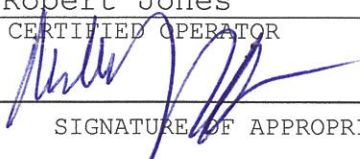


**MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT**

For Month of November 2017

<u>Flint Water Plant</u> NAME OF WATER SYSTEM	<u>2310</u> WSSN	<u>Genesee</u> COUNTY
<u>Robert Jones</u> CERTIFIED OPERATOR		<u>D-1</u> CLASSIFICATION
 SIGNATURE OF APPROPRIATE OFFICIAL		

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum 10.14 Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity 36 Million Gallons per Day
3. Average Filter Run N/A Hours, Average Head Loss N/A Feet
4. Average Filtration Rate N/A Gallons per Square Ft. per Minute
5. Maximum Filtration Rate N/A Gallons per Square Ft. per Minute
6. Average Wash Water Use N/A percent of Treated Water

CHEMICAL DATA

7. Sodium Hypochlorite on hand at CS2 4621 gal.: Estimated supply 64 days
8. Sodium Hypochlorite on hand at outstations 330 gal: Estimated supply 67 days
9. Phosphoric Acid on hand 647 gal.: Estimated supply 27 days
9. Sodium Hydroxide on hand 4158 gal.: Estimated supply 23 days

Remarks:

Submit to: MDEQ - Office of Drinking Water & Municipal Assistance
 LANSING DISTRICT OFFICE
 525 West Allegan Street, 1st Floor South
 (Constitution Hall)
 PO Box 30242
 Lansing, MI 48909-7742



Fluoridation & Chlorination

WSSN 2310

Nov-17

D A T E	Fluoride Applied F mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
					Chlorine App. Mg/l	Chlorine (prior to filtration) mg/L OCl	Post Chlorine mg/L	Sta II	Dort	3MG Well	Tap				
		Free	Free	Free				Free							
		14	15	16	17	18	19	20	21	22	23	24	25	26	27
1		0.81		1.48				0.8						1.7	
2		0.78		1.43				0.8						1.6	
3		0.78		1.35				0.8						1.7	
4		0.78		1.35				0.8						1.7	
5		0.78		1.39				0.8						1.7	
6		0.78		1.33				0.8						1.7	
7		0.72		1.27				0.8						1.6	
8		0.71		1.30				0.8						1.8	
9		0.74		1.28				0.8						1.7	
10		0.67		1.16				0.8						1.6	
11		0.69		1.26				0.9						1.8	
12		0.71		1.19				0.9						1.7	
13		0.75		1.23				0.8						1.6	
14		0.72		1.29				0.9						1.7	
15		0.74		1.20				0.9						1.6	
16		0.77		1.33				0.9						1.7	
17		0.82		1.56				0.7						1.6	
18		0.74		1.38				0.8						1.7	
19		0.75		1.47				0.9						1.8	
20		0.76		1.37				0.9						1.7	
21		0.79		1.11				0.9						1.7	
22		0.79		1.16				0.8						1.7	
23		0.79		1.07				0.9						1.7	
24		0.72		1.17				0.9						1.7	
25		0.78		1.36				0.7						1.6	
26		0.78		1.16				1.0						1.8	
27		0.81		1.15				0.9						1.7	
28		0.82		1.36				0.8						1.7	
29		0.81		1.30				0.8						1.7	
30		0.82		1.30				0.8						1.6	
AVG		0.76		1.29				0.8						1.7	
MAX		0.82		1.56				1.0						1.8	
MIN		0.67		1.07				0.7						1.6	



Chemical Analyses WSSN 2310 Nov-17

DATE	pH		Total Hardness as CaCO ₃ mg/l		Total Alkalinity as CaCO ₃ mg/l		NonCarbonate Hardness as CaCO ₃ mg/l		Iron mg/L		Calcium Ca ²⁺ mg/l		Magnesium as Mg ²⁺ mg/l		Chloride as Cl ⁻ mg/l	
	CSII	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37.00	38	39	40	41	42	43	44
1	7.40	7.64		98		88		24		0.00		29.7		5.8		15
2	7.34	7.73		98		86		28		0.00		28.1		6.8		14
3	7.37	7.74		100		86		32		0.00		27.3		7.8		15
4	7.41	7.63		94		84		28		0.00		26.5		6.8		16
5	7.41	7.64		100		82		34		0.00		26.5		8.3		17
6	7.46	7.70		98		76		26		0.00		28.9		6.3		25
7	7.45	7.61	102	100	80	90	32	28	0.00	0.00	28.1	28.9	7.8	6.8	17	18
8	7.46	7.67		98		88		30		0.00		27.3		7.3		16
9	7.46	7.79		98		86		28		0.00		28.1		6.8		17
10	7.41	7.58		98		84		28		0.02		28.1		6.8		18
11	7.43	7.70		98		82		34		0.00		25.7		8.3		13
12	7.41	7.64		94		74		32		0.01		24.9		7.8		14
13	7.40	7.62		100		90		34		0.01		26.5		8.3		16
14	7.39	7.65	98	96	80	96	26	26	0.00	0.02	28.9	28.1	6.3	6.3	16	16
15	7.28	7.61		100		86		32		0.01		27.3		7.8		19
16	7.14	7.45		108		84		40		0.00		27.3		9.7		16
17	7.26	7.69		96		86		24		0.00		28.9		5.8		20
18	7.30	7.55		92		76		28		0.01		25.6		6.8		14
19	7.36	7.64		92		66		26		0.01		26.5		6.3		14
20	7.33	7.57		98		84		28		0.00		28.1		6.8		15
21	7.28	7.64	100	96	82	84	32	24	0.00	0.00	27.3	28.9	7.8	5.8	16	16
22	7.32	7.70		98		84		28		0.00		28.1		6.8		15
23	7.32	7.80		100		94		32		0.00		27.3		7.8		17
24	7.33	7.64		98		86		26		0.00		28.9		6.3		15
25	7.38	7.65		96		80		28		0.00		27.3		6.8		12
26	7.31	7.56		92		94		30		0.00		24.9		7.3		13
27	7.23	7.65		98		84		28		0.00		28.1		6.8		18
28	7.24	7.67	98	100	80	86	30	30	0.00	0.00	27.3	28.1	7.3	7.3	14	15
29	7.21	7.55		102		86		32		0.01		28.1		7.8		13
30	7.33	7.61		98		86		28		0.00		28.1		6.8		14
AVG	7.35	7.64		98		85		29		0.00		27.5		7.1		16
MAX	7.46	7.80		108		96		40		0.02		29.7		9.7		25.0
MIN	7.14	7.45		92		66		24		0.00		24.9		5.8		12.0



WSSN 2310

Nov-17

DATE	Total Coliform						Standard Plate Count		Conductivity (mS)	Temp deg.C	Color		Odor	
	Plant Tap						Raw	Tap			Raw	Tap	Raw	Tap
			Dort	3MG Well	Sta II	Lab Tap								
	60	61	62	63	64	65	66	67	68	69	71	72	73	74
1					2/0	2/0			0.23	15.3				
2					2/0	2/0			0.23	15.6				
3					2/0	2/0			0.23	15.7				
4					2/0	2/0			0.22	15.9				
5					2/0	2/0			0.23	17.0				
6					2/0	2/0			0.24	15.7				
7					2/0	2/0			0.24	15.1				
8					2/0	2/0			0.23	15.3				
9					2/0	2/0			0.23	15.7				
10					2/0	2/0			0.23	14.8				
11					2/0	2/0			0.22	14.3				
12					2/0	2/0			0.23	14.2				
13					2/0	2/0			0.23	14.6				
14					2/0	2/0			0.24	14.9				
15					2/0	2/0			0.24	13.5				
16					2/0	2/0			0.23	13.2				
17					2/0	2/0			0.25	13.6				
18					2/0	2/0			0.22	13.4				
19					2/0	2/0			0.22	12.7				
20					2/0	2/0			0.23	12.8				
21					2/0	2/0			0.24	12.9				
22					2/0	2/0			0.24	12.3				
23					2/0	2/0			0.24	12.2				
24					2/0	2/0			0.23	12.3				
25					2/0	2/0			0.22	12.6				
26					2/0	2/0			0.22	12.0				
27					2/0	2/0			0.24	11.5				
28					2/0	2/0			0.24	11.9				
29					2/0	2/0			0.24	11.8				
30					2/0	2/0			0.23	11.5				
AVG									0.23	13.8				
MAX									0.25	17.0				
MIN									0.22	11.5				



Distribution System Monitoring WSSN 2310

Nov-17

DATE	Free Chlorine Residual at Bacteriological Monitoring Stations mg/l																									Number of Samples		
	1	2	3	4	CS	6	7	8	9	10	WR**	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
1														1.47	0.84	1.44	1.46	0.97	0.46				1.39			7		
2	1.20	1.31	1.39	1.32																0.86				1.32		6		
3												1.31	1.43	0.89	1.18										1.48	5		
4																										0		
5																										0		
6	1.22	1.08	1.34	1.31	1.51	0.57																1.03				7		
7							1.24	1.40	0.88	0.84		0.83	1.14										1.51			7		
8														1.51	1.24	1.60	1.51	1.05	0.58				1.54			7		
9						1.17	1.42	1.59	1.06	1.53														1.53		6		
10																1.61	1.67	1.25	0.68							4		
11																										0		
12																										0		
13	1.35	1.27	1.42	1.42	1.77	1.01																1.17				7		
14							1.33	1.56	0.96	1.53		0.79	1.34													6		
15														0.77	0.98	1.58	1.54	1.21	0.69				1.43			7		
16	1.22	1.27	1.52	1.49	1.43															1.05						6		
17												1.18	1.28	1.06	0.70										1.23	5		
18																										0		
19																										0		
20	1.25	1.10	1.40	1.39	1.51	0.84																1.16				7		
21							1.44	1.55	1.23	1.56		1.39	1.21										1.51			7		
22														0.94	0.94	1.57	1.61	1.14	1.18				1.54			7		
23																										0		
24															1.49	1.68	1.21								1.42	4		
25																										0		
26																										0		
27	1.28	1.31	1.52	1.42	1.90	1.41																				6		
28							1.36	1.59	1.63	1.60		1.03	1.34										1.38			7		
29														0.93	1.36	1.33	1.64	1.25	0.90				1.60			7		
30	1.32	1.32	1.55	1.49	1.87															1.17				1.41		7		
	Monthly Cl₂ Avg.				1.29																							
	Total Samples				132																							



Distribution System Monitoring

WSSN 2310

Nov-17

DATE	Total Chlorine Residual at Bacteriological Monitoring Stations mg/l																									Number of Samples			
	1	2	3	4	CS	6	7	8	9	10	WR**	12	13	14	15	16	17	18	19	20	21	22	23	24	25				
1														1.68	1.07	1.58	1.67	1.20	0.62					1.56			7		
2	1.39	1.47	1.58	1.54	1.54																0.97				0.98		7		
3												1.49	1.63	1.03	1.40											1.63	5		
4																											0		
5																											0		
6	1.37	1.32	1.48	1.50	1.82	0.75																1.22					7		
7							1.45	1.64	1.07	0.98		1.00	1.34											1.67			7		
8														1.77	1.39	1.79	1.70	1.20	0.73					1.75			7		
9						1.26	1.53	1.75	1.27	1.70															1.63		6		
10																1.84	1.87	1.41	0.86								4		
11																											0		
12																											0		
13	1.46	1.40	1.55	1.54	1.89	1.12																					6		
14							1.47	1.67	1.06	1.63		0.92	1.45														6		
15														0.93	1.12	1.75	1.63	1.33	0.81					1.54			7		
16	1.34	1.38	1.65	1.72	1.60																1.17						6		
17												1.30	1.41	1.21	0.83											1.42	5		
18																											0		
19																											0		
20	1.44	1.21	1.53	1.50	1.65	0.94																1.29					7		
21							1.57	1.73	1.35	1.70		1.55	1.36										1.62				7		
22														1.12	1.11	1.69	1.81	1.33	1.36					1.63			7		
23																											0		
24															1.70	1.83	1.35									1.52	4		
25																											0		
26																											0		
27	1.43	1.47	1.73	1.66	2.01	1.56																					6		
28							1.52	1.73	1.76	1.76		1.27	1.51										1.52				7		
29															1.05	1.57	1.66	1.83	1.39	1.17				1.74			7		
30	1.46	1.45	1.69	1.63	2.00																1.33				1.59		7		
	Monthly Cl₂ Avg.				1.45																								
	Total Samples				132																								



ROUTINE POSITIVE DISTRIBUTION SAMPLES

Nov-17

Total number of positive routine samples:				Total Coliform: <u>0</u>			E.coli Bacteria: <u>0</u>		Chlorine Residual (mg/L)	
Date	Monitoring Station	Total Coliform	E.coli Bacteria	Date	Time	Retest of Station, Upstream & Downstream	Total Coliform	E.coli Bacteria	Free	Total
Total number of routine distribution samples analyzed:				115						
Total number of routine distribution samples required:				100						