

AUG 2018 DAY	RAW WATER GAL	HIGH SERV GAL	ROG BPS	SO. RD. BPS	CER. BPS	HRS. PLT. OPTD	POLY GAL USED	POLY LBS. USED	FL. LBS. USED	FL. X 0.23	POT. GAL. USED	POT. LBS. USED	CL2 #1 READING LBS	CL2 #2 READING LBS	CL2 PRE LBS	CL2 PST LBS	#1 BASIN CLEANED GAL.	#2 BASIN CLEANED GAL.	#3 BASIN CLEANED GAL.	#4 BASIN CLEANED GAL.	OPR.	TIME 24 HR CLK	
1	1,502,000	1,435,000	154,000	225,000	152,000	15.9	282	293	46	10.6	1.6	3.1	153.8	23.8	430	15	31				JERRY	2400	
2	1,536,000	1,529,000	183,000	243,000	140,000	16.2	293	42	9.7	1.6	3.2	145.2	8.0	47	15	38					JERRY	2400	
3	1,587,000	1,474,000	208,000	237,000	133,000	16.8	300	35	8.1	1.7	3.3	129.0	49	24	15	34					JERRY	2400	
4	1,761,000	1,729,000	225,000	278,000	136,000	18.6	335	47	10.8	1.9	3.6	112.2	50	0	15	35					TOM	2400	
5	1,723,000	1,729,000	217,000	262,000	137,000	18.2	297	44	10.1	1.8	3.6	94.8	52	0	15	37					TOM	2400	
6	1,589,000	1,507,000	179,000	250,000	150,000	16.8	304	39	9.0	1.7	3.3	78.4	49	0	15	34					JEFF	2400	
7	1,423,000	1,466,000	147,000	252,000	136,000	15.1	279	45	10.4	1.5	2.9	63.2	46	0	15	31					JEFF	2400	
8	1,666,000	1,525,000	158,000	230,000	154,000	15.5	306	46	10.6	1.6	3.0	47.2	48	0	15	33					JEFF	2400	
9	1,556,000	1,438,000	142,000	208,000	122,000	16.6	294	33	7.6	1.7	3.2	31.8	46	0	15	31					JEFF	2400	
10	1,443,000	1,471,000	156,000	246,000	133,000	15.2	269	30	6.9	1.5	3.0	18.2	41	0	15	26					JEFF	2400	
11	1,807,000	1,495,000	163,000	256,000	134,000	19.8	315	27	6.2	2.0	3.9	2.4	47	162.2	487	40	100,000	100,000			JEFF	2400	
12	1,907,000	1,558,000	166,000	255,000	124,000	19.1	339	31	7.1	1.9	3.7		7	147.6	60	15	45				JEFF	2400	
13	1,669,000	1,567,000	165,000	284,000	183,000	17.7	320	29	6.7	1.8	3.5		0	129.0	56	15	41				MARTIN	2400	
14	1,547,000	1,527,000	167,000	272,000	170,000	16.2	270	28	6.4	1.6	3.2		0	112.0	51	15	36				MARTIN	2400	
15	1,521,000	1,408,000	143,000	252,000	139,000	16.1	268	32	7.4	1.6	3.1		0	97.0	45	15	30				MARTIN	2400	
16	1,330,000	1,403,000	148,000	231,000	130,000	13.9	236	30	6.9	1.4	2.7		0	84.0	39	10	29				MARTIN	2400	
17	1,394,000	1,346,000	139,000	228,000	146,000	14.0	260	33	7.6	1.4	2.7		0	70.0	42	15	27				MARTIN	2400	
18	1,526,000	1,516,000	180,000	252,000	173,000	16.2	302	34	7.8	1.6	3.2		0	52.0	54	15	39				MARTIN	2400	
19	1,577,000	1,604,000	190,000	264,000	190,000	16.7	291	35	8.1	1.7	3.3		0	35.0	51	15	36				MARTIN	2400	
20	1,586,000	1,555,000	173,000	257,000	180,000	16.8	292	37	8.5	1.7	3.3		0	58	15	43					JEFF	2400	
21	1,440,000	1,406,000	145,000	320,000	186,000	15.3	269	29	6.7	1.5	3.0	140.4	40	9.8	18	15	43				JEFF	2400	
22	1,548,000	1,490,000	188,000	270,000	213,000	16.5	299	35	8.1	1.7	3.2	124.2	49	29	15	34					JEFF	2400	
23	1,515,000	1,534,000	166,000	232,000	189,000	15.9	285	35	8.1	1.6	3.1	109.2	45	0	15	30					JEFF	2400	
24	1,515,000	1,410,000	161,000	244,000	183,000	15.3	288	39	9.0	1.5	3.0	94.6	44	0	15	29					JEFF	2400	
25	1,624,000	1,622,000	213,000	277,000	207,000	17.3	306	42	9.7	1.7	3.4	79.0	47	0	15	32					STEVE	2400	
26	1,616,000	1,567,000	190,000	261,000	207,000	17.3	295	43	9.9	1.7	3.4	63.0	48	0	15	33					STEVE	2400	
27	1,761,000	1,665,000	183,000	287,000	209,000	18.8	324	44	10.1	1.9	3.7	46.6	49	0	15	34					JEFF	2400	
28	1,743,000	1,719,000	207,000	255,000	200,000	18.6	331	44	10.1	1.9	3.6	29.6	51	0	15	36					JEFF	2400	
29	1,476,000	1,458,000	186,000	260,000	204,000	15.7	278	38	8.7	1.6	3.1	14.8	44	167.2	502	15	29				JEFF	2400	
30	1,560,000	1,438,000	176,000	268,000	217,000	16.7	295	41	9.4	1.7	3.3	5.8	27	157.4	29	15	41				JEFF	2400	
31	1,683,000	1,603,000	190,000	252,000	208,000	18.1	332	47	10.8	1.8	3.5		17	139.4	54	15	39				JEFF	2400	
TOT	49,146,000	47,171,000	5,478,000	7,908,000	5,266,000	516.9	0	9154	1160	266.8	51.7	101			461	100					100,000	100,000	
MAX		MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX			MAX	MAX						ONE	BASINS CLEANED
	1,907,000	1,729,000	225,000	320,000	262,000	19.8	0	339	47	11	2.0	101			430	45					TWO		
	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN			AVG.	AVG.						THREE	
	1,330,000	1,346,000	139,000	208,000	122,000	13.9	0	236	27	6	1	3			3	15					FOUR		
	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.			AVG.	AVG.							
	1,585,355	1,521,645	176,710	255,097	169,871	16.7	0	295	37	9	1.7	3			15	35							
WHEN CL2 TANKS ARE CHANGED, BE SURE TO PUT WEIGHT AT TOP OF APPROPRIATE COLUMN!!!																							

8B

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
 WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

APPLICABLE TO ALL PLANTS WITH FILTRATION

PWS ID : KY1110019
 PLANT ID: A
 REPORT MONTH/YEAR: 08/2018
 PAGE 6 OF 11

DAY	FILTER OPERATION										
	TOTAL WASH WATER GALLONS	No: A		No: B		No: C		No: D		No:	
		AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS
1	94,000		15.90		15.90	47,000	15.90	47,000	15.90		
2			16.20		16.20		16.20		16.20		
3			16.80		16.80		16.80		16.80		
4	66,000	30,000	18.60	36,000	18.60		18.60		18.60		
5	75,000		18.20		18.20	37,500	18.20	37,500	18.20		
6			16.80		16.80		16.80		16.80		
7			15.10		15.10		15.10		15.10		
8	92,000	46,000	15.50	46,000	15.50		15.50		15.50		
9			16.60		16.60		16.60		16.60		
10	80,000		15.20		15.20	40,000	15.20	40,000	15.20		
11			19.80		19.80		19.80		19.80		
12	40,000	40,000	19.10		19.10		19.10		19.10		
13	40,000		17.70	40,000	17.70		17.70		17.70		
14	80,000		16.20		16.20	40,000	16.20	40,000	16.20		
15			16.10		16.10		16.10		16.10		
16			13.90		13.90		13.90		13.90		
17			14.00		14.00		14.00		14.00		
18	38,000	38,000	16.20		16.20		16.20		16.20		
19	25,000		16.70	25,000	16.70		16.70		16.70		
20	80,000		16.80		16.80	40,000	16.80	40,000	16.80		
21			15.30		15.30		15.30		15.30		
22			16.50		16.50		16.50		16.50		
23	66,000	33,000	15.90	33,000	15.90		15.90		15.90		
24	81,000		15.30		15.30	40,500	15.30	40,500	15.30		
25			17.30		17.30		17.30		17.30		
26			17.30		17.30		17.30		17.30		
27	76,000	38,000	18.80	38,000	18.80		18.80		18.80		
28	71,000		18.60		18.60	35,500	18.60	35,500	18.60		
29			15.70		15.70		15.70		15.70		
30			16.70		16.70		16.70		16.70		
31			18.10		18.10		18.10		18.10		
TOTAL	1,004,000	225,000	516.90	218,000	516.90	280,500	516.90	280,500	516.90	0	0.00
AVERAGE	66,933	37,500	16.674	36,333	16.674	40,071	16.674	40,071	16.674	#DIV/0!	#DIV/0!

COPY AS NEEDED

8B

SEPT 2018 DAY	RAW WATER GAL	HIGH SERV GAL	ROG BPS	SO. RD. BPS	CER. BPS	HRS. P.L.T. OPTD	POLY GAL USED	POLY LBS. USED	FL. LBS. USED	FL. X 0.23	POT. GAL. USED	POT. LBS. USED	CL2 READING #1 150.8 LBS	CL2 READING #2 163.8 LBS	CL2 PRE LBS	CL2 PST LBS	#1 BASIN CLEANED GAL.	#2 BASIN CLEANED GAL.	#3 BASIN CLEANED GAL.	#4 BASIN CLEANED GAL.	OPR.	TIME 24 HR CLK		
1	1,860,000	1,813,000	226,000	280,000	232,000	20.2	352	49	11.3	2.0	3.9	452	122.8	123	15	35					JEFF	2400		
2	1,772,000	1,772,000	276,000	263,000	216,000	19.3	342	47	10.8	1.9	3.8	0	102.0	62	15	38					JEFF	2400		
3	1,901,000	1,842,000	251,000	293,000	225,000	20.7	368	50	11.5	2.1	4.0	0	84.0	54	15	39					MARTIN	2400		
4	1,631,000	1,612,000	212,000	266,000	215,000	17.8	310	44	10.1	1.8	3.5	0	68.0	48	15	27					MARTIN	2400		
5	1,553,000	1,490,000	178,000	262,000	201,000	16.9	306	44	10.1	1.7	3.3	0	50.0	54	15	39					MARTIN	2400		
6	1,247,000	1,182,000	106,000	206,000	183,000	13.6	236	30	6.9	1.4	2.7	0	40.0	30	10	20					MARTIN	2400		
7	2,203,000	2,119,000	296,000	279,000	253,000	24.0	425	61	14.0	2.4	4.7	0	14.0	78	20	58					MARTIN	2400		
8	1,810,000	1,626,000	193,000	243,000	217,000	20.6	329	46	10.6	2.1	4.0	0	133.0	51	0	15	36				100,000	MARTIN	2400	
9	2,032,000	1,657,000	202,000	268,000	195,000	22.8	358	50	11.5	2.3	4.5	0	114.0	57	0	15	42					STEVE	2400	
10	1,703,000	1,648,000	178,000	271,000	203,000	18.2	315	44	10.1	1.8	3.6	0	98.4	47	0	15	32					STEVE	2400	
11	1,623,000	1,602,000	136,000	274,000	186,000	16.6	306	41	9.4	1.7	3.2	0	82.0	49	0	15	34					STEVE	2400	
12	1,500,000	1,399,000	262,000	268,000	219,000	17.3	293	35	8.1	1.7	3.4	0	67.8	43	0	15	28					STEVE	2400	
13	1,287,000	1,356,000	177,000	318,000	196,000	13.8	236	30	6.9	1.4	2.7	0	56.6	34	0	15	19					STEVE	2400	
14	1,435,000	1,368,000	179,000	271,000	203,000	15.3	280	35	8.1	1.5	3.0	0	43.6	39	0	15	24					STEVE	2400	
15	1,511,000	1,364,000	179,000	292,000	224,000	16.0	275	37	8.5	1.6	3.1	0	30.2	40	0	15	25					STEVE	2400	
16	1,377,000	1,432,000	184,000	293,000	221,000	14.5	265	37	8.5	1.5	2.8	0	12.2	54	150.4	451	0					STEVE	2400	
17	1,349,000	1,287,000	175,000	290,000	211,000	14.1	245	34	7.8	1.4	2.8	0	22	147.8	8	10	20					JEFF	2400	
18	1,493,000	1,452,000	166,000	344,000	203,000	15.5	278	37	8.5	1.6	3.0	0	113.4	43	15	28					JEFF	2400		
19	1,326,000	1,259,000	162,000	274,000	233,000	13.9	258	35	8.1	1.4	2.7	0	117.0	49	15	34					JEFF	2400		
20	1,457,000	1,441,000	170,000	285,000	219,000	15.3	262	36	8.3	1.5	3.0	0	104.4	38	10	28					JEFF	2400		
21	1,394,000	1,197,000	127,000	280,000	176,000	14.7	272	37	8.5	1.5	2.9	0	88.6	47	15	32					JEFF	2400		
22	1,156,000	1,226,000	122,000	301,000	134,000	12.3	224	29	6.7	1.2	2.4	0	75.6	39	10	29					JEFF	2400		
23	1,523,000	1,344,000	186,000	273,000	154,000	15.4	283	37	8.5	1.5	3.0	0	60.6	45	10	35					JEFF	2400		
24	1,242,000	1,198,000	153,000	259,000	163,000	13.2	226	30	6.9	1.3	2.6	0	38.0	36	10	22					MARTIN	2400		
25	1,176,000	1,232,000	99,000	299,000	148,000	12.5	226	30	6.9	1.3	2.4	0	38.0	36	10	26					MARTIN	2400		
26	1,303,000	1,187,000	137,000	259,000	182,000	13.8	248	35	8.1	1.4	2.7	0	26.0	36	10	26					MARTIN	2400		
27	1,167,000	1,149,000	100,000	238,000	160,000	12.3	243	32	7.4	1.2	2.4	0	150.4	451	13.0	39	15	29					MARTIN	2400
28	1,310,000	1,253,000	103,000	259,000	166,000	13.8	243	32	7.4	1.2	2.4	0	146.8	11	0.0	35	15	35					MARTIN	2400
29	1,358,000	1,339,000	131,000	289,000	148,000	14.3	268	35	8.1	1.4	2.8	0	132.0	44	0	15	29					MARTIN	2400	
30	1,307,000	1,244,000	139,000	284,000	192,000	13.7	241	33	7.6	1.4	2.7	0	118.0	42	0	15	27					MARTIN	2400	
TOT	45,006,000	43,090,000	5,202,000	8,276,000	5,879,000	482.4	0	8513	1152	265.0	48.2	94	548	449	415	935	100,000	100,000	100,000	100,000	BASINS CLEANED			
	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	POT. GAL. = PLANT OP. HRS. X 3					ONE JDM		
	2,203,000	2,119,000	296,000	344,000	253,000	24.0	0	425	61	14	2.4	94	452	123	20	58	ALL HEADINGS IN YELLOW GO ON MOR					TWO JDM		
	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	=day max pumped					THREE JDM		
	1,156,000	1,149,000	99,000	206,000	134,000	12.3	0	224	29	7	1	2	18	15	14	31	=day min pumped					FOUR JDM		
	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.								
	1,500,200	1,436,333	173,400	275,867	195,967	16.1	0	284	38	9	1.6	3												
	WHEN CL2 TANKS ARE CHANGED, BE SURE TO PUT WEIGHT AT TOP OF APPROPRIATE COLUMN!!!																							

9B

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
 WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

APPLICABLE TO ALL PLANTS WITH FILTRATION

PWS ID : KY1110019
 PLANT ID: A
 REPORT MONTH/YEAR: 09/2018
 PAGE 6 OF 11

DAY	FILTER OPERATION										
	TOTAL WASH WATER GALLONS	No: A		No: B		No: C		No: D		No:	
		AREA (square feet)	180	AREA (square feet)	180	AREA (square feet)	180	AREA (square feet)	180	AREA (square feet)	180
	WASHWATER GALLONS	FILT RUN HRS	WASHWATER GALLONS	FILT RUN HRS	WASHWATER GALLONS	FILT RUN HRS	WASHWATER GALLONS	FILT RUN HRS	WASHWATER GALLONS	FILT RUN HRS	
1	81,000	41,000	20.20	40,000	20.20		20.20		20.20		
2	54,000		19.30		19.30	27,000	19.30	27,000	19.30		
3			20.70		20.70		20.70		20.70		
4			17.80		17.80		17.80		17.80		
5	82,000	41,000	16.90	41,000	16.90		16.90		16.90		
6			13.60		13.60		13.60		13.60		
7	83,000		24.00		24.00	43,000	24.00	40,000	24.00		
8			20.40		20.40		20.40		20.40		
9			22.80		22.80		22.80		22.80		
10	114,000	40,500	18.20	40,500	18.20	15,000	18.20	18,000	18.20		
11			16.60		16.60		16.60		16.60		
12			17.30		17.30		17.30		17.30		
13			13.80		13.80		13.80		13.80		
14	59,000	30,000	15.30	29,000	15.30		15.30		15.30		
15			16.00		16.00		16.00		16.00		
16	60,000		14.50		14.50	30,000	14.50	30,000	14.50		
17			14.10		14.10		14.10		14.10		
18	89,000	44,500	15.50	44,500	15.50		15.50		15.50		
19			13.90		13.90		13.90		13.90		
20	112,000		15.30		15.30	62,000	15.30	50,000	15.30		
21			14.70		14.70		14.70		14.70		
22			12.30		12.30		12.30		12.30		
23	76,000	38,000	15.40	38,000	15.40		15.40		15.40		
24			13.20		13.20		13.20		13.20		
25			12.50		12.50		12.50		12.50		
26			13.80		13.80		13.80		13.80		
27			12.30		12.30		12.30		12.30		
28	86,000		13.80		13.80	43,000	13.80	43,000	13.80		
29	80,000	40,000	14.30	40,000	14.30		14.30		14.30		
30			13.70		13.70		13.70		13.70		
31											
TOTAL	976,000	275,000	482.20	273,000	482.20	220,000	482.20	208,000	482.20	0	0.00
AVERAGE	81,333	39,286	16.073	39,000	16.073	36,667	16.073	34,667	16.073	#DIV/0!	#DIV/0!

COPY AS NEEDED

9B

OCT 2018 DAY	RAW WATER GAL	HIGH SERV GAL	ROG BPS GAL	SO. RD. BPS GAL	CER. BPS GAL	HRS. P.L.T. OPTD	POLY GAL USED	POLY LBS. USED	FL. LBS. USED	FL. X 0.23	POT. GAL. USED	POT. LBS. USED	CL2 #1 READING 150.2 LBS	CL2 #2 READING 159.8 LBS	CL2 PRE LBS	CL2 PST LBS	#1 BASIN CLEANED GAL.	#2 BASIN CLEANED GAL.	#3 BASIN CLEANED GAL.	#4 BASIN CLEANED GAL.	OPR.	TIME 24 HR CLK	
1	1,248,000	1,205,000	117,000	272,000	180,000	13.1	225	32	7.4	1.3	2.6	105.6	134	479	10	27					STEVE	2400	
2	1,255,000	1,153,000	90,000	264,000	161,000	13.5	240	31	7.1	1.4	2.6	92.6	39	0	10	29					STEVE	2400	
3	1,234,000	1,271,000	111,000	321,000	171,000	12.9	230	30	6.9	1.3	2.5	80.4	37	0	10	27					STEVE	2400	
4	1,499,000	1,353,000	143,000	299,000	159,000	15.6	291	22	5.1	1.6	3.0	64.2	49	0	10	39					STEVE	2400	
5	1,550,000	1,235,000	105,000	267,000	154,000	16.0	279	14	3.2	1.6	3.1	52.4	35	0	10	25	100,000	100,000			STEVE	2400	
6	1,665,000	1,423,000	138,000	270,000	170,000	17.5	326	46	10.6	1.8	3.4	37.0	46	0	10	36			100,000	100,000	STEVE	2400	
7	1,368,000	1,256,000	132,000	265,000	165,000	14.4	249	34	7.8	1.4	2.8	24.4	38	0	10	28					STEVE	2400	
8	1,217,000	1,290,000	124,000	291,000	184,000	12.9	244	32	7.4	1.3	2.5	11.8	38	0	10	28					JEFF	2400	
9	1,509,000	1,413,000	143,000	276,000	162,000	16.1	280	37	8.5	1.6	3.1	-0.0	53	163.8	15	38					JEFF	2400	
10	1,177,000	1,164,000	113,000	245,000	161,000	12.5	236	30	6.9	1.3	2.4		-18	150.6	40	15	25					JEFF	2400
11	1,325,000	1,243,000	92,000	278,000	145,000	14.1	243	32	7.4	1.4	2.8		0	137.6	39	10	29					JEFF	2400
12	1,106,000	1,157,000	125,000	247,000	134,000	11.8	224	29	6.7	1.2	2.3		0	124.0	41	15	26					JEFF	2400
13	1,419,000	1,317,000	178,000	262,000	179,000	15.2	273	36	8.3	1.5	3.0		0	108.6	46	15	31					JEFF	2400
14	1,114,000	1,161,000	87,000	270,000	142,000	11.9	217	28	6.4	1.2	2.3		0	98.2	31	10	21					JEFF	2400
15	1,181,000	1,189,000	82,000	270,000	152,000	12.6	224	28	6.4	1.3	2.5		0	87.0	34	10	24					MARTIN	2400
16	1,228,000	1,114,000	111,000	222,000	134,000	13.1	234	32	7.4	1.3	2.6		0	76.0	33	10	23					MARTIN	2400
17	1,371,000	1,357,000	104,000	261,000	158,000	14.6	229	33	7.6	1.5	2.8		0	66.0	30	10	20					MARTIN	2400
18	1,168,000	1,149,000	84,000	262,000	145,000	12.4	208	31	7.1	1.2	2.4		0	55.0	33	10	23					MARTIN	2400
19	1,261,000	1,352,000	138,000	271,000	150,000	13.4	214	33	7.6	1.3	2.6		0	42.0	31	10	29					MARTIN	2400
20	1,244,000	1,179,000	102,000	287,000	138,000	13.2	215	33	7.6	1.3	2.6		0	31.6	31	10	21					TOM	2400
21	1,213,000	1,236,000	172,000	246,000	189,000	12.9	220	31	7.1	1.3	2.5	150.2	-451	19.0	38	10	28					TOM	2400
22	1,285,000	1,166,000	127,000	279,000	162,000	13.5	200	33	7.6	1.4	2.6	136.0	43	57	15	28					STEVE	2400	
23	1,234,000	1,313,000	126,000	261,000	153,000	13.2	212	33	7.6	1.3	2.6	126.4	29	0	10	19					STEVE	2400	
24	1,291,000	1,186,000	171,000	241,000	170,000	14.2	217	33	7.6	1.4	2.8	113.2	40	0	10	30					STEVE	2400	
25	1,267,000	1,254,000	137,000	258,000	148,000	13.7	218	33	7.6	1.4	2.7	100.2	39	0	10	29					STEVE	2400	
26	1,260,000	1,244,000	103,000	224,000	146,000	13.8	219	33	7.6	1.4	2.7	89.5	32	0	10	22					STEVE	2400	
27	1,251,000	1,173,000	120,000	243,000	144,000	13.6	213	33	7.6	1.4	2.7	77.8	35	0	10	25					STEVE	2400	
28	1,164,000	1,175,000	152,000	233,000	162,000	12.7	212	33	7.6	1.3	2.5	67.2	32	0	10	22					STEVE	2400	
29	1,274,000	1,174,000	118,000	274,000	158,000	13.9	211	32	7.4	1.3	2.6	57.6	29	0	5	24					JEFF	2400	
30	1,275,000	1,291,000	165,000	219,000	179,000	13.9	212	33	7.6	1.4	2.7	45.2	37	0	10	27					JEFF	2400	
31	1,255,000	1,290,000	128,000	267,000	161,000	13.6	218	34	7.8	1.4	2.7	32.4	38	0	15	23					JEFF	2400	
TOT	39,848,000	38,483,000	3,838,000	8,062,000	4,946,000	425.2	7233	984	226.3	42.5	83		353	479	335	826	100,000	100,000	100,000	100,000	BASINS CLEANED		
	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX		MAX	MAX	MAX	MAX						ONE	
	1,865,000	1,423,000	178,000	321,000	189,000	17.5	326	46	11	1.8	83		134	479	15	39					TWO		
	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN		AVG.	AVG.	AVG.	AVG.						ALL HEADINGS IN YELLOW GO ON MOR	
	1,106,000	1,114,000	82,000	211,000	134,000	11.8	200	14	3	1	2		11	16	11	27					=day max pumped	THREE	
	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.											=day min pumped	FOUR
	1,285,419	1,241,387	123,806	260,065	159,548	13.7	233	32	7	1.4	3												
WHEN CL2 TANKS ARE CHANGED, BE SURE TO PUT WEIGHT AT TOP OF APPROPRIATE COLUMN!!!																							

10B

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
 WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

APPLICABLE TO ALL PLANTS WITH FILTRATION

PWS ID : KY1110019
 PLANT ID: A
 REPORT MONTH/YEAR: OCT 2018
 PAGE 6 OF 11

DAY	FILTER OPERATION										
	TOTAL WASH WATER GALLONS	No: A		No: B		No: C		No: D		No:	
		AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS
1			13.10		13.10		13.10		13.10		
2			13.50		13.50		13.50		13.50		
3			12.90		12.90		12.90		12.90		
4	110,000		15.60		15.60	55,000	15.60	55,000	15.60		
5			16.00		16.00		16.00		16.00		
6	80,000	40,000	17.50	40,000	17.50		17.50		17.50		
7			14.40		14.40		14.40		14.40		
8			12.90		12.90		12.90		12.90		
9	85,000		16.10		16.10	42,500	16.10	42,500	16.10		
10			12.50		12.50		12.50		12.50		
11	76,000	38,000	14.10	38,000	14.10		14.10		14.10		
12			11.80		11.80		11.80		11.80		
13			15.20		15.20		15.20		15.20		
14			11.90		11.90		11.90		11.90		
15			12.60		12.60		12.60		12.60		
16			13.10		13.10		13.10		13.10		
17			14.60		14.60		14.60		14.60		
18			12.40		12.40		12.40		12.40		
19	112,000	29,000	13.40	29,000	13.40	30,000	13.40	24,000	13.40		
20			13.20		13.20		13.20		13.20		
21			12.90		12.90		12.90		12.90		
22			13.50		13.50		13.50		13.50		
23			13.20		13.20		13.20		13.20		
24			14.20		14.20		14.20		14.20		
25	79,000	39,500	13.70	39,500	13.70		13.70		13.70		
26	95,000		13.80		13.80	47,500	13.80	47,500	13.80		
27			13.60		13.60		13.60		13.60		
28			12.70		12.70		12.70		12.70		
29			13.30		13.30		13.30		13.30		
30	52,000	26,000	13.90	26,000	13.90		13.90		13.90		
31			13.60		13.60		13.60		13.60		
TOTAL	689,000	172,500	425.20	172,500	425.20	175,000	425.20	169,000	425.20	0	0.00
AVERAGE	86,125	34,500	13.716	34,500	13.716	43,750	13.716	42,250	13.716	#DIV/0!	#DIV/0!

COPY AS NEEDED

10B

NOV 2018 DAY	RAW WATER GAL	HIGH SERV GAL	ROG BPS GAL	SO. RD. BPS GAL	CER. BPS GAL	HRS. P.L.T. OPTD	POLY GAL USED	POLY LBS. USED	FL. LBS. USED	FL. X 0.23	POT. GAL. USED	POT. LBS. USED	CL2 READING #1	CL2 READING #2	CL2 PRE LBS	CL2 PST LBS	#1 BASIN CLEANED GAL.	#2 BASIN CLEANED GAL.	#3 BASIN CLEANED GAL.	#4 BASIN CLEANED GAL.	OPR.	TIME 24 HR CLK	
1	1,311,000	1,290,000	129,000	212,000	155,000	14.2	237	34	7.8	1.4	2.8	19.2	368	489	15	25					JEFF	2400	
2	1,234,000	1,235,000	112,000	250,000	173,000	13.4	297	33	7.6	1.3	2.6	7.6	35	0	15	20					JEFF	2400	
3	1,457,000	1,184,000	130,000	242,000	163,000	15.8	363	39	9.0	1.6	3.1	-0.4	24	-509	10	14	100,000	100,000			JEFF	2400	
4	1,590,000	1,321,000	157,000	281,000	178,000	17.3	284	43	9.9	1.7	3.4	-1	157.6	37	10	27			100,000		JEFF	2300	
5	1,118,000	1,061,000	99,000	232,000	179,000	12.2	227	28	6.4	1.2	2.4	0	148.0	29	10	19					MARTIN	2300	
6	1,272,000	1,358,000	106,000	260,000	152,000	13.7	307	34	7.8	1.4	2.7	0	137.0	33	10	23					MARTIN	2300	
7	1,064,000	1,055,000	92,000	243,000	167,000	11.4	268	28	6.4	1.1	2.2	0	127.0	30	10	20					MARTIN	2300	
8	1,228,000	1,160,000	105,000	255,000	160,000	13.2	276	32	7.4	1.3	2.6	0	117.0	30	10	20					MARTIN	2300	
9	1,136,000	1,090,000	92,000	252,000	144,000	12.2	230	28	6.4	1.2	2.4	0	106.0	33	10	23					MARTIN	2300	
10	1,229,000	1,183,000	96,000	231,000	143,000	13.2	255	32	7.4	1.3	2.6	0	95.0	33	10	23					MARTIN	2300	
11	1,278,000	1,371,000	135,000	281,000	184,000	13.6	256	31	7.1	1.4	2.7	0	85.0	30	10	20					TOM	2300	
12	1,404,000	1,318,000	102,000	278,000	161,000	14.9	290	38	8.7	1.5	2.9	0	72.2	38	15	23					STEVE	2300	
13	1,280,000	1,300,000	68,000	244,000	146,000	13.5	255	30	6.9	1.4	2.6	0	60.4	35	15	20					STEVE	2300	
14	1,087,000	1,028,000	67,000	299,000	148,000	11.5	220	28	6.4	1.2	2.2	0	50.6	29	10	19					STEVE	2300	
15	1,149,000	1,143,000	127,000	266,000	163,000	12.2	235	28	6.4	1.2	2.4	0	38.6	36	10	26					STEVE	2300	
16	1,273,000	1,357,000	85,000	273,000	158,000	13.5	239	31	7.1	1.4	2.6	142.0	-426	22.6	48	15	33					STEVE	2300
17	1,221,000	1,173,000	110,000	267,000	163,000	12.9	215	30	6.9	1.3	2.5	133.8	25	18.9	11	10	26					STEVE	2300
18	1,254,000	1,191,000	99,000	265,000	170,000	13.3	230	31	7.1	1.3	2.6	122.6	34	57	10	24					JEFF	2300	
19	1,264,000	1,260,000	87,000	271,000	167,000	13.3	241	33	7.6	1.3	2.6	110.2	37	0	10	27					JEFF	2300	
20	1,258,000	1,226,000	85,000	260,000	156,000	13.3	233	32	7.4	1.3	2.6	97.6	38	0	10	28					JEFF	2300	
21	1,235,000	1,221,000	120,000	314,000	176,000	13.0	216	27	6.2	1.3	2.5	88.8	26	0	10	16					JEFF	2300	
22	1,182,000	1,220,000	111,000	291,000	161,000	12.5	208	33	7.6	1.3	2.4	79.4	28	0	10	18					JEFF	2300	
23	1,278,000	1,282,000	120,000	297,000	174,000	13.3	213	31	7.1	1.3	2.6	69.0	31	0	10	21					JEFF	2300	
24	1,350,000	1,256,000	130,000	309,000	163,000	14.3	226	33	7.6	1.4	2.8	58.4	32	0	10	22					JEFF	2300	
25	1,109,000	1,189,000	125,000	309,000	176,000	11.7	190	28	6.4	1.2	2.3	49.2	28	0	10	18					JEFF	2300	
26	1,132,000	1,101,000	105,000	276,000	179,000	12.0	184	26	6.0	1.2	2.3	39.0	31	0	10	21					MARTIN	2300	
27	1,233,000	1,187,000	81,000	286,000	168,000	13.2	212	33	7.6	1.3	2.6	29.0	30	0	10	20					MARTIN	2300	
28	1,078,000	1,069,000	102,000	260,000	166,000	11.6	176	29	6.7	1.2	2.3	21.0	24	0	10	14					MARTIN	2300	
29	1,247,000	1,215,000	74,000	247,000	158,000	13.4	222	31	7.1	1.3	2.6	12.2	26	0	10	16					MARTIN	2300	
30	930,000	916,000	71,000	245,000	154,000	10.1	185	24	5.5	1.0	2.0	5.2	21	0	10	11					MARTIN	2300	
TOT	36,881,000	35,960,000	3,182,000	7,993,000	4,925,000	393.7	0	7190	938	215.7	39.4	77	410	489	325	637	100,000	100,000	100,000	100,000	BASINS CLEANED		
	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	POT. GAL. PLANT OP. HRS. X 3				ONE		
	1,590,000	1,371,000	157,000	314,000	199,000	17.3	0	363	43	10	1.7	77	368	489	15	33	ALL HEADINGS IN YELLOW GO ON MOR				TWO		
	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	AVG.	AVG.	AVG.	AVG.	=day max pumped				THREE		
	930,000	916,000	67,000	212,000	143,000	10.1	0	176	24	6	1	2	14	16	11	21	=day min pumped				FOUR		
	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.											
	1,229,367	1,198,667	106,067	266,433	164,167	13.1	0	240	31	7	1.3	3											
	WHEN CL2 TANKS ARE CHANGED, BE SURE TO PUT WEIGHT AT TOP OF APPROPRIATE COLUMN!!!!																						

11 B

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

APPLICABLE TO ALL PLANTS WITH FILTRATION

PWS ID : KY1110019
 PLANT ID: A
 REPORT MONTH/YEAR: NOV 2018
 PAGE 6 OF 11

DAY	FILTER OPERATION										
	TOTAL WASH WATER GALLONS	No: A		No: B		No: C		No: D		No:	
		AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	FILT RUN HRS
1	92,000		14.20		14.20	46,000	14.20	46,000	14.20		
2	83,000	41,500	13.40	41,500	13.40		13.40		13.40		
3			15.80		15.80		15.80		15.80		
4			17.30		17.30		17.30		17.30		
5			12.20		12.20		12.20		12.20		
6	144,200	47,000	13.70	47,000	13.70	25,100	13.70	25,100	13.70		
7			11.40		11.40		11.40		11.40		
8			13.20		13.20		13.20		13.20		
9			12.20		12.20		12.20		12.20		
10	67,000	33,500	13.20	33,500	13.20		13.20		13.20		
11	75,000		13.60		13.60	37,500	13.60	37,500	13.60		
12			14.90		14.90		14.90		14.90		
13	91,000	45,500	13.50	45,500	13.50		13.50		13.50		
14			11.50		11.50		11.50		11.50		
15			12.20		12.20		12.20		12.20		
16	170,000	45,000	13.50	45,000	13.50	40,000	13.50	40,000	13.50		
17			12.90		12.90		12.90		12.90		
18			13.30		13.30		13.30		13.30		
19	146,000	39,000	13.30	39,000	13.30	34,000	13.30	34,000	13.30		
20			13.30		13.30		13.30		13.30		
21			13.00		13.00		13.00		13.00		
22	85,000	42,500	12.50	42,500	12.50		12.50		12.50		
23			13.30		13.30		13.30		13.30		
24	88,000		14.30		14.30	44,000	14.30	44,000	14.30		
25			11.70		11.70		11.70		11.70		
26			12.00		12.00		12.00		12.00		
27	60,000	30,000	13.20	30,000	13.20		13.20		13.20		
28			11.60		11.60		11.60		11.60		
29	78,000		13.40		13.40	39,000	13.40	39,000	13.40		
30			10.10		10.10		10.10		10.10		
31											
TOTAL	1,179,200	324,000	393.70	324,000	393.70	265,600	393.70	265,600	393.70	0	0.00
AVERAGE	98,267	40,500	13.123	40,500	13.123	37,943	13.123	37,943	13.123	#DIV/0!	#DIV/0!

COPY AS NEEDED

11B

DEC 2018 DAY	RAW WATER GAL	HIGH SERV GAL	ROG BPS GAL	SO. RD. BPS GAL	CER. BPS GAL	HRS. P.L.T. OPTD	POLY GAL USED	POLY LBS. USED	FL. LBS. USED	FL. X 0.23	POT. GAL. USED	POT. LBS. USED	CL2 READING #1	CL2 READING #2	CL2 PRE LBS	CL2 PST LBS	#1 BASIN CLEANED GAL.	#2 BASIN CLEANED GAL.	#3 BASIN CLEANED GAL.	#4 BASIN CLEANED GAL.	OPR.	TIME 24 HR CLK	
1	1,258,000	1,272,000	105,000	272,000	154,000	13.6	238	33	7.6	1.4	2.7	5.4	451	164.8	-37	10	22					TOM	2300
2	1,171,000	1,187,000	122,000	252,000	182,000	12.6	228	30	6.9	1.3	2.5	-18	156.2	26	5	21						TOM	2300
3	1,042,000	1,038,000	95,000	267,000	151,000	11.2	237	27	6.2	1.1	2.2	0	149.4	20	5	15						STEVE	2300
4	1,210,000	1,241,000	92,000	248,000	166,000	13.1	252	30	6.9	1.3	2.6	0	139.8	29	10	19						STEVE	2300
5	1,086,000	1,139,000	102,000	244,000	156,000	11.9	217	28	6.4	1.2	2.3	0	131.6	25	5	20						STEVE	2300
6	1,081,000	1,009,000	86,000	275,000	153,000	11.7	205	27	6.2	1.2	2.3	0	123.2	25	5	20						STEVE	2300
7	1,093,000	1,098,000	98,000	260,000	160,000	11.8	197	27	6.2	1.2	2.3	0	115.6	23	5	18						STEVE	2300
8	1,219,000	1,267,000	104,000	239,000	168,000	13.2	223	29	6.7	1.3	2.6	0	106.0	29	10	19						TOM	2300
9	1,256,000	1,244,000	157,000	277,000	181,000	13.5	223	33	7.6	1.4	2.6	0	95.6	31	10	21						STEVE	2300
10	1,110,000	1,155,000	123,000	260,000	188,000	11.9	198	28	6.4	1.2	2.3	0	86.8	26	10	16						JEFF	2300
11	1,171,000	1,094,000	117,000	257,000	173,000	12.5	202	29	6.7	1.3	2.4	0	78.2	26	10	16						JEFF	2300
12	1,266,000	1,229,000	100,000	293,000	174,000	13.6	210	30	6.9	1.4	2.7	0	67.6	32	10	22						JEFF	2300
13	1,428,000	1,155,000	137,000	262,000	171,000	15.3	248	35	8.1	1.5	3.0	0	57.2	31	10	21						JEFF	2300
14	1,477,000	1,242,000	104,000	240,000	168,000	15.9	264	37	8.5	1.6	3.1	0	45.6	35	10	25						JEFF	2300
15	1,253,000	1,239,000	138,000	254,000	171,000	13.4	225	32	7.4	1.3	2.6	0	31.0	44	15	29						JEFF	2300
16	1,098,000	1,140,000	111,000	288,000	181,000	11.7	200	27	6.2	1.2	2.3	0	16.0	45	15	30						JEFF	2300
17	1,379,000	1,267,000	143,000	248,000	180,000	14.7	253	33	7.6	1.6	3.1	0	138.0	48	15	33						MARTIN	2300
18	1,130,000	1,169,000	125,000	264,000	171,000	12.1	214	27	6.2	1.2	2.3	0	129.6	33	10	23						MARTIN	2300
19	1,099,000	1,040,000	64,000	246,000	144,000	11.7	197	27	6.2	1.2	2.3	0	120.6	27	10	17						MARTIN	2300
20	1,085,000	1,095,000	96,000	254,000	147,000	11.6	195	26	6.0	1.0	2.0	0	99.0	35	10	20						MARTIN	2300
21	1,143,000	1,217,000	102,000	259,000	152,000	12.3	202	28	6.4	1.2	2.3	0	89.6	28	10	18						MARTIN	2300
22	1,283,000	1,200,000	116,000	252,000	147,000	13.8	204	29	6.7	1.3	2.6	0	77.6	36	10	26						TOM	2300
23	1,230,000	1,203,000	103,000	254,000	151,000	13.2	219	31	7.1	1.4	2.7	0	66.4	34	10	24						STEVE	2300
24	1,276,000	1,210,000	92,000	271,000	148,000	12.2	229	28	6.4	1.2	2.3	0	57.2	28	10	18						STEVE	2300
25	1,138,000	1,115,000	110,000	259,000	174,000	13.3	259	31	7.1	1.4	2.7	0	46.6	32	10	22						STEVE	2300
26	1,236,000	1,179,000	113,000	248,000	182,000	12.3	249	29	6.7	1.3	2.6	0	36.4	31	10	21						STEVE	2300
27	1,146,000	1,219,000	98,000	261,000	181,000	13.8	279	32	7.4	1.5	3.0	0	24.0	37	10	27						STEVE	2300
28	1,279,000	1,123,000	117,000	286,000	182,000	12.3	248	29	6.7	1.3	2.6	0	14.0	30	10	20						STEVE	2300
29	1,136,000	1,199,000	107,000	254,000	192,000	11.7	237	28	6.4	1.2	2.3	0	5.6	25	10	15						STEVE	2300
30	1,087,000	1,208,000	132,000	267,000	204,000	13.6	283	32	7.4	1.6	3.1	0	-3.2	28	10	23						JEFF	2300
31	1,271,000	36,433,000	3,414,000	8,097,000	5,193,000	399.2	7082	926	213.0	20.7	40	452		7	300	666	100,000	100,000	100,000	100,000		BASINS CLEANED	
TOT	37,157,000	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	
	1,477,000	1,272,000	157,000	293,000	204,000	15.9	283	37	9	1.8	4.0	451		48	15	33					ONE		
	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN					TWO	
	1,042,000	1,009,000	64,000	239,000	141,000	11.2	195	26	6	0	0	15		0	10	21					THREE		
	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.	AVG.					FOUR	
	1,198,613	1,175,258	110,129	261,194	167,516	12.9	228	30	7	0.7	1												

WHEN CL2 TANKS ARE CHANGED, BE SURE TO PUT WEIGHT AT TOP OF APPROPRIATE COLUMN!!!

12B

POT GAL = PLANT OP. HRS. X 3
 ALL HEADINGS IN YELLOW GO ON MOR
 =day max pumped
 =day min pumped

KENTUCKY DIVISION OF WATER - DRINKING WATER BRANCH
 WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

APPLICABLE TO ALL PLANTS WITH FILTRATION

PWS ID : KY1110019
 PLANT ID: A
 REPORT MONTH/YEAR: DEC 2018
 PAGE 6 OF 11

DAY	FILTER OPERATION										
	TOTAL WASH WATER GALLONS	No: A		No: B		No: C		No: D		No:	
		AREA (square feet) WASHWATER GALLONS	180 FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	180 FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	180 FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	180 FILT RUN HRS	AREA (square feet) WASHWATER GALLONS	180 FILT RUN HRS
1	80,000	40,000	13.60	40,000	13.60		13.60		13.60		
2			12.60		12.60		12.60		12.60		
3			11.20		11.20		11.20		11.20		
4	68,000		13.10		13.10	34,000	13.10	34,000	13.10		
5	71,000	35,500	11.90	35,500	11.90		11.90		11.90		
6			11.70		11.70		11.70		11.70		
7			11.80		11.80		11.80		11.80		
8	64,000		13.20		13.20	32,000	13.20	32,000	13.20		
9	74,000	37,000	13.50	37,000	13.50		13.50		13.50		
10			11.90		11.90		11.90		11.90		
11			12.50		12.50		12.50		12.50		
12	116,000	23,000	13.60	23,000	13.60	35,000	13.60	35,000	13.60		
13			15.30		15.30		15.30		15.30		
14	69,000	34,500	15.90	34,500	15.90		15.90		15.90		
15	65,000		13.40		13.40	32,500	13.40	32,500	13.40		
16			11.70		11.70		11.70		11.70		
17	97,000	26,000	14.70	26,000	14.70	22,500	14.70	22,500	14.70		
18			12.10		12.10		12.10		12.10		
19	34,000	17,000	11.70	17,000	11.70		11.70		11.70		
20	36,000		11.60		11.60	18,000	11.60	18,000	11.60		
21			12.30		12.30		12.30		12.30		
22	116,000	34,000	13.80	34,000	13.80	24,000	13.80	24,000	13.80		
23			13.20		13.20		13.20		13.20		
24	70,000	35,000	13.70	35,000	13.70		13.70		13.70		
25	72,000		12.20		12.20	36,000	12.20	36,000	12.20		
26	50,000	25,000	13.30	25,000	13.30		13.30		13.30		
27	37,000		12.30		12.30	18,500	12.30	18,500	12.30		
28	46,000	23,000	13.80	23,000	13.80		13.80		13.80		
29	66,000		12.30		12.30	33,000	12.30	33,000	12.30		
30	76,000	38,000	11.70	38,000	11.70		11.70		11.70		
31	50,000		13.60		13.60	25,000	13.60	25,000	13.60		
TOTAL	1,357,000	368,000	399.20	368,000	399.20	310,500	399.20	310,500	399.20	0	0.00
AVERAGE	67,850	30,667	12.877	30,667	12.877	28,227	12.877	28,227	12.877	#DIV/0!	#DIV/0!

COPY AS NEEDED

12B

1:37:10 PM

27.3

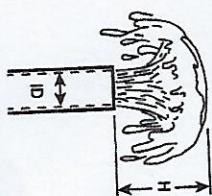
13B

4,000.0
3,200.0
2,400.0
1,600.0
800.0
0.0

12:00:00 AM 4:48:00 9:36:00 2:24:00 7:12:00 12:00:00 AM
11/14/2018 11/14/2018 11/14/2018 11/14/2018 11/14/2018 11/15/2018

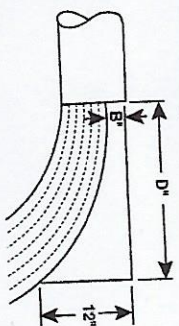
Caption		4:07:35 PM	Min	Max	Units
Common Backwash Supply Flow		0.5	0.0	4,000.0	GPM

Estimating Flow from a Vertical Pipe



I.D. Pipe, Inches	Flow in Gallons per Minute Vertical Height of Flow (H), Inches											
	3	3.5	4	4.5	5	5.5	6	7	8	10	12	
2	39	41	44	47	50	53	56	61	65	74	82	
3	81	89	96	103	109	114	120	132	141	160	177	
4	137	151	163	174	185	195	205	222	240	269	298	
6	318	349	378	405	430	455	480	520	560	635	700	
8	567	623	684	730	776	821	868	945	1020	1150	1270	
10	950	1055	1115	1200	1280	1350	1415	1530	1640	1840	2010	

Estimating Discharge from a Horizontal Pipe not Running Full Flow



$$\text{Flow (gpm)} = A \times D \times 1.039 \times F$$

A = Area of pipe in sq. in. = inside dia² x 0.7854
 D = Horizontal distance in inches
 F = Effective area factor obtained from table at right

Example:

Given: Inside dia pipe = 6 inches

D = 16 inches

B = 4 inches

$$A = 36 \times 0.7854 = 28.3 \text{ in.}^2$$

$$\text{Ratio B/D} = 4/16 = 25\%$$

F = 0.805 (from table)

$$\text{Flow (gpm)} = A \times D \times 1.039 \times F$$

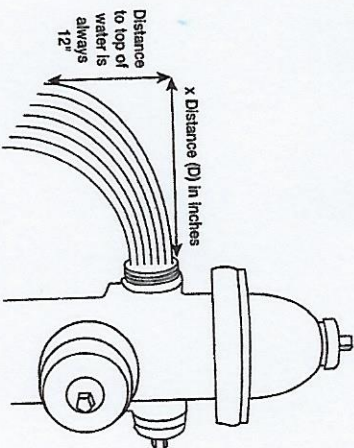
$$= 28.3 \times 16 \times 1.039 \times 0.805$$

$$= 379 \text{ gpm (approx)}$$

Effective Area Factor Based on B/D	Ratio B/D	Eff. Area Factor F
5	0.981	
10	0.948	
15	0.905	
20	0.858	
25	0.805	
30	0.747	
35	0.688	
40	0.627	
45	0.564	
50	0.500	
55	0.436	
60	0.373	
65	0.312	
70	0.253	
75	0.195	
80	0.142	
85	0.095	
90	0.052	
95	0.019	
100	0.000	

Estimating Low Flow Rates From a 2 1/2" Hydrant Nozzle

The approximate flow from a 2 1/2" hydrant nozzle can be determined by measuring the distance of the water flow at a point 12" below the top of the water as it leaves the nozzle.



Distance (D) in inches	Flow in gpm
6"	30
8"	40
10"	50
12"	60
14"	70
16"	80
18"	90
20"	100
30"	150

14B

Water Statistics (Ref Page: 30)

Gallons (Omit 000's)

Percent

	2018	2019	Percent
1. Water Produced, Purchased and Distributed			
2. Water Produced	556,155	482,444	
3. Water Purchased	0		
4. Total Produced and Purchased	556,155	482,444	
6. Water Sales:			
7. Residential	247,634	231,913	
8. Commercial	0		
9. Industrial	0		
10. Bulk Loading Stations	0		
11. Resale	72,198	62,952	
12. Other Sales	0		
-13. Total Water Sales	319,832	294,865	
15. Other Water Used			
16. Utility/Water treatment plant	37,063	44,689	
17. Wastewater plant	0		
18. System flushing	97,500	67,000	
19. Fire department	600	600	
20. Other	1,221	5,217	
-21. Total Other Water Used	136,384	117,506	
23. Water Loss:			
24. Tank Overflows	0	0	
25. Line Breaks	86,600	62,500	
26. Line Leaks	13,339	7,573	
27. Other	0		
-28. Total Line Loss	99,939	70,073	
Note: Line 13 + Line 21 + Line 28 must equal Line 4			
32. Water Loss Percentage		14.53%	
33. Line 28 divided by Line 4			17.9696

15 B

**BARKLEY LAKE WATER DISTRICT
NOTES TO FINANCIAL STATEMENTS, CONTINUED
FOR THE YEAR ENDED DECEMBER 31, 2019**

5. Depreciation Fund

This fund was established by the bond ordinance of 1969. The ordinance requires Barkley Lake Water District to make monthly contributions to this fund after observing the priority of deposits into the Water System Bond and Interest Sinking Fund (Bond Sinking Fund and Reserve). The following bond ordinances require monthly deposits until a maximum amount is accumulated:

<u>Issue</u>	<u>Monthly Deposit</u>	<u>Maximum Requirement</u>
2005	\$ 540	\$ 64,800
2008C	-	-
2010A	1,755	210,600
2010B	755	90,600
2012E	-	-
2014	295	35,400

The maximum required level of funding all bond resolutions is \$401,400. The Water System Revenue Bonds, Series 2008C and 2012E require the maintaining of a Depreciation Fund but do not modify the method or level of funding. As of December 31, 2019, the depreciation cash and certificates of deposit totaled \$1,098,592.

As further security for the bond owners and for the benefit of the District, in addition to the monthly transfers required to be made there shall be deposited all proceeds of connection fees collected from potential customers to aid in the financing of the cost of future extensions, additions and improvements to the District, plus the proceeds of any property damage insurance (not otherwise used to replace damaged or destroyed property); and any such amounts or proceeds so deposited shall be used solely and only for the purposes intended. The funds in the Depreciation fund can be expended for the purpose of paying the cost of unusual or extraordinary maintenance, repairs, renewals or replacements, and the cost of construction additions and improvements to the system.

6. Construction Funds

Expansion projects currently in construction are funded through the construction account with a December 31, 2019 year-end balance of \$125,625. Initial funding was obtained through the 2008 bond issue.

7. Deposits and Investments

State statutes require that all deposits in financial institutions be fully collateralized by U.S. Government obligations or its agencies and instrumentalities or direct obligations of Kentucky or its agencies and instrumentalities that have a market value of not less than the principal amount of deposits. The District's deposits, including certificates of deposit, were insured or collateralized as required by State statutes at their highest daily balance during the year.

Custodial credit risk is defined as the risk that a government will not be able to recover its deposits, investments, or collateral from the bank in the event of bank failure. The District does not have a policy addressing custodial credit risk.

2A