.000 sq. in.

Crack= length (in) 6 width (in) 1 0.5

Area= 3 sq. in.

Insert the approximate dimensions of the hole or crack to determine the area of the break. Insert the area in the spreadsheet below.

Date	Excavation Break Location	Excavator		Hole or Crack?	Area of hole or crack		GPM	Gallons Lost During 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	bill 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	floyd 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
6/23/2018	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
6/25/2018	pallet mill rt 1	1.3	240	hole	2.000	120	666	159,816

Total Gallons Lost Due to Excavation Breaks: 2,046,891

Monthly Excavation Break Report

I Rattlesnake Ridge Water District (name of Water System)

Ky0220555 (PWSID)

Montri / Year: JULY 2018

Area Calculator

diameter in inches

Hole: Area = 0.000 sq. in.

Crack: length (in) 6 × width (in) 0.1 = Area 0.6 sq. in.

Insert the approximate dimensions of the hole or crack to determine the area of the break. Insert the area in the spreadsheet below.

Date	Excavation Break Location	Excavator		Hole or Crack?	Area of hole or crack		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	crack	0.250	130	65	187,658
7/11/2018	possum holler 2'	1.24	2888	crack	0.150	130	39	112,595
7/13/2018	986 service cora baliev	1.35	2888	hole	0.100	120	33	96,156
7/15/2018	front of bruin boat ramp	1.28	360	crack	2.000	150	558	201,019
7/16/2018	biq run 8'	1.15	1444	crack	0.500	130	130	187,658
7/21/2018	bear ridae service	1.24	1444	crack	0.250	90	54	78,071
7/21/2018	bear ridqe service	1.24	1444	crack	0.250	90	54	78,071
7/22/2018	huffs run	1.31	1444	crack	0.300	130	78	112,595
7/26/2018	Mavhew Flats 8'	1.48	300	hole	2.000	100	608	182,364
7/26/2018	Mavnew Flats service	1.48	1444	crack	0.250	120	62	90,148
7/26/2018	RattlesnakeRidaefork 3'	1.2	400	crack	0.300	120	75	29,966
7/27/2018	Cliinv service at church	1.31	1444	crack	0.150	100	34	49,376
7/3 J18	8' BIG RUN	1.35	1444	crack	0.400	150	112	161,262
7/31/2018	service at vounqs	1.29	7220	crack	0.250	120	62	450,740

Total Gallons Lost Due to Excavation Breaks 2,625,933

Monthly Excavation Break Report

Rattlesnake Ridge Water District (Name of Water System)

Ky0220555 (PWSID)

Month / Year: August 2018

Area Calculator

Insert the approximate dimensions of the hole or crack to determine the area of the break. Insert the area in the spreadsheet below.

diameter in inches

Hole=

Area= 0.000 sq. in.

	length (in)	width (in)
Crack=	6	0.5
Area =	3	sq. in.

Date	Excavation Break Location	Excavator		Hole or Crack?	Area of hole or crack		GPM	Gallons Lost During Break
8/5/2018	willard lodge	1.31	1444	crack	0.150	120	37	54,089
8/6/2018	us60 service	1.25	1444	crack	0.250	100	57	82,294
8/7/2018	486 rooer ison service	1.05	2888	crack	0.150	110	36	103,572
8/10/2018	us 60 handcock	1.2	2888	crack	0.200	100	46	131,670
8/13/2018	wicker holler	1.25	180	crack	1.500	130	390	70,177
8/14/2018	rattlesnake ridqe	1.35	2888	crack	0.250	100	57	164,587
8/14/2018	rattlesnake fork	1.26	1444	crack	0.150	100	34	49,376
8/14/2018	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
8/16/2018	rt 1025 meter busted		1444	crack	0.100	100	23	32,917
8/20/2016	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	1.29	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	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

Total Gallons Lost Due to Excavation Breaks 2,270,621

Monthly Excavation Break Report

Rattlesnake Ridge Water District (name of Water System)

Ky0220555 (PWSID)

Month September

Year 2018

Area Calculator

diameter in inches

Hole= Area= 0.000 sq. in.

Insert the approximate dimensions of the hole or crack to determine the area of the break. Insert the area in the spreadsheet below.

length (in) width (in)

Crack = 6 | 0.5

Area = 3 sq. in.

Date	Excavation Break Location	Excavator		Hole or Crack?	Area of hole or crack		GPM	Gallons Lost During Break
9/3/2018	elmer kinster service	1.25	2888	crack	0.250	90	54	156,141
9/3/2018	eff mabrv service	1.26	2888	crack	0.500	90	108	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	0.500	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
s[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	112,595
9/21/2018	davevs run	1.24	2888	crack	0.150	120	37	108,178
9/21/2018	davevs run	1.24	2888	crack	0.100	120	25	72,118
9/23/2018	kitchen holler	1.05	4332	crack	0.100	100	23	98,752
9/23/2018	st rt 504 slip	1.19	180	hole	4.000	40	769	138,405
9/26/2018	davevs run	1.15	1444	crack	0.250	120	62	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	crack	0.100	90	22	31,228
9/22/2018	rt 60 ailliums	1.2	1444	crack	0.250	100	57	82,294
9/22/2018	willard church	1.25	2888	crack	0.100	120	25	72,118
9/23/2018	falls branch service	1.21	7220	crack	0.120	120	30	216,355
9/23/2018	contractors hit services	1.2	60	hole	0.750	120	250	14,983
9/28/1/	3' at darren carroll	1.1	7220	crack	0.150	100	34	246,881

Total Gallons Lost Due to Excavation Breaks! 4,216,283

Monthly Excavation Break Report

Rattlesnake Rid9e Water District (name of Water System)

Ky0220555 (PWSID)

Month Oct
Year 2018

Area Calculator

diameter in inches

Hole
Area= 0.000 sq. in.

Insert the approximate dimensions of the hole or crack to determine the area of the break. Insert the area in the spreadsheet below.

	length (in)	width (in)
Crack=	6	0.5
Area=	3	sq. in.

Date	Excavation Break Location	Excavator		Hole or Crack?	Area of hole or crack		GPM	Gallons Lost During Break
102/9/18	6' dudlev	1.25	10108	crack	0.250	150	70	705,520
10/9/2018	dudlev 3/4	1.25	60	crack	0.250	130	65	3,899
10/101/18	RT2 3'	1.18	180	hole	1.000	130	347	62,378
10/10/2018	kiser branch service	1.31	1444	crack	0.150	120	37	54,089
10/12/2018	estep on rsr service	1.34	2888	crack	0.150	100	34	98,752
10/12/2018	3' on rattlesnak fork	1.29	4332	crack	0.250	90	54	234,212
10/12/018	pearl roe old house service	1.3	1444	crack	0.150	100	34	49,376
10/12/2018	aden rd service barber	1.2	1444	crack	0.250	100	57	82,294
10/15/187	aden road 4 ' bell	1025	2888	crack	0.150	100	34	98,752
10/18//18	flovd bear	1.1	1444	crack	0.100	100	23	32,917
10/18/2018	ron revnolds	1.1	1444	crack	0.250	100	57	82,294
10/18/2018	hazel revnolds	1.2	10108	crack	0.100	100	23	230,422
10/18/2018	Rt706 service	1.35	1444	crack	0.150	120	37	54,089
10/18/2018	Fallsbranch lackson service	1.31	1444	crack	0.100	120	25	36,059
10/18/2018	mike qollihue huffs service	1.35	2888	crack	0.150	130	39	112,595
10/18/2018	bart tackett huffs run	1.33	2888	crack	0.100	130	26	75,063
,_ 1Q/;'-Of2018	prv at huffs run		2888	hole	0.100	150	37	107,505
1C 2018	RT elirrv crossing	1.45	10108	crack	0.500	200	161	1,629,329
10/19/2018	9986 pump station 6 '	1.38	480	hole	1.000	150	372	178,679
10/20/2018	dav road 2' hit bv horst buld	1.2	240	crack	0.250	120	62	14,983
10/230/18	6' at us 60 creek crossina	1.3	180	hole	2.000	200	860	154,741
10/24/2018	service at vesterdav prices	1.2	1444	crack	0.250	130	65	93,829
10/25/2018	8' mayhew flats	1.3	240	crack	2.000	120	499	119,864
10129r18	roger markwell	1.25	1444	crack	0.500	80	102	147,211
10/29/2018	dale kiser	1.24	1444	crack	0.250	100	57	82,294

Total Gallons Lost Due to Excavation Breaks! 4,541,148

Mo..nthly Excavation Break Report

Rattlesnake Ridge Water District j(name of Water System)

C---- Ky0220555 j(PWSID)

Montn November

Year 2018

Area Calculator

diameter in inches

Hole= Area= 0.000 sq. in.

Insert the approximate dimensions of the hole or crack to detennine the area of the break. Insert the area in the spreadsheet below.

	length (in)	width (in)
Crack=	6	0.5

Area= 3 lsq. in.

Date	Excavation Break Location	Excavator	:E	Hole or Crack?	Area of hole or crack	ii E z	GPM	Gallons 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
J..!l?r..l-20 1 8	horton flats lewis leadinaham	1.49	240	crack	2.000	120	499	119,864
L018	tom flauaher 1 inch	1.23	43000	crack	0.250	120	62	2,684,465
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	Raymond bo□□s meter bust		1444	crack	0.150	90	32	46,842

Total Gallons Lost Due to Excavation Breaks 6,267,706

Monthly Excavation Break Report

Rattlesnake Rid!!e Water District l<name of Water System)

Ky0220555 l<PWSID)

Momn **December**

Year **2018**

Area Calculator

diameter in inches

Hole Area= 0.000 sq. in.

Insert the approximate dimensions of the hole or crack to determine the area of the break. Insert the area in the spreadsheet below.

	length (in)	width (in)
Crack =	6	0.5
Area =	3	sq. in.

Date	Excavation Break Location	Excavator		Hole or Crack?	Area of hole or crack		GPM	Gallons Lost During 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	tony 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
12/21/2018	Fralev Branch	1.49	1444	crack	0.250	160	72	104,094
12/28/2018	Fralev Branch tee broke		480	hole	0.750	120	250	119,862
12/4/2018	3' cordel hit hitchins	1.25	60	hole	3.000	130	1040	62,378
12/20/2018	tim lawson service	1.34	1444	crack	0.500	90	108	156,141
12/21/2018	meter bottom okera lane		1444	crack	0.150	90	32	46,842

Total Gallons Lost Due to Excavation Breaks! 1,799,856

Rattlesnake Ridge Response to Appendix C

12. **See Attached Work Orders**

NEW WORK ORDERS 08:23:09

CHECKLIST/TYPE: CHECK WORK ORDER NO 9861
SCHEDULED DATE: 01/29/18 SCHEDULED TIME: PM:
I TRUCTIONS: LEAK BY DRIVE HE MARKED IT
SON SPOKE TO DAVID
SON SAID IT IS UNDERMINING HIS DRIVE WAY

METER LOCATION: BELOW ROAD NEXT TO TRAILER

IN:

ACCOUNT:160-37410-01 CITY: OLIVE HILL, KY 41164
NAME :HOLBROOK, CHARLES OWNER: OWNER
S/ADDR: BEAR RIDGE O/ADDR:
PHONE :606 738 - 4048
OWNER PHONE:
ISSUED: 01/29/18 BY: CAROLYN COMPLETED:

**********OLD METER INFORMATION********** NEW METER INFORMATION*******

SIZE: 5/8 in. TY: GUSE: 356 03/11 *

	MAKE	SERIAL	REMOTE	MXUID	CURRENT	*	MAKE	SERIAL	REMOTE	MXUID
1:		55919932		100025479	42823 A	*				
2:						*				
3:						*				
4:						*				

HISTORY:	DATE	CURRENT	PREVIOUS	USAGE	PRIOR W/O	DATE	TYPE
	02/18/19	42467	41914	553 A			
	01/09/19	41914	41703	211 A	7374	11/23/15	CHECK
	12/21/18	41703	41353	350 A			
	11/26/18	41353	40768	585 A			

**} **********CHECK

WORK COMPLETED:

NEW SET : _____ SERIAL NO: _____ REMOTE NO:_____READ:___

MATERIAL: ITEM# PART DESCRIPTION QUANTITY

LABOR

SIGNATURE:_____ DATE:_____ TIME: _____

NEW WORK ORDERS 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********** NEW METER INFORMATION*******

SIZE: 5/8 in. TY: GUSE: 128 03/11 *

	MAKE	SERIAL	REMOTE	MXUID	CURRENT	*	MAKE	SERIAL	REMOTE	MXUID
1:		55093831		4392008	41467 A	*				
2:						*				
3:						*				
4:						*				

****

HISTORY:	DATE	CURRENT	PREVIOUS	USAGE		PRIOR W/O	DATE	TYPE
	02/14/19	41339	41178	161	A			
	01/09/19	41178	41131	47	A	9379	08/28/17	CHECK
	12/03/18	41131	40968	163	E			
	11/26/18	40968	40763	205	A			

****t- ********** CHECK**

****

WORK COMPLETED:

NEW SET: _____ SERIAL NO: _____ REMOTE NO: _____ READ: ____

MATERIAL: ITEM# PART DESCRIPTION QUANTITY

LABOR

SIGNATURE: _____ DATE: _____ TIME: _____

NEW WORK ORDERS 08:36:08

CHECK WORK ORDER NO: 10692

CHECKLIST/TYPE: 01/04/19 SCHEDULED TIME: PM:
SCHEDULED DATE:

INSTRUCTIONS: SAYS THAT WE FIXED A LEAK ON HER PROPERTY BY HERD RIVEWAY AND THE PLACE WHERE IT WAS FIXED IS NOW A SUNKEN HOLE AND STAYS WET. THINKS IT MAY STILL BE LEAKING. WANTS SOMEONE TO COME LOOK AT IT AND FIX 82.948290 38.256010

METER LOCATION: WAS JAMES E PARSONS

IN:

ACCOUNT:130-03410-00 CITY: GRAYSON, KY 41143
NAME :WADE JR, HALLIE OWNER: OWNER
S/ADDR: HUFFS RUN O/ADDR:
PHONE :606 474 - 2282
OWNER PHONE:
ISSUED: 01/04/19 BY: FELICIA COMPLETED:

OLD METER INFORMATION NEW METER INFORMATION

SIZE: 5/8 in. TY: GUSE: 259 03/04

	MAKE	SERIAL	REMOTE	MXUID	CURRENT		MAKE	SERIAL	REMOTE	MXUID
1:		54952039		100020455	46998 A					
2:										
3:										
4:										

HISTORY:	DATE	CURRENT	PREVIOUS	USAGE		PRIOR W/O	DATE	TYPE
	02/01/19	46739	46549	190	A			
	01/02/19	46549	46279	270	A	8083	05/13/16	CHECK
	12/03/18	46279	45889	390	A	7565	01/19/16	CHECK
	11/01/18	45889	45619	270	A	7139	10/08/15	CHECK

/._. **CHECK

WORK COMPLETED:

NEW SET: _____ SERIAL NO:_____ REMOTE NO:_____READ:___

MATERIAL: ITEM# PART DESCRIPTION QUANTITY

LABOR

SIGNATURE:_____ DATE:_____ TIME: _____

NEW WORK ORDERS 08:23:32

CHECKLIST/TYPE: CHECK WORK ORDER NO 10795
SCHEDULED DATE: 02/08/19 SCHEDULED TIME: PM:
INSTRUCTIONS: CHECK FOR LEAK
CANT SEE METER FACE ITS FOGGED UP
PLEASE ALSO GET READING

METER LOCATION: EDGE OF YARD RIGHT SIDE

IN:

ACCOUNT:151-01800-00 CITY: OLIVE HILL, KY 41164
NAME :EVANS, DREW OWNER: OWNER
S/ADDR: HORTON FLATS O/ADDR:
PHONE :606 738 - 5460
OWNER PHONE:
ISSUED: 02/08/19 BY: CAROLYN COMPLETED:

**********OLD METER INFORMATION********** NEW METER INFORMATION*******
SIZE: 5/8 in. TY: GUSE: 352 03/07 *
MAKE SERIAL REMOTE MXUID CURRENT * MAKE SERIAL REMOTE MXUID
1: 55093946 100024642 51694 A*
2: *
3: *
4: *

HISTORY:	DATE	CURRENT	PREVIOUS	USAGE		PRIOR W/O	DATE	TYPE
	02/13/19	51342	51305	37	A			
	01/10/19	54305	49728	4577	A			
	12/21/18	49728	49254	474	A			
	11/28/18	49254	48264	990	A			

**"X-'"' **********CHECK

WORK COMPLETED:

NEW SET: _____ SERIAL NO: _____ REMOTE NO:_____READ:___

MATERIAL: ITEM# PART DESCRIPTION QUANTITY

LABOR
.

SIGNATURE:_____ DATE:_____ TIME: _____

NEW WORK ORDERS 08:23:32

CHECK WORK ORDER NO: 10803

CHECKLIST/TYPE:
SCHEDULED DATE: 02/22/19 SCHEDULED TIME: PM:
INSTRUCTIONS: SAID THERE IS WATER LEAKING FROM METER
PLEASE CHECK METER SAID SHE HAD 2 DIFFERENT PEOPLE
COME OUT TO LOOK FOR LEAK AND NO LEAK BUT THEY TH
OUGHT THERE WAS SOMETHING WRONG W METER
RIGHT SIDE RESIDENCE BY FENCE
METER LOCATION:

IN:

****

ACCOUNT:140-10000-01 CITY: WILLARD, KY 41181
NAME :GRIFFITH, BRETT OWNER: OWNER
S/ADDR: ROUTE 1 O/ADDR:
PHONE :606 475 - 3027
OWNER PHONE:
ISSUED: 02/22/19 BY: CAROLYN COMPLETED:

**********OLD METER INFORMATION********** NEW METER INFORMATION*******

SIZE: 5/8 in. TY: GUSE: 353 03/04 *

	MAKE	SERIAL	REMOTE	MXUID	CURRENT	*	MAKE	SERIAL	REMOTE	MXUID
1:		55093979		100023042	35900 A	*				
2:						*				
3:						*				
4:						*				

****

HISTORY:	DATE	CURRENT	PREVIOUS	USAGE		PRIOR W/O	DATE	TYPE
	02/04/19	35547	35018	529	A	8159	06/01/16	CHECK
	01/03/19	35018	34451	567	A	10033	04/24/18	DISC
	12/04/18	34451	33912	539	A	9204	06/26/17	CHECK
	11/02/18	33912	33468	444	A	9037	03/27/17	CHECK

****

WORK COMPLETED:

NEW SET: _____ SERIAL NO: _____ REMOTE NO: _____ READ: ___

MATERIAL: ITEM# PART DESCRIPTION QUANTITY

LABOR

SIGNATURE:_____ DATE:_____ TIME: _____

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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, LISTENING DEVICES FOR LEAK DETECTION"

Badger Meter

Servin[< 1he Ohio Valley

Automatic Controls Company,

6

Signature

__8/19/16__

Date

5 PDH

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 Controls Company

64seconds

Signature

_8/19/16_
-Date-

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

Se1Ti11g the Ohio Valley

Automatic Controls Company

64seconds

Signature

8/19/16

Date

5 PDH

Rattlesnake Ridge Response to Appendix C

16. **Our billing has a program to run that shows meters missed as estimates. See attachment.**

METER READING EXCEPTION REPORT

ACCOONT	NAME	METER	READING DATE	current READING	PREVIOUS READING	USAGE	CHANGE	ESTIMATE	FINAL ROLLOVER: OUT
110-06670-00	ELLIOTT, LAUREL C GREGORY HOLLOW	1	03/01/2019	75158	74826	331		X	
110-07000-00	LAMBERT, MARY GREGORY HOLLOW	1	03/01/2019	77334	77153	11		X	
112-07300-00	DAVIS, EARNEST K RT 182	1	03/05/2019	1308	1277	31			X
112-08610-00	JENKINS, JOHNS SAND RIDGE	1	03/01/2019	14946	14501	444		X	
112-19400-01	MABRY #2, JAMES SAND RIDGE	1	03/01/2019	461	461			X	
113-15390-01	CRUMP, JARRELL GESLING	1		7898	7898		X		
114-02600-00	BURTON, BRIAN RT 1025	1	03/01/2019	69320	69158	842		X	
114-09810-00	JONES, RONALD PR.ATER ROAD	1	03/01/2019	38479	38310	209		X	
114-12600-00	BURTON, ERNEST PRATER ROAD	1	03/01/2019	25163	25081	83		X	
115-40410-00	OWENS, JUDY ROSE RIDGE	1	03/21/2019	585	*506*	79			X
115-72000-00	HAMILTON #2, BARRY WALNUT GROVE	1	03/01/2019	54239	54019	144		X	
115-79600-00	REEDER, HAROLD REEDER ROAD	1	03/01/2019	24217	24216			X	
116-30400-00	MCCORMICK, WILLIAM RT 474	1	03/01/2019	27851	27851			X	
144-34615-00	SCHUELER, PAUL GREENBRIAR RD	1	03/01/2019	15	15			X	
150-02400-05	BUSH, JOSH RT 7	1	03/21/2019	4704	4670	34			X
160-03250-00	HAMRIC, JAMES B ROUTE 182	1	03/01/2019					X	
15r,...._iOO-Ol	WALL, MAURICE ROUTE 986	1	03/01/2019	77667	77428	296		X	
160-13670-00	NEWELL, JEFFERY ROUTE 986	1	03/05/2019	30392	30376	32			X

.

METER READING EXCEPTION REPORT

ACCOUNT	NAME	METER	READING DATE	CURRENT READING	PREVIOUS READING	USAGE	CHANGE	ESTIMATE	FINAL	ROLLOVER
180-07100-00	HARPER, GLEN ALLEN RT 504 EAST	1	03/01/2019	1	1				X	
181-12001-00	HOLBROOK #2, AANDY RT 504 W	1	03/01/2019	64953	64883				X	
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				X	
182-12800-00	FLAlfflERY, JR STARK RIDGE	1	03/01/2019	60595	60257	341			X	
182-17500-01	CARTER, NATHANIEL STARK RIDGE	1	03/01/2019	52967	52637	325			X	
182-17850-00	GIVENS #3, BRIAN STARK RIDGE	1	03/01/2019						X	
-, !1210-07	SLONE, DONNA STARK RIDGE	1	03/01/2019	68820	68413	440			X	

TOTAL NUMBER OF ACCOUNTS: 26 USAGE: 4527

* End of Report: Rattlesnake Ridge Water Distri *

...-,,.,

Rattlesnake Ridge Response to Appendix C

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

. Rattlesnake Ridge Response to Appendix C

18. **See Attached Files**

/''''

De initive TestinP_·. Services

O "' CO *Lexington, K0ntucky*

& 8r vic0

Certified Meter Test-Results .

					BEFORE REPAIR TEST RESULTS				AFTtR REPAIR TE f RESULTS				
Meter Slie	Meter MFG	MFB Model	S8!1al Nmlber	: .Tians	lllgh flow	Med Aow	LOW Fl.OW	Avg Test	Hlgb flOIY	Motl FlO\\'.	Low Flow	Avg Test	Test/Parts
lj"'	/4	' 1/tMA	.<" /	.. ·%	J/C/	II<'	IN\ .	.$' A'-':"	j/Y)	I	//V'i	!//Y'I°	_") _ d.,,/ ,..:, ,, .,./
2		$ --	/C<-'A' :,r	.	;)<'),'-'.	rNt.				· I			Z /::ti//
a													7?/--· -
4			,.,,				'						
5	/olelllr Rea<llllg llaloro Test		,;')":).,. -y/ '.. - -;										/ - 7 //4' - ·-
6	Meter lmdlngA!lef Tes!:		/1 ') '3"...... ,o-J/',							:			,__ - : . ·
7			/V,?2	'									/i/ .
e		,	--- -) ..., <:	_r".fy-,						..			/ "';L__ -
9	/) /1_) 7, ?'&A .												£. /,',,/__/
10	CoollJ)8JJW. 4		i2 ...... --- -Z.,_ ..,,		/4r _: 4",		- .:,£ ;		-# ,		L		///
11	/4..,. A· e'		-/•/,/	-			-	.·____		- .:	- d ,/		---s'--, .,.
12	/7. J		/;?,? 7	, . .,,	,,,_	// / - -		.,					
13	..									/. f:/:_, .	X-- .	/	
14													-
5													

Cusl er ______________ .,..,,,..4;......,· :--- -

Dat&Tested Test!ld By Af2'l&$ ...P:-/££ ;÷?;.Z

Recaivell By____ . _/e._____,_____ Dale ;

Definitive Testing Services

Lexington, Kentucky

Certified Meter Test Results

Meter Size	Meter MFG	MFG Model	Serial Number	Trans Point of	Before Repair Test Results: High Flow	Before Repair Test Results: Med Flow	Before Repair Test Results: Low Flow	Before Repair Test Results: Avg Test	After Repair Test Results: High Flow	After Repair Test Results: Med Flow	After Repair Test Results: Low Flow	After Repair Test Results: Avg Test	Test/Parts
1													
2													
3													
4													

5 Meter Reading Before Test:

6 Meter Reading After Test:

7

8

9

10 Comments:

11

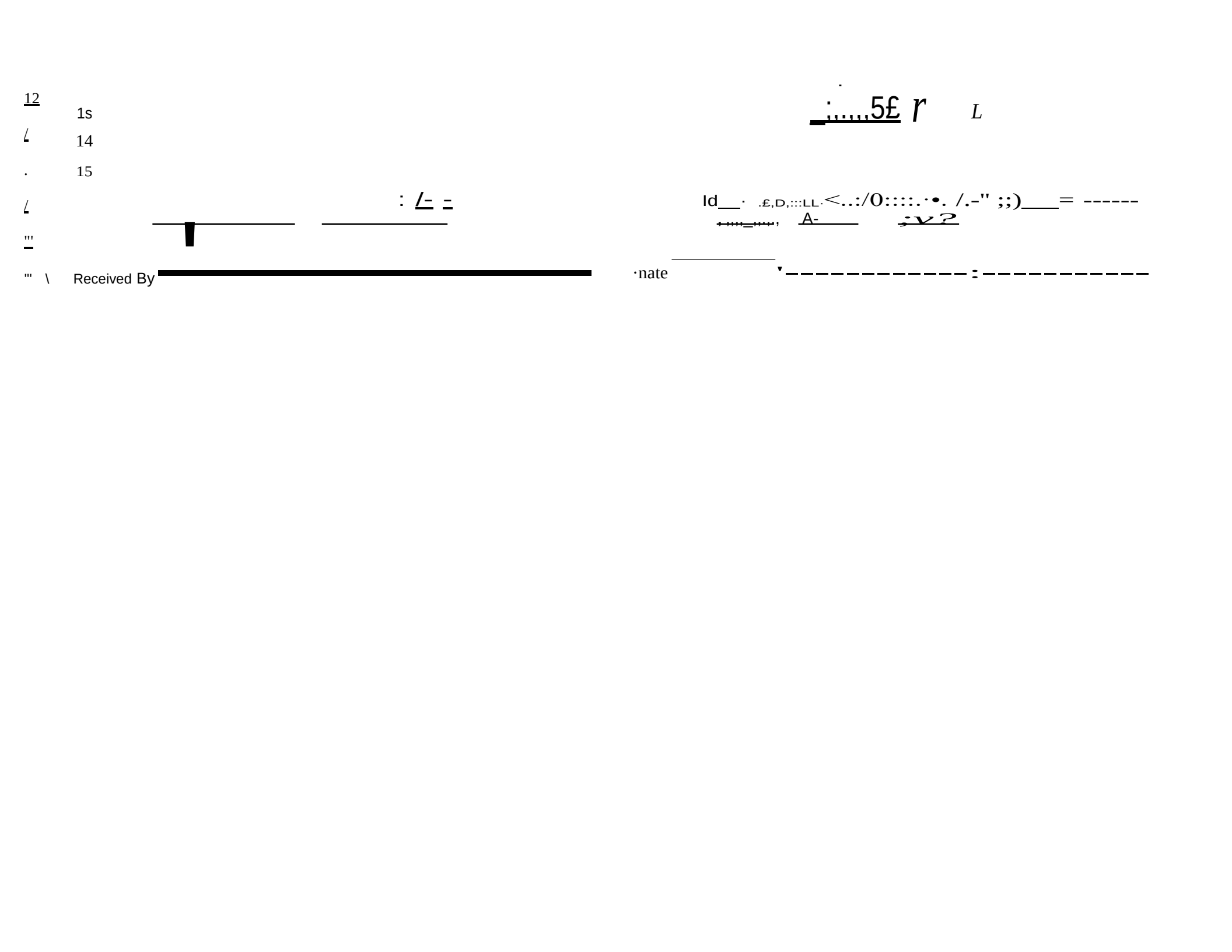
12

1s

14

15

Received By



Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

20.156

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.

Rattlesnake Ridge Response to Appendix C

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.

,-»„„

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

31. **See attachments**

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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.

Rattlesnake Ridge Response to Appendix C

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.

-

Rattlesnake Ridge Response to Appendix C

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

Leak Adiustment Policy. (N)

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.

Rattlesnake Ridge Response to Appendix C

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

AME _____

CCOUNT# _____

ATE _____

OTAL GAL LEAKED _____

,VG MONTHLY USE _____

iAL NEEDING· ADJUSTED _____

iAL@$2.50 PERlOOO _____

%TAX. _____

;us-TOTAL _____

ATEJ-€ES _____

-OTAL OUE ON LEAK _____

\DJUSTED BY _____

1PPROVED BY _____

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

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 KAR 5:095 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 !(name of Fire Department)

_____ 1(name of Water System)

Month 12/1/18-2/28/19

Year 2018-2019

unit conversion factor 29.83

coefficient 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
1/1/2018								47,331
2/1/2018								59,076
3/1/2018								35,250
4/1/2018								46,850
5/1/2018								40,947
6/1/2018								53,410
7/1/2018								97,141
8/1/2018								39,842
9/1/2018								58,558
10/1/2018								38.200
11/1/2018								71,702
12/1/2018								41,300
1/1/2019								36,928
2/1/2019								47,300

Total Gallons for Month! **713,835** !

(· 2014 Kentucky Rural Water Association

Rattlesnake Ridge Response to Appendix C

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**

1Ky0 0555 i(PWSJD)

Formula: GPM - 29.83 cd^2 p

unit conversion factor 29.83

coefficient value 0.95

Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or 4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitot not used
1/3/2019	us60	monthlv	30.00	2.5	100	1771	53,135	
1/9/2019	carter city	monthly	30.00	3.0	90	2420	72,588	
1/16/2019	willard	monthlv	45.00	2.5	120	1940	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	
1/24/2019	Daveys run	leak	30.00	3.0	120	2794	83,817	
1/28/2019	us60	leak	30.00	2.5	100	1771	53,135	
1/28/2019	possum holler	leak	60.00	2.0	130	1292	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**

Rattlesnake Ridge Response to Appendix C

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

Rattlesnake Ridge Response to Appendix C

45. See attachments.

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

Rattlesnake Ridge Water District (name of Water System)

Month Year **January 2018**

[&92.20555](PWSID)

							29.83	
						unit conversion factor	0.95	
		Formula:	GPM = 29.83 cd^2 p			**coefficient value**		
Date	Hydrant Location and/or Number	Reason Operate,d	Total Minutes Operated	Nozzle **size** (typically 2.5 or4.5)	Pitot **Pressure**	**GPM**	Gallons Flowed	Estimated Flow if 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 **409.955**

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

Rattlesnake Ridge Water District (name of Water System)

Month February
Year 2018

IKyP"-"0555]CPWSID)

unit conversion factor 29.83
coefficient value 0.95

Formula: GPM = 29.83 cd^2 p

Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or 4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitotnot used
2/3/2018	willard	monthly	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	
-								
1--								

Total Gallons for Month! **417,808**

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

Rattlesnake Ridge Water District I<name of Water System)

Ky0?.2_05_55](PWSID)

Month March
Year 2018

Formula: GPM = 29.83 c,f p

Unit conversion factor 29.83
coefficient value 0.95

Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or 4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitot not used
3/6/2018	biq run	leak	90.00	2.5	100	1771	159,404	
3/7/2018	willard	monthlv	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	monthlv	15.00	2.5	100	1771	26,567	
3/28/2018	flat fork	monthly	20.00	2.5	90	1680	33,605	

Total Gallons for Month **327,685**

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

!Rattlesnake Ridge Water District j(name of Water System)

Month **Aeril**

Year **2018**

jKy07 0555](PWSID)

unit conversion factor 29.83 / 0.95

Formula: GPM = 29.83 ccJ2 p **coefficient value**

Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or 4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitot not used
4/5/2018	Diamond Ridae	leak	30.00	3.0	100	2550	76,514	
4/16/2018	Aden	leak	30.00	2.5	110	1858	55,728	
4/23/2018	RT 1	leak	30.00	2.5	130	2019	60,583	

Total Gallons for Month! 192,825 j

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

Rattlesnake Ridge Water District (name of Water System)

Month May
Year 2018

1&..0?.20555 (PWSID)

Formula: GPM = 29.83 cd^2 p

unit conversion factor 29.83
coefficient value 0.95

Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or4.5)	Pilot Pressure	GPM	Gallons Flowed	Estimated Flow if Pilot 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	monthlv	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 ridoe	monthlv	20.00	3.0	90	2420	48,392	
5/28/2018	carter citv	monthlv	30.00	2.5	110	1858	55,728	

Total Gallons for Month **354,789**

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

Rattlesnake Ridge Water District (<name of Water System)

Month June
Year 2018

0555 (PWSID)

unit conversion factor 29.83

Formula: GPM = 29.83 c d2 p **coefficient 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
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	monthlv	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	monthlv	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	monthlv	30.00	4.5	140	6790	203,698	

Total Gallons for Month 754,474

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

!Rattlesnake Ridge Water District l<name of Water System)

Month JULY
Year 2018

IKyo:> 0555](PWS!D)

unit conversion factor 29.83
coefficient value 0.95

Formula: GPM - 29.83 cd^2 p

Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or 4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitot not 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	

Total Gallons for Month 637,634

c: 014 - - - - - Kcntuc1..:,· Rural Water Association

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

Rattlesnake Ridge Water District (<name of Water System)

Ky!P.!10555]{PWSID)

Month **AUJIUSt**
Year **2018**

unit conversion factor 29.83
0.95

Formula: GPM = 29.83 c,f p

coefficient value

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
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	rattlesnake fork	leak	30.00	2.2	100	1372	41,148	
8/20/2018	us60	monthly	15.00	2.5	90	1680	25,204	
8/23/2018	706	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	

Total Gallons for Month **639,253**

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

Rattlesnake Ridge Water District !(name of Water System)

KyO-?:wsss](PWSID)

Month **September**
Year **2018**

	29.83
unit conversion factor	0.95

Formula: GPM = 29.83 cd^2 p

coefficient value

Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or 4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitot not used
9/5/17	little fork	leak	30.00	2.5	100	1771	53,135	
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	

Total Gallons for Month **539,628**

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

Rattlesnake Ridge Water District (name of Water System)

Month Oct
Year 2018

[SO.](PWSID)

unit conversion factor 29.83

Formula: GPM - 29.83c,J2 p coefficient 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	
10/12/2018	rattlesnake fork	leak	30.00	2.5	80	1584	47,525	
10/15/2018	aden	leak	30.00	2.5	90	1680	50,408	
10/17/2018	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	monthlY	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	

Total Gallons for Month! 717.890 !

•<_.-.,;Jl4 ,Jilt_' Kenruck-:-· Rural Water Association

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

Rattlesnake Ridge Water District l<name of Water System)

Month **November**
Year **2018**

1Ky0? 0555 j(PWSID)

Formula: GPM = 29.83 e<f p

unit conversion factor coefficient	value
29.83	
0.95	

Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or 4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitot not used
11/5/2018	aden	leak	30.00	2.5	100	1771	53,135	
11/13/2018	us60	monthv	30.00	3.0	120	2794	83,817	
11/13/2018	huffs run	leak	15.00	3.0	150	3124	46,855	
11/16/2018	8' popes fork	leak	30.00	2.5	120	1940	58,206	
11/20/2018	horton flats	leak	30.00	2.5	100	1771	53,135	
11/26/2018	horton flats	leak	30.00	3.0	100	2550	76,514	
1128/18	mik !owes service							

Total Gallons for Month **371.661**

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

Rattlesnake Ridge Water District !(name of Water System)

Month **December**
Year **2018**

1§02-20555](PWSID)

unit conversion factor 29.83

Formula: GPM = 29.83cd² p **coefficient 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
12/4/2018	us60	monthlv	30.00	2.5	120	1940	58,206	
12/6/2018	willard	monthly	30.00	2.5	130	2019	60,583	
12/10/2018	carter citv	monthlv	30.00	2.5	100	1771	53,135	
12/13/2018	adkins loop	air	30.00	2.5	90	1680	50,408	
12/14/2018	Rattlesnake Ridqe	monthlv	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	monthlv	30.00	2.5	90	1680	50,408	
12/26/2018	brushy creek	air	30.00	2.5	100	1771	53,135	

Total Gallons for Month **449,157**

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

Rattlesnake Ridge Water District (name of Water System)

Month **January**

Year **2019**

[&,0 20555](PWSID)

unit conversion factor 29.83

Formula: GPM = 29.83 cd² p **coefficient 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
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	
1/28/2019	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	

Total Gallons for Month **682.710**

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

Rattlesnake Ridge Water District |<name of Water System)

Month Feb
Year 2019

Ky0?..20555]<PWSID)

unit conversion factor 29.83

Formula: GPM = 29.83 ccJ2 p **coefficient value** 0.95

Date	Hydrant Location and/or Number	Reason Operated	Total Minutes Operated	Nozzle size (typically 2.5 or 4.5)	Pitot Pressure	GPM	Gallons Flowed	Estimated Flow if Pitot not 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	

Total Gallons for Month **694.222**