

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

In the Matter of:

**ELECTRONIC INVESTIGATION INTO THE)
MEASURING, RECORDING, AND)
REPORTING OF WATER LOSS BY) CASE NO. 2018-00394
KENTUCKY'S JURISDICTIONAL WATER)
UTILITIES)**

**RESPONSE OF
MCCREARY COUNTY WATER DISTRICT
TO
COMMISSION'S REQUEST FOR INFORMATION
DATED DECEMBER 18, 2018**

FILED: January 17, 2019

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

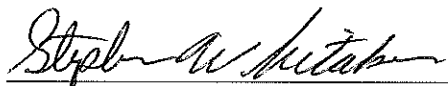
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CERTIFICATION OF RESPONSE OF MCCREARY COUNTY WATER DISTRICT TO
COMMISSION'S REQUEST FOR INFORMATION

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

Date: 1.17.19



Stephen Whitaker, Superintendent
McCreary County Water District

MCCREARY COUNTY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 1

Responding Witness: Stephen Whitaker

- Q-1. Explain in detail the manner in which you measure, calculate, and track water loss, and:
- a. Identify whether you use any manual form (including Excel spreadsheet) or electronic or mechanized system to calculate and track water loss.
 - b. Provide a copy of any form used (including Excel spreadsheet).
 - c. Identify the source of any form or system used.
- A-1. McCreary County Water District ("McCreary District") uses a manual form to calculate and track water loss. A copy of this form is attached as Exhibit 1-A.

To better illustrate its method of tracking water usage, McCreary District has provided at Exhibit 1-B the documents and calculations that it used to calculate water usage for Calendar Year 2017.

McCreary District meters the amount of water produced at both of its water treatment plants. Water sales (or "Total Water Sold") is based upon actual sales data and billing records. Subtracting recorded sales from total water produced determine the total amount of non-revenue water (or "Total Water Not Sold"). McCreary District then breaks non-revenue water into two components: "Unsold Water Used" and "Water Lost."

"Unsold Water Used" includes water treatment plant use, system flushing, fire department usage and "Other". The calculations used to determined treatment plant usage are reflected in Exhibit 1-B. Water use for water main flushing is reported as system flushing and is estimated based upon main size, flushing times and main length. McCreary District provides free water service for fire protection and firefighting training to one fire department. This department reports its monthly usage to McCreary District. The form used for these reports is shown in Exhibit 1-B. "Other" usage includes contractor flushing, billing adjustments, and water used for tank cleaning.

"Water Lost" is composed of three components: tank overflows, line breaks, and "Other Loss". Water loss due to line breaks are calculated based upon reported water main breaks. McCreary District maintains a record of all line breaks. A copy of the form used to record water breaks is found in Exhibit 1-C. "Other Loss" represents all other losses that cannot be attributed to line breaks or to a tank overflow.

- a. McCreary County Water District uses a manual form. A copy of the form is attached as Exhibit 1-A.
- b. See response to Question 1a.
- c. Kentucky Rural Water Association

EXHIBIT 1-A

Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: January

Year:

2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 20,415,435 Plant B 35,359,830	55,775,265	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	55,775,265	
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WATER SOLD			
5	Residential	21,146,300	65%
6	Commercial	2,448,200	8%
7	Industrial	45,700	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) <u>Government, Schools,</u>	8,947,700	27%
11	TOTAL WATER SOLD	32,587,900	58%
12	TOTAL WATER NOT SOLD	23,187,365	42%
<hr/>			
BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 4,861,648 9,196,000	14,057,648	25%
14	Wastewater Plant	0	0%
15	System Flushing	2,721,000	5%
16	Fire Department	86,000	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		16,864,648	30%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	3,274,500	6%
20	Other Loss	3,048,217	5%
TOTAL WATER LOST		6,322,717	11%

"OTHER LOSS" FLOW RATE CALCULATION:		
21	"Other Loss"	3,048,217
22	% "Other Loss"	0
23	Number of Days in Period	31
24	"Other Loss" per Day (1,000's gallons per Day)	98,330
25	"Other Loss" per Minute (GPM)	68,284



This form approved by: EPPC/DEP/DOW, KY PSC, KRWA

EXHIBIT 1-B

Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: January

Year:

2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 20,415,435 Plant B 35,359,830	55,775,265	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	55,775,265	
<hr/>			
WATER SOLD			
5	Residential	21,146,300	65%
6	Commercial	2,448,200	8%
7	Industrial	45,700	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) <u>Government, Schools,</u>	8,947,700	27%
11	TOTAL WATER SOLD	32,587,900	58%
12	TOTAL WATER NOT SOLD	23,187,365	42%
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BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 4,861,648 9,196,000	14,057,648	25%
14	Wastewater Plant	0	0%
15	System Flushing	2,721,000	5%
16	Fire Department	86,000	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		16,864,648	30%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	3,274,500	6%
20	Other Loss	3,048,217	5%
TOTAL WATER LOST		6,322,717	11%

"OTHER LOSS" FLOW RATE CALCULATION:		
21	"Other Loss"	3,048,217
22	% "Other Loss"	0
23	Number of Days in Period	31
24	"Other Loss" per Day (1,000's gallons per Day)	98,330
25	"Other Loss" per Minute (GPM)	68,284



This form approved by: EPPC/DEP/DOW, KY PSC, KRWA

Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: February

Year: 2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 30,710,010 Plant B 16,393,030	47,103,040	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	47,103,040	
<hr/>			
WATER SOLD			
5	Residential	16,325,200	67%
6	Commercial	1,276,500	5%
7	Industrial	44,500	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) _____	6,579,500	27%
11	TOTAL WATER SOLD	24,225,700	51%
12	TOTAL WATER NOT SOLD	22,877,340	49%
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BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 5,891,694 8,213,000	14,104,694	30%
14	Wastewater Plant	0	0%
15	System Flushing	128,000	0%
16	Fire Department	74,000	0%
17	Other (explain) Contractor flushing, Adjustments, Tank Cleaning.	0	0%
TOTAL UNSOLD WATER USED		14,306,694	30%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	131,100	0%
20	Other Loss	8,439,546	18%
TOTAL WATER LOST		8,570,646	18%

"OTHER LOSS" FLOW RATE CALCULATION:

21	"Other Loss"	8,439,546
22	% "Other Loss"	0
23	Number of Days in Period	28
24	"Other Loss" per Day (1,000's gallons per Day)	301,412
25	"Other Loss" per Minute (GPM)	209,314



Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: March

Year:

2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 33,731,243 Plant B 17,230,917	50,962,160	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	50,962,160	
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WATER SOLD			
5	Residential	19,472,900	64%
6	Commercial	1,564,200	5%
7	Industrial	67,500	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) _____	9,443,900	31%
11	TOTAL WATER SOLD	30,548,500	60%
12	TOTAL WATER NOT SOLD	20,413,660	40%
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BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 6,489,296 8,894,000	15,383,296	30%
14	Wastewater Plant	0	0%
15	System Flushing	139,000	0%
16	Fire Department	85,000	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		15,607,296	31%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	398,000	1%
20	Other Loss	4,408,364	9%
TOTAL WATER LOST		4,806,364	9%

"OTHER LOSS" FLOW RATE CALCULATION:		
21	"Other Loss"	4,408,364
22	% "Other Loss"	0
23	Number of Days in Period	31
24	"Other Loss" per Day (1,000's gallons per Day)	142,205
25	"Other Loss" per Minute (GPM)	98,754



Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: April

Year:

2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 11,309,201 Plant B 38,757,190	50,066,391	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	50,066,391	
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WATER SOLD			
5	Residential	18,552,900	64%
6	Commercial	1,379,100	5%
7	Industrial	93,900	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) _____	9,040,000	31%
11	TOTAL WATER SOLD	29,065,900	58%
12	TOTAL WATER NOT SOLD	21,000,491	42%
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BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 4,218,659 9,892,000	14,110,659	28%
14	Wastewater Plant	0	0%
15	System Flushing	115,000	0%
16	Fire Department	52,000	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		14,277,659	29%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	300,000	1%
20	Other Loss	6,422,832	13%
TOTAL WATER LOST		6,722,832	13%

"OTHER LOSS" FLOW RATE CALCULATION:		
21	"Other Loss"	6,422,832
22	% "Other Loss"	0
23	Number of Days in Period	30
24	"Other Loss" per Day (1,000's gallons per Day)	214,094
25	"Other Loss" per Minute (GPM)	148,677



Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: May

Year: 2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 5,427,310 Plant B 47,219,880	52,647,190	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	52,647,190	
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WATER SOLD			
5	Residential	20,105,600	62%
6	Commercial	1,507,800	5%
7	Industrial	79,700	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) _____	10,715,400	33%
11	TOTAL WATER SOLD	32,408,500	62%
12	TOTAL WATER NOT SOLD	20,238,690	38%
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BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 3,965,245 10,624,000	14,589,245	28%
14	Wastewater Plant	0	0%
15	System Flushing	172,000	0%
16	Fire Department	24,000	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		14,785,245	28%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	517,500	1%
20	Other Loss	4,935,945	9%
TOTAL WATER LOST		5,453,445	10%

"OTHER LOSS" FLOW RATE CALCULATION:

21	"Other Loss"	4,935,945
22	% "Other Loss"	0
23	Number of Days in Period	31
24	"Other Loss" per Day (1,000's gallons per Day)	159,224
25	"Other Loss" per Minute (GPM)	110,572



Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: June

Year: 2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 6,034,982 Plant B 48,168,000	54,202,982	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	54,202,982	
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WATER SOLD			
5	Residential	21,476,800	65%
6	Commercial	1,584,700	5%
7	Industrial	74,900	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) _____	10,026,100	30%
11	TOTAL WATER SOLD	33,162,500	61%
12	TOTAL WATER NOT SOLD	21,040,482	39%
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BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 4,166,717 10,266,000	14,432,717	27%
14	Wastewater Plant	0	0%
15	System Flushing	444,000	1%
16	Fire Department	46,000	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		14,922,717	28%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	294,100	1%
20	Other Loss	5,823,665	11%
TOTAL WATER LOST		6,117,765	11%

"OTHER LOSS" FLOW RATE CALCULATION:		
21	"Other Loss"	5,823,665
22	% "Other Loss"	0
23	Number of Days in Period	30
24	"Other Loss" per Day (1,000's gallons per Day)	194,122
25	"Other Loss" per Minute (GPM)	134,807



Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: July

Year: 2017

LINE #	ITEM	GALLONS	%
WATER PRODUCED or PURCHASED			
1			
2	Water Produced Plant A 5,131,579 Plant B 53,053,430	58,185,009	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	58,185,009	
WATER SOLD			
5	Residential	20,393,300	64%
6	Commercial	1,659,000	5%
7	Industrial	55,700	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain)	9,944,800	31%
11	TOTAL WATER SOLD	32,052,800	55%
12	TOTAL WATER NOT SOLD	26,132,209	45%
BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 3,588,337 10,660,000	14,248,337	24%
14	Wastewater Plant	0	0%
15	System Flushing	207,500	0%
16	Fire Department	36,000	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		14,491,837	25%
BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	541,500	1%
20	Other Loss	11,098,872	19%
TOTAL WATER LOST		11,640,372	20%

"OTHER LOSS" FLOW RATE CALCULATION:		
21	"Other Loss"	11,098,872
22	% "Other Loss"	0
23	Number of Days in Period	31
24	"Other Loss" per Day (1,000's gallons per Day)	358,028
25	"Other Loss" per Minute (GPM)	248,631



Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: August

Year: 2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 9,378,830 Plant B 49,059,870	58,438,700	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	58,438,700	
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WATER SOLD			
5	Residential	24,085,100	65%
6	Commercial	1,916,600	5%
7	Industrial	82,900	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) _____	11,107,800	30%
11	TOTAL WATER SOLD	37,192,400	64%
12	TOTAL WATER NOT SOLD	21,246,300	36%
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BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 5,553,862 10,676,000	16,229,862	28%
14	Wastewater Plant	0	0%
15	System Flushing	162,000	0%
16	Fire Department	40,000	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		16,431,862	28%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	580,000	1%
20	Other Loss	4,234,438	7%
TOTAL WATER LOST		4,814,438	8%

"OTHER LOSS" FLOW RATE CALCULATION:		
21	"Other Loss"	4,234,438
22	% "Other Loss"	0
23	Number of Days in Period	31
24	"Other Loss" per Day (1,000's gallons per Day)	136,595
25	"Other Loss" per Minute (GPM)	94,857



Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: September

Year: 2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 6,100,913 Plant B 44,188,300	50,289,213	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	50,289,213	
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WATER SOLD			
5	Residential	22,859,700	62%
6	Commercial	1,863,500	5%
7	Industrial	71,500	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) _____	11,825,400	32%
11	TOTAL WATER SOLD	36,620,100	73%
12	TOTAL WATER NOT SOLD	13,669,113	27%
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BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 4,170,758 10,208,000	14,378,758	29%
14	Wastewater Plant	0	0%
15	System Flushing	733,000	1%
16	Fire Department	41,000	0%
17	Other (explain) <u>Contractor flushing, Addjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		15,152,758	30%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	6,348,000	13%
20	Other Loss	-7,831,645	-16%
TOTAL WATER LOST		-1,483,645	-3%

"OTHER LOSS" FLOW RATE CALCULATION:		
21	"Other Loss"	-7,831,645
22	% "Other Loss"	0
23	Number of Days in Period	30
24	"Other Loss" per Day (1,000's gallons per Day)	-261,055
25	"Other Loss" per Minute (GPM)	-181,288



Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: October

Year: 2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 4,715,211 Plant B 43,651,910	48,367,121	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	48,367,121	
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WATER SOLD			
5	Residential	15,148,600	71%
6	Commercial	1,177,800	6%
7	Industrial	42,900	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) _____	4,950,400	23%
11	TOTAL WATER SOLD	21,319,700	44%
12	TOTAL WATER NOT SOLD	27,047,421	56%
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BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 3,575,817 10,605,000	14,180,817	29%
14	Wastewater Plant	0	0%
15	System Flushing	750,000	2%
16	Fire Department	50,500	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		14,981,317	31%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	329,000	1%
20	Other Loss	11,737,104	24%
TOTAL WATER LOST		12,066,104	25%

"OTHER LOSS" FLOW RATE CALCULATION:

21	"Other Loss"	11,737,104
22	% "Other Loss"	0
23	Number of Days in Period	31
24	"Other Loss" per Day (1,000's gallons per Day)	378,616
25	"Other Loss" per Minute (GPM)	262,928



Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: November

Year:

2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 4,418,291 Plant B 43,456,590	47,874,881	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	47,874,881	
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WATER SOLD			
5	Residential	18,396,900	61%
6	Commercial	1,712,900	6%
7	Industrial	73,500	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) _____	9,743,700	33%
11	TOTAL WATER SOLD	29,927,000	63%
12	TOTAL WATER NOT SOLD	17,947,881	37%
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BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 3,001,387 10,196,000	13,197,387	28%
14	Wastewater Plant	0	0%
15	System Flushing	1,120,000	2%
16	Fire Department	51,500	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning.</u>	0	0%
TOTAL UNSOLD WATER USED		14,368,887	30%
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BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	934,000	2%
20	Other Loss	2,644,994	6%
TOTAL WATER LOST		3,578,994	7%

"OTHER LOSS" FLOW RATE CALCULATION:

21	"Other Loss"	2,644,994
22	% "Other Loss"	0
23	Number of Days in Period	30
24	"Other Loss" per Day (1,000's gallons per Day)	88,166
25	"Other Loss" per Minute (GPM)	61,227



Monthly Water Use Report

Water Utility: McCreary County Water District

For the Month of: December

Year: 2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 4,905,770 Plant B 43,878,270	48784040	100%
3	Water Purchased		0%
4	TOTAL PRODUCED AND PURCHASED	48784040	
<hr/>			
WATER SOLD			
5	Residential	20,001,200	66%
6	Commercial	1,660,800	5%
7	Industrial	93,100	0%
8	Bulk Loading Stations		0%
9	Wholesale		0%
10	Other Sales (explain) _____	8,499,300	28%
11	TOTAL WATER SOLD	30254400	62%
12	TOTAL WATER NOT SOLD	18529640	38%
<hr/>			
BREAKDOWN OF UNSOLD WATER USED			
13	Utility and/or Water Treatment Plant 3,384,849 10,635,000	14019849	29%
14	Wastewater Plant	0	0%
15	System Flushing	294,000	1%
16	Fire Department	22,500	0%
17	Other (explain) <u>Contractor flushing, Adjustments, Tank Cleaning, Annual Flus</u>	0	0%
TOTAL UNSOLD WATER USED		14336349	29%
<hr/>			
BREAKDOWN OF WATER LOST			
18	Tank Overflows		0%
19	Line Breaks	533,000	1%
20	Other Loss	3660291	8%
TOTAL WATER LOST		4193291	9%

"OTHER LOSS" FLOW RATE CALCULATION:

21	"Other Loss"	3660291
22	% "Other Loss"	8%
23	Number of Days in Period	31
24	"Other Loss" per Day (1,000's gallons per Day)	118074
25	"Other Loss" per Minute (GPM)	81996



Annual Water Use Report

Water Utility: McCreary County Water District

Year: 2017

LINE #	ITEM	GALLONS	%
1	WATER PRODUCED or PURCHASED		
2	Water Produced Plant A 142278775 Plant B 480417217	622,695,992	100.0%
3	Water Purchased	0	0.0%
4	TOTAL PRODUCED AND PURCHASED	622,695,992	
<hr/>			
	WATER SOLD		
5	Residential	237,964,500	64.4%
6	Commercial	19,751,100	5.3%
7	Industrial	825,800	0.2%
8	Bulk Loading Stations		0.0%
9	Wholesale	0	0.0%
10	Other Sales (explain) _____	110,824,000	30.0%
11	TOTAL WATER SOLD	369,365,400	59.3%
12	TOTAL WATER NOT SOLD	253,330,592	40.7%
<hr/>			
	BREAKDOWN OF UNSOLD WATER USED		
13	Utility and/or Water Treatment Plant	172,933,269	27.8%
14	Wastewater Plant	0	0.0%
15	System Flushing	6,985,500	1.1%
16	Fire Department	608,500	0.1%
17	Other (explain) <u>Contractor flushing, Addjustments, Tank Cleaning.</u>	0	0.0%
	TOTAL UNSOLD WATER USED	180,527,269	29.0%
<hr/>			
	BREAKDOWN OF WATER LOST		
18	Tank Overflows		0.0%
19	Line Breaks	14,180,700	2.3%
20	Other Loss	58,622,623	9.4%
	TOTAL UNSOLD WATER LOST	72,803,323	11.7%

"OTHER LOSS" FLOW RATE CALCULATION:			
21		"Other Loss"	58,622,623
22		% "Other Loss"	0
23		Number of Days in Period	365
24		"Other Loss" per Day (1,000's gallons per Day)	160,610
25		"Other Loss" per Minute (GPM)	111,535



McCreary County Water District
Plant A and B Water Report 2017

	Plant A					Plant B				
	Total Production	Date	Daily Maximum Produce	No. BW	Backwash Total	Total Production	Date	Daily Maximum Produce	No. BW	Backwash Total
Jan	20,415,435	1/13	1,193,335	11	174,048	35,359,830	1/30	2,088,810	16	416000
Feb	30,710,010	2/4	1,542,100	28	392,494	16,393,030	2/3	1,494,910	4	105000
Mar	33,731,243	3/27	1,171,890	29	404,896	17,230,917	3/10	779,500	5	136000
Apr	11,309,201	4/10	1,144,199	8	120,259	38,757,190	4/6	1,870,700	17	462000
May	5,427,310	5/18	636,559	4	69,245	47,219,880	5/8	1,975,620	22	536000
Jun	6,034,982	6/1	528,779	4	76,317	48,168,000	6/7	1,880,010	21	504000
Jul	5,131,579	7/21	395,027	4	81,137	53,053,430	7/6	1,874,350	24	568000
Aug	9,378,830	8/6	592,306	5	100,662	49,059,870	8/10	1,756,230	24	584000
Sept	6,100,913	9/15	618,407	4	80,358	44,188,300	9/18	1,772,490	20	448000
Oct	4,715,211	10/18	405,630	4	68,617	43,651,910	10/24	1,729,300	22	517000
Nov	4,418,291	11/2	426,464	4	77,387	43,456,590	11/28	1,810,610	20	436000
Dec	4,905,770	12/19	443,220	4	72,049	43,878,270	12/14	1,752,650	22	547000
Totals	142,278,775			109	1,717,469	480,417,217			217	5259000
Total	142,278,775			109	1,717,469	480,417,217			217	5259000

Plant usage (chorinators) Plant A 1" pipe at 50 PSI to a length of 100' = 45gal/min
 45gal/min x 1440 min/day = 64,800 gal-----64,800gal x 3 chorinators = 194400 gal
 Plant usage (chorinators) Plant B 1" pipe at 50 PSI to a length of 100' = 45gal/min
 45gal/min x 1440 min/day = 64,800 gal-----64,800gal x 5 chorinators = 324,000 gal
 Surface wash was estimated at 2000gal per wash.

	Plant A			Surface			Plant B			Surface		
	chorinators useage	Days Oper	Days	wash useage	No. BW	Basin Washout	chorinators useage	Days Oper	Days	wash useage	No. BW	Basin Washout
Jan	4,665,600	24	24	22,000	11		8,748,000	27	27	32,000	16	
Feb	5,443,200	28	28	56,000	28		8,100,000	25	25	8,000	4	
Mar	6,026,400	31	31	58,000	29	2	8,748,000	27	27	10,000	5	4
Apr	4,082,400	21	21	16,000	8		9,396,000	29	29	34,000	17	
May	3,888,000	20	20	8,000	4		10,044,000	31	31	44,000	22	4
Jun	4,082,400	21	21	8,000	4		9,720,000	30	30	42,000	21	
Jul	3,499,200	18	18	8,000	4		10,044,000	31	31	48,000	24	4
Aug	5,443,200	28	28	10,000	5	2	10,044,000	31	31	48,000	24	
Sept	4,082,400	21	21	8,000	4		9,720,000	30	30	40,000	20	4
Oct	3,499,200	18	18	8,000	4		10,044,000	31	31	44,000	22	
Nov	2,916,000	15	15	8,000	4		9,720,000	30	30	40,000	20	
Dec	3,304,800	17	17	8,000	4		10,044,000	31	31	44,000	22	
Totals	50,932,800	262	262	218,000	109		114,372,000	12/18	12/18	434,000	217	

Plant A water Used		Plant B water Used	
Jan	4,861,648		9,196,000
Feb	5,891,694		8,213,000
Mar	6,489,296		8,894,000
Apr	4,218,659		9,892,000
May	3,965,245		10,624,000
Jun	4,166,717		10,266,000
Jul	3,588,337		10,660,000
Aug	5,553,862		10,676,000
Sept	4,170,758		10,208,000
Oct	3,575,817		10,605,000
Nov	3,001,387		10,196,000
Dec	3,384,849		10,635,000
	52,868,269		120,065,000
	% 37		% 25

	Plant A	Plant B	Production	Res.	Com	Indust	Other	Plant A	Plant B	Water	System	Other	Line
	Production	Production	Production	Res.	Com	Indust	Sales	water Used	Used	Used	Flushing	Adjusted	Breaks
Jan	20,415,435	35,359,830	35,359,830	21,146,300	2,448,200	45,700	8,947,700	4,861,648	9,196,000	2,721,000	86,000		3,274,500
Feb	30,710,010	16,393,030	16,393,030	16,325,200	1,276,500	44,500	6,579,500	5,891,694	8,213,000	128,000	74,000		131,100
Mar	33,731,243	17,230,917	17,230,917	19,472,900	1,564,200	67,500	9,443,900	6,489,296	8,894,000	139,000	41,000		398,000
Apr	11,309,201	38,757,190	38,757,190	18,552,900	1,379,100	93,900	9,040,000	4,218,659	9,892,000	115,000	52,000		300,000
May	5,427,310	47,219,880	47,219,880	20,105,600	1,507,800	79,700	10,715,400	3,965,245	10,624,000	172,000	24,000		517,500
Jun	6,034,982	48,168,000	48,168,000	21,476,800	1,584,700	74,900	10,026,100	4,166,717	10,266,000	444,000	46,000		294,100
Jul	5,131,579	53,053,430	53,053,430	20,393,300	1,659,000	55,700	9,944,800	3,588,337	10,660,000	207,500	36,000		541,500
Aug	9,378,830	49,059,870	49,059,870	24,085,100	1,916,600	82,900	11,107,800	5,553,862	10,676,000	162,000	40,000		580,000
Sept	6,100,913	44,188,300	44,188,300	22,859,700	1,863,500	71,500	11,825,400	4,170,758	10,208,000	733,000	41,000		6,348,000
Oct	4,715,211	43,651,910	43,651,910	15,148,600	1,177,800	42,900	4,950,400	3,575,817	10,605,000	750,000	50,500		329,000
Nov	4,418,291	43,456,590	43,456,590	18,396,900	1,712,900	73,500	9,743,700	3,001,387	10,196,000	1,120,000	51,500		934,000
Dec	4,905,770	43,878,270	43,878,270	20,001,200	1,660,800	93,100	8,499,300	3,384,849	10,635,000	294,000	22,500		533,000
										6,985,500			

2017 WATER USAGE (IN GALLONS)

	Res.	Com.	Indust.	Other	Total
January	21,146,300	2,448,200	45,700	8,947,700	32,587,900
February	16,325,200	1,276,500	44,500	6,579,500	24,225,700
March	19,472,900	1,564,200	67,500	9,443,900	30,548,500
April	18,552,900	1,379,100	93,900	9,040,000	29,065,900
May	20,105,600	1,507,800	79,700	10,715,400	32,408,500
June	21,476,800	1,584,700	74,900	10,026,100	33,162,500
July	20,393,300	1,659,000	55,700	9,944,800	32,052,800
August	24,085,100	1,916,600	82,900	11,107,800	37,192,400
September	22,859,700	1,863,500	71,500	11,825,400	36,620,100
October	15,148,600	1,177,800	42,900	4,950,400	21,319,700
November	18,396,900	1,712,900	73,500	9,743,700	29,927,000
December	20,001,200	1,660,800	93,100	8,499,300	30,254,400
TOTAL	237,964,500	19,751,100	825,800	110,824,000	369,365,400

2017 WATER CUSTOMERS	Res	Com	Indust	Other	Total
January	5653	237	7	248	6145
February	5647	238	7	245	6137
March	5648	238	7	245	6138
April	5664	239	7	245	6155
May	5684	241	7	245	6177
June	5679	237	7	247	6170
July	5679	237	7	249	6172
August	5674	240	7	250	6171
September	5690	240	7	247	6184
October	5685	242	7	248	6182
November	5696	245	7	244	6192
December	5692	246	7	243	6188

Month	Plant A Production						
	<u>Total</u>	<u>MGD</u>	<u>Max-Day</u>	<u>MGD</u>	<u>Date</u>	<u>Min-Day</u>	<u>MGD</u>
Jan	20,415,435	20.415	1,193,335	1.193	1/17/2017	255,898.00	0.255
Feb	30,710,010	30.71	1,542,100	1.542	2/15/2017	380,898.00	0.38
March	33,731,243	33.731	1,171,890	1.171	3/4/2017	986,527.00	0.986
April	11,309,201	11.309	1,144,199	1.144	4/2/2017	133,585.00	0.133
May	5,427,310	5.427	636,559	0.636	5/15/2017	119,192.00	0.119
June	6,034,982	6.034	528,779	0.528	6/12/2017	114,493.00	0.114
July	5,131,579	5.131	395,027	0.395	7/22/2017	144,000.00	0.144
August	9,378,830	9.378	592,306	0.592	8/15/2017	52,608.00	0.052
September	6,100,913	6.1	618,407	0.618	9/7/2017	128,762.00	0.128
October	4,715,211	4.715	405,630	0.405	10/9/2017	121,456.00	0.121
November	4,418,291	4.418	426,464	0.426	11/20/2017	161,505.00	0.161
December	4,905,770	4.905	443,220	0.443	12/15/2017	115,333.00	0.115
Total	142,278,775	142.278					

Date

1/13/2017
2/4/2017
3/27/2017
4/10/2017
5/18/2017
6/1/2017
7/21/2017
8/6/2017
9/15/2017
10/18/2017
11/2/2017
12/19/2017

Month	Plant B Production						
	<u>Total</u>	<u>MGD</u>	<u>Max-Day</u>	<u>MGD</u>	<u>Date</u>	<u>Min-Day</u>	<u>MGD</u>
Jan	35,359,830	35.359	2,088,810	2.088	1/2/2017	610,670	0.61
Feb	16,393,030	16.393	1,494,910	1.494	2/4/2017	268,000	0.268
March	17,230,917	17.23	779,500	0.779	3/19/2017	449,000	0.449
April	38,757,190	38.757	1,870,700	1.87	4/16/2017	331,800	0.331
May	47,219,880	47.219	1,975,620	1.975	5/22/2017	1,222,800	1.222
June	48,168,000	48.168	1,880,010	1.88	6/17/2017	1,268,130	1.268
July	53,053,430	53.053	1,874,350	1.874	7/21/2017	1,461,850	1.461
August	49,059,870	49.059	1,756,230	1.756	8/20/2017	1,321,600	1.321
September	44,188,300	44.188	1,772,490	1.772	9/28/2017	1,212,560	1.212
October	43,651,910	43.651	1,729,300	1.729	10/8/2017	1,214,370	1.214
November	43,456,590	43.456	1,810,610	1.810	11/7/2017	1,243,360	1.243
December	43,878,270	43.878	1,752,650	1.752	12/31/2017	920,760	0.92
Total	480,417,217	480.417					

Date

1/30/2017
2/3/2017
3/10/2017
4/6/2017
5/8/2017
6/7/2017
7/6/2017
8/10/2017
9/18/2017
10/24/2017
11/28/2017
12/14/2017

A

<u>Plant A Backwash</u>	<u>Total Backwash Gallons</u>		<u>Backwash Cycles</u>
	Gallons	MGD	#
January	174048	0.174048	11
February	392494	0.392494	28
March	404896	0.404896	29
April	120259	0.120259	8
May	69245	0.069245	4
June	76317	0.076317	4
July	81137	0.081137	4
August	100662	0.100662	5
September	80358	0.080358	4
October	68617	0.068617	4
November	77387	0.077387	4
December	72049	0.072049	4
Total	1,717,469	1.717	109

B

<u>Plant B Backwash</u>	<u>Total Backwash Gallons</u>		<u>Backwash Cycles</u>
	Gallons	MGD	#
January	416000	0.416	16
February	105000	0.105	4
March	136000	0.136	5
April	462000	0.462	17
May	536000	0.536	22
June	504000	0.504	21
July	568000	0.568	24
August	584000	0.584	24
September	448000	0.448	20
October	517000	0.517	22
November	436000	0.436	20
December	547000	0.547	22
Total	5,259,000	5.259	217

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 ("User") 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 fire protection 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 calendar month.

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.

Whitley City Fire Dept. (name of Fire Department)

Month JAN.
Year 2017

McCleary Co. Water Dist (name of Water System)

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
1-25-17	Kingsman rd	Whitley City Fire Dept. Water Usage for 2017 547,500 Gallons					20000	
1-23-17	K. JB Comb rd						16000	
1-21-17	POPE Road						4000	
1-21-17	Heritage Drive						8000	
1-18-17	DAVIS Drive						4000	
1-12-17	POPPIAR SPRINGS rd						2000	
1-8-17	Ed STEPHENS rd						8000	
1-5-17	SOUTH Hwy. 1651						16000	
1-2-17	LOW GAP rd						8000	
							86,000	

Signed: Tony J. Miller
(fire department representative)

Date: _____

Total Gallons for Month 86000

Fire Department - Water Usage Report Form

KRS 278.170(3) 807 KAR 5:095 Section 9

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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.

Whitley City Fire Dept. (name of Fire Department)

Month Feb.
Year 2017

MCCREARY CO. WATER DIST. (name of Water System)

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
2-24-17	CHERRY LANE	STRUCTURE					10,000	
2-22-17	VINA BROWN RD	STRUCTURE					20,000	
2-16-17	CHILDERS RIDGE RD	STRUCTURE					10,000	
2-13-17	SOUTH HWY 1651	BRUSH					2,000	
2-9-17	PAULINA DRIVE	STRUCTURE					10,000	
2-8-17	ALON ROAD	WATER					2,000	
2-6-17	WEST HWY 92	BRUSH					4,000	
2-6-17	DEBBIE LANE	STRUCTURE					16,000	
							74,000	

Signed: Tom J. Miller
(fire department representative)

Date: _____

Total Gallons for Month 74,000



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 ("User") 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 fire protection 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 calendar month.

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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.

Whitley City Fire Dept. (name of Fire Department)

Month Year
March 2017

McCleary Co. Water Dist (name of Water System)

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
3-31-17	South Hwy 27	Vehicle					2000	
3-29-17	Lwoods rd	Structure					10,000	
3-29-17	Short Factory rd	Vehicle					2000	
3-25-17	PineHill rd	Structure					8000	
3-24-17	Mt. Pleasant	Structure					8000	
3-23-17	Harper rd	Brush					2000	
3-22-17	Watson rd	Brush					2000	
3-19-17	Tanner Rd rd	Structure					4000	
3-18-17	Behind Lattin rd	Brush					1000	
3-7-17	Alum rd.	Structure					2000	
							41000	

Signed: Tom Miller
(fire department representative)

Date: _____

Total Gallons for Month 41000 0

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 ("User") 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 fire protection 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 calendar month.

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.

Whitley City Fire Dept. (name of Fire Department)

Month April
Year 2017

McCleary Co. Water Dist (name of Water System)

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
4-25-17	Gar in Law Ridge	Structure					8000	
4-10-17	Pine Ridge rd.	Brush					8000	
4-9-17	Watson rd.	Brush					2000	
4-9-17	Alum rd.	Brush					2000	
4-9-17	Kidd Ridge rd.	Brush					2000	
4-8-17	Noss Jones rd.	Structure					10,000	
4-2-17	Noss Jones rd.	Brush					2000	
4-2-17	Bearlah Heibute rd	Structure					18000	
							<u>52000</u>	

Signed: Tony J. Miller
(fire department representative)

Date: _____

Total Gallons for Month 52000 0

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 ("User") 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 fire protection 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 calendar month.

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.

Whitley City Fire Dept. (name of Fire Department)

Month Year May 2017

McCleary Co. Water Dist (name of Water System)

unit conversion factor coefficient value 29.83 0.95

Table with 9 columns: 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. Includes handwritten entries for 5-16-17 and 5-1-17.

Signed: Tony Mellen Date: Total Gallons for Month 24000 0 (fire department representative)

Fire Department - Water Usage Report Form

KRS 278.170(3) 807 KAR 5:095 Section 9

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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.

Whitley City Fire Dept. (name of Fire Department)

Month June
Year 2012

MCCREARY CO. WATER DIST. (name of Water System)

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
6-15-12	MINE 18 ROAD	STRUCTURE					16000	
6-9-12	HONARD SPRINGS RD	STRUCTURE					10000	
6-7-12	CLARK HOLLOW RD	STRUCTURE					20000	
							<u>46000</u>	

Signed: Tony Miller
(fire department representative)

Date: _____

Total Gallons for Month 46000 0

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 ("User") 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 fire protection 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 calendar month.

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.

Whitley City Fire Dept. (name of Fire Department)

Month
Year

July
2017

MCCREARY CO. WATER DIST. (name of Water System)

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
7-24-17	EAST 1467	Structure					8000	
7-24-17	LAKE DRIVE	Structure					16000	
7-5-17	JAMAR NEAL RD.	Structure					12000	
							<u>36000</u>	

Signed: Tony Melvin Date: _____ Total Gallons for Month 36000 0
(fire department representative)

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 ("User") 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 fire protection 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 calendar month.

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.

Whitley City Fire Dept. (name of Fire Department)

Month
Year

Aug
2017

McCleary Co. Water Dist (name of Water System)

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
8-26-17	Smiddy rd.	Structure					8000	
8-13-17	Cal Hill rd	Structure					10,000	
8-10-17	DAVE Sommer rd	Structure					10,000	
8-9-17	Tunnel A. B. Co. rd	Structure					12,000	
							40,000	

Signed: Tom Miller
(fire department representative)

Date: _____

Total Gallons for Month 40,000 0

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 ("User") 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 fire protection 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 calendar month.

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.

Whitley City Fire Dept. (name of Fire Department)

Month: Sept.
Year: 2017

McCleary Co. Water Dist (name of Water System)

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
9-26-17	Smith Lane	Brush					1000	
9-24-17	Lot A Woods Rd	Structure					10,000	
9-12-17	West Hwy 92	Brush					2000	
9-12-17	South Hwy 1651	Structure					5000	
9-8-17	Norrd Top Rd	Structure					2000	
9-8-17	Norrd Top Rd	Structure					8000	
9-3-17	West Hwy 92	Brush					4000	
							41000	

Signed: Tom J. Miller
(fire department representative)

Date: _____

Total Gallons for Month: 32000

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 ("User") 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 fire protection 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 calendar month.

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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.

Whitley City Fire Dept. (name of Fire Department)

Month Oct.
Year 2017

MCCLEARY CO. WATER Dist (name of Water System)

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
10-29-17	Jody Jones rd	Structure					10,000	
10-20-17	Watters rd	Structure					1000	
10-19-17	Pine rd	Vehicle					1000	
10-16-17	Mathis rd. North	Structure					10,000	
10-11-17	Man Liberty rd	Structure					10,000	
10-8-17	Holloway CEM. rd	Structure					12,500	
10-6-17	East 1470	Structure					8000	
							<u>50,500</u>	

Signed: Tom Miller
(fire department representative)

Date: _____

Total Gallons for Month 52500

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 ("User") 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 fire protection 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 calendar month.

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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.

Whitley City Fire Dept. (name of Fire Department)

Month
Year

Nov,
2017

MCCREARY CO. WATER DIST (name of Water System)

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
11-29-17	DEAN KING RD	STRUCTURE					5000	
11-19-17	KIDD SCHOOL RD	STRUCTURE					2000	
11-18-17	MYRTLE AVENUE	BLEND					2000	
11-13-17	HATFIELD LANE	STRUCTURE					12500	
11-2-17	TONY KIDD APT.	STRUCTURE					10,000	
11-4-17	WV HWY 92	STRUCTURE					10,000	
							<u>51500</u>	

Signed: Tom Melton
(fire department representative)

Date: _____

Total Gallons for Month 41500 0

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 ("User") 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 fire protection 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 calendar month.

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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.

Whitley City Fire Dept. (name of Fire Department)

Month

DEC.

Year

2017

MCCREARY CO. WATER DIST (name of Water System)

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
12-28-17	DUMP #6	STRUCTURE					5000	
12-17-17	LOCAL #26	BUILDING					2500	
12-9-17	CHILDREN #26	STRUCTURE					10,000	
12-4-17	DCL #26	STRUCTURE					5000	
							27,500	

Signed: Tom J. Miller
(fire department representative)

Date: _____

Total Gallons for Month 27500



<u>Plant A</u>	<u>Days Operated</u>	<u>Plant B</u>	<u>Days Open</u>
January	24	January	27
February	28	February	25
March	31	March	27
April	21	April	29
May	20	May	31
June	21	June	30
July	18	July	31
August	28	August	31
September	21	September	30
October	18	October	31
November	15	November	30
December	17	December	31

Monthly Water Loss

Year

Flushing

	Leaks	Flushing	Fire Dept.
Jan	3,274,500	2,530,000 + 191,000 =	2,721,000
Feb	1,311,000	50,000 + 78,000 =	128,000
Mar	3,980,000	10,000 + 129,000 =	139,000
Apr	300,000		= 115,000
May	5,175,000	50,000 + 122,000 =	172,000
Jun	294,100		= 444,000
Jul	541,500	50,500 + 157,000 =	207,500
Aug	580,000	80,000 + 82,000 =	162,000
Sept	6,348,000	420,000 + 313,000 =	733,000
Oct	329,000	350,000 + 400,000 =	750,000
Nov	934,000	1,040,000 + 80,000 =	1,120,000
Dec	533,000	225,000 + 69,000 =	294,000
Total	14,180,700	4,805,500 + 1,621,000	6,485,500

1/2/18 JB
9:36 AM

SB'S Daily Flushing 2017

JAN.	191,000	JULY	157,000
FEB.	78,000	AUG.	82,000
MARCH	129,000	SEPT.	313,000
APRIL	115,000	OCT.	400,000
MAY	122,000	NOV.	80,000
JUNE	444,000	DEC.	69,000

Total
2,180,000 Gallons

LEAKS AND FLUSHING TOTALS

14,042,100 LEAKS / 5,595,500 FLUSHING LEAKS

EXHIBIT 1-C

McCreary County Water District
P.O. Box 488
Whitley City KY. 42653
(606) 376-2540

Break or rupture report

Date _____

Work Order _____

Location _____

Size of line _____

Main Break _____
 Fixed under pressure _____
 Fire Hydrant _____
 Line Relocation _____
 Main Extension _____
 Other _____

Remedy _____

Time leak was discovered (date/24hr) _____

Time main line shut down (date/24hr) _____

Time service restored (date/24hr) _____

Line flushing water loss Time (24hr) _____ Approx. gal. _____

Time disinfectant residual detected (date/24hr) _____ Cl2 Reading _____

Total time service off _____

Population Effected _____

DOW Contact Name _____ (date/24hr) _____

Phone # (606) 330-2080

Sample code	Location	Time

I certify that the above information has been properly filled out and DOW has been contacted. Fax # (606) 330-2097

Operator _____

MCCREARY COUNTY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 2

Responding Witness: Stephen Whitaker

- Q-2. Explain in detail your understanding of the information to be provided in each of the categories on the Water Statistics page (reference page 30) of the annual report required of jurisdictional water utilities, accessed through the Commission's website.
- A-2. Line 2: Total amount of water produced at utility's water treatment
- Line 3: Total amount of water purchased from another water supplier
- Line 4: Sum of Lines 2 and 3
- Line 7: Billed Sales to Residential Customers
- Line 8: Billed Sales to Commercial Customers
- Line 9: Billed Sales to Industrial Customers
- Line 10: Sales through Bulk Loading Stations
- Line 11: Billed sales to other water suppliers for resale to those suppliers' customers
- Line 12: Billed sales to Public authorities (such as the Federal Bureau of Prisons for use at United States Penitentiary McCreary, local or state government, school districts) or to utility's wastewater treatment facilities
- Line 13: Sum of Lines 4 and 7-12
- Line 16: Treated water used at the water treatment plant and water supplied to utility buildings such as utility offices
- Line 17: Water supplied to utility's wastewater facilities and not otherwise billed to those operations
- Line 18: Water used to flush water mains
- Line 19: Water reported used by fire departments for fire protection or fire protection training purposes

Line 20: Water used for purposes not addressed or reported in Lines 16-19, such as contractor flushing, tank cleanings, and leak adjustments

Line 21: The sum of Lines 16-20

Line 24: Water lost due to tank overflows

Line 25: Water loss due to reported line breaks

Line 26: Unknown; the Commission has not defined "line leaks" or provided guidance as to how to calculate such amounts

Line 27: $\text{Line 4} - (\text{Line 13} + \text{Line 21} + \text{Line 24} + \text{Line 25} + \text{Line 26})$

Line 28: Sum of Lines 23-27

MCCREARY COUNTY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 3

Responding Witness: Stephen Whitaker

- Q-3. State any questions you have regarding how to use the updated Commission Form described and attached as Appendix A to this Order.
- A-3. a. How does the Commission expect a utility to measure or estimate water loss due to theft?
- b. In determining water loss percentage for ratemaking purposes, the updated form includes in water loss due to excavation damages. As most excavation damages result from the actions of third parties who are not within the water utility's control, why are these amounts included in water loss?
- c. Unless a water utility bills its wastewater operations for water used at its wastewater plant and does not include the proceeds from those bills, why is it reasonable to include water used by the water utility's wastewater treatment plant in "other water used"? Under such circumstances, why should the water utilities ratepayers subsidize the wastewater operations' ratepayers?
- d. How does the Commission define "Line leaks? What methodology does the Commission expect water utilities to use to calculate the amount of water loss due to line leaks?
- e. What records or other evidence is adequate to support losses reported on lines 25 through 29 of the updated form?
- f. What records or other evidence does the Commission require to support the amounts reported in "Other Water Used"?

MCCREARY COUNTY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 4

Responding Witness: Stephen Whitaker

- Q-4. State any suggestions or improvements you have for the updated Commission Form described and attached as Appendix A to this Order.
- A-4. a. Recommend eliminating excavation damages as a separate category of water loss. Calculating and recording each excavation loss is an unnecessary administrative burden. Unless the water utility has circumstances that indicate excavation is a significant contributor to water loss, the benefit from separately recording this type of loss is outweighed by the additional administrative burden and expense.
- b. The Commission should publish specific guidance on calculating and reporting the level of water loss due to theft.
- c. The Commission should develop a uniform reporting form for fire departments to report their usage to water utilities.
- d. McCreary County Water District opposes any water usage reporting requirement that requires all water utilities to make monthly reports to the Commission using the revised form. Any requirement for monthly reporting should be limited to those water utilities that experience high water loss over an extended period of time. If the Commission imposes a monthly reporting requirement on all water utilities, it should develop a system that allows for electronic reporting in a manner similar to that currently used to submit annual reports and should not impose any such requirement until such system has been developed and is fully operational.

MCCREARY COUNTY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 5

Responding Witness: Stephen Whitaker

- Q-5. State any questions you have regarding how the information in the updated Commission Form described and attached as Appendix A to this Order is to be incorporated into annual reports.
- A-5. Does the Commission intend to revise 807 KAR 5:006 using the procedures required by KRS Chapter 13A to incorporate the proposed changes to its annual report form?

MCCREARY COUNTY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

Question No. 6

Responding Witness: Stephen Whitaker

- Q-6. State any concerns you have regarding the use of the updated Commission Form described and attached as Appendix A to this Order.
- A-6. See Response to Question 4a.

MCCREARY COUNTY WATER DISTRICT

CASE NO. 2018-00394

Response to Commission's Request for Information

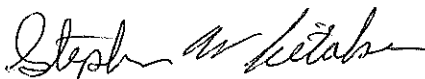
Question No. 7

Responding Witness: Stephen Whitaker

- Q-7. State whether you believe it is reasonable, proper, and appropriate for the Commission to require jurisdictional water utilities to maintain and use the updated Commission Form described and attached as Appendix A to this Order. Fully explain your answer.
- A-7. KRS 278.230(3) permits the Commission to require a utility to file with it any reports, schedules, classifications or other information that it reasonably requires. If the Commission intends to impose a requirement upon all water utilities to use the proposed form to report water usage, the Commission should follow the requirements of KRS Chapter 13A and amend its existing regulations to include that requirement. Likewise, if the Commission intends to make revisions to the annual report form, it should comply with the procedures of KRS Chapter 13A.

CERTIFICATE OF SERVICE

In accordance with 807 KAR 5:001, Section 8, I certify that McCreary County Water District's electronic filing of this Response is a true and accurate copy of the same document being filed in paper medium; that the electronic filing was transmitted to the Public Service Commission on January 17, 2019; that there are currently no parties that the Public Service Commission has excused from participation by electronic means in this proceeding; and that an original paper medium of this Response will be delivered to the Public Service Commission within two business days.



Stephen Whitaker