



The City of Flint and F&V Operations and Resource Management are submitting the following report(s) to Michigan Department of Environment, Great Lakes and Energy:

January MOR

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons or persons who manage the system or those persons directly responsible for gathering such information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

City of Flint Representative: _____


Signature: _____ Date: _____

F&V Operations Representative: Robert Jones _____

Signature:  _____ Date: 2/5/2020

**MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT**

For Month of January 2020

<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 10.89 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 3465 gal.: Estimated supply 58 days
8. Sodium Hypochlorite on hand at outstations 54 gal: Estimated supply 69 days.
9. Phosphoric Acid on hand 1461 gal.: Estimated supply 70 days
9. Sodium Hydroxide on hand 3075 gal.: Estimated supply 14 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

Jan-20

DATE	Fluoride Applied mg/l	Fluoride Analyses mg/l				Chlorine App. Mg/l		Chlorine Residual mg/l				
		Raw	Tap	Dist	Chlorine App. Mg/l	Chlorine (prior to filtration) mg/L OCI'	Post Chlorine mg/L	Sta II	Dort	3MG Well	Tap	
								Free	Free	Free	Free	
1	0.82	0.75	1.15	1.15			1.0				1.7	
2	0.70	0.69	1.12	1.12			1.2				1.7	
3	0.73	0.74	1.10	1.10			1.1				1.7	
4	0.69	0.71	1.09	1.09			1.1				1.7	
5	0.66	0.67	1.08	1.08			1.1				1.7	
6	0.59	0.59	1.02	1.02			1.1				1.7	
7	0.69	0.71	1.06	1.06			1.1				1.7	
8	0.69	0.63	1.08	1.08			1.1				1.7	
9	0.74	0.70	1.00	1.00			1.1				1.7	
10	0.64	0.68	0.98	0.98			1.1				1.7	
11	0.70	0.65	1.12	1.12			0.8				1.4	
12	0.77	0.77	1.21	1.21			0.6				1.6	
13	0.61	0.61	1.01	1.01			0.8				1.7	
14	0.68	0.69	0.97	0.97			1.0				1.7	
15	0.67	0.69	0.98	0.98			1.1				1.7	
16	0.64	0.67	0.97	0.97			1.1				1.7	
17	0.69	0.65	0.91	0.91			1.1				1.7	
18	0.66	0.62	0.92	0.92			1.2				1.7	
19	0.80	0.68	0.95	0.95			1.1				1.7	
20	0.63	0.62	1.00	1.00			1.1				1.7	
21	0.64	0.68	1.00	1.00			1.1				1.7	
22	0.68	0.70	1.05	1.05			1.1				1.7	
23	0.64	0.66	1.01	1.01			1.1				1.7	
24	0.71	0.71	0.97	0.97			1.1				1.7	
25	0.67	0.70	1.01	1.01			1.1				1.7	
26	0.66	0.63	0.98	0.98			1.1				1.7	
27	0.63	0.62	0.94	0.94			1.1				1.7	
28	0.64	0.67	1.07	1.07			1.1				1.7	
29	0.73	0.65	1.05	1.05			1.2				1.7	
30	0.63	0.62	0.94	0.94			1.0				1.7	
31	0.67	0.70	1.02	1.02			1.1				1.7	
AVG		0.67	1.02	1.02			1.0				1.7	
MAX		0.77	1.21	1.21			1.2				1.7	
MIN		0.59	0.91	0.91			0.6				1.4	



Chemical Analyses

WSSN 2310

Jan-20

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
1	7.24	7.65		102		86		34	0.02	0.01		27.3		8.3		15
2	7.26	7.73		106		84		36	0.0	0.02		28.1		8.7		15
3	7.39	7.70		104		84		34	0.02	0.01		28.1		8.3		16
4	7.49	7.74		102		88		32	0.01	0.06		28.1		7.8		15
5	7.34	7.58		92		82		24	0.01	0.01		27.3		5.8		13
6	7.40	7.42		104		84		36	0.01	0.01		27.3		8.7		15
7	7.42	7.72	104	104	80	84	36	36	0.03	0.02	27.3	27.3	8.7	8.7	14	15
8	7.44	7.78		102		86		32	0.03	0.02		28.1		7.8		16
9	7.20	7.44		100		84		30	0.02	0.01		28.1		7.3		15
10	7.48	7.45		102		82		32	0.01	0.01		28.6		7.8		15
11	7.41	7.58		100		86		34	0.05	0.03		26.5		8.3		15
12	7.18	7.51		100		86		34	0.03	0.02		26.5		8.3		14
13	7.41	7.50		100		84		32	0.01	0.02		27.3		7.8		15
14	7.30	7.56	100	104	80	84	30	34	0.01	0.01	28.1	28.1	7.3	8.3	15	16
15	7.15	7.44		104		84		36	0.01	0.00		27.3		8.7		15
16	7.21	7.56		100		86		32	0	0.00		27.3		7.8		16
17	7.08	7.54		104		86		34	0.02	0.01		28.1		8.3		15
18	7.12	7.40		102		84		34	0.03	0.03		27.3		8.3		15
19	7.12	7.40		104		84		34	0.02	0.01		28.1		8.3		13
20	7.10	7.58		102		84		34	0.01	0.02		27.3		8.3		15
21	7.12	7.41	100	102	80	84	30	32	0	0.00	28.1	28.1	7.3	7.8	16	15
22	7.05	7.53		102		82		32	0.01	0.02		28.1		7.8		15
23	7.09	7.48		102		86		32	0.03	0.01		28.1		7.8		15
24	7.31	7.78		104		86		36	0.02	0.01		27.3		8.7		15
25	7.16	7.50		104		84		34	0	0.00		28.1		8.3		15
26	7.09	7.50		102		86		34	0.01	0.02		27.3		8.3		13
27	7.13	7.49		104		86		34	0.01	0.03		28.1		8.3		15
28	7.17	7.69	98	100	80	84	32	34	0.02	0.01	26.5	26.5	7.8	8.3	15	16
29	7.27	7.66		104		82		38	0.02	0.01		26.5		9.2		13
30	7.36	7.63		112		82		38	0.03	0.03		29.7		9.2		14
31	7.41	7.61		98		82		30	0	0.01		27.3		7.3		12
AVG	7.25	7.57		102		84		33		0.02		27.7		8.1		15
MAX	7.49	7.78		112		88		38		0.06		29.7		9.2		16.0
MIN	7.05	7.40		92		82		24		0.00		26.5		5.8		12.0



WSSN 2310

Jan-20

D A T E	Total Coliform					Standard Plate Count	Conductivity (ms)	Temp deg C	Color			Odor			
	Plant Tap								Raw Tap	Raw Tap	Raw Tap	Raw Tap	Raw Tap		
	60	61	Dort 62	3MG Well 63	Sta II 64									Lab Tap 65	66
1						2/0	0.23	8.9							
2						2/0	0.23	9.0							
3						2/0	0.23	9.0							
4						2/0	0.23	8.8							
5						2/0	0.22	8.1							
6						2/0	0.23	8.9							
7						2/0	0.23	9.0							
8						2/0	0.23	8.8							
9						2/0	0.23	9.0							
10						2/0	0.23	9.3							
11						2/0	0.23	9.6							
12						2/0	0.23	10.8							
13						2/0	0.23	9.0							
14						2/0	0.23	9.3							
15						2/0	0.23	9.0							
16						2/0	0.23	8.7							
17						2/0	0.23	8.7							
18						2/0	0.23	8.7							
19						2/0	0.22	8.2							
20						2/0	0.23	8.4							
21						2/0	0.23	9.0							
22						2/0	0.23	7.9							
23						2/0	0.22	11.0							
24						2/0	0.23	9.5							
25						2/0	0.23	9.0							
26						2/0	0.22	9.2							
27						2/0	0.23	8.3							
28						2/0	0.23	8.4							
29						2/0	0.22	11.0							
30						2/0	0.13	13.1							
31						2/0	0.23	8.1							
AVG							0.22	9.2							
MAX							0.23	13.1							
MIN							0.13	7.9							



Distribution System Monitoring WSSN 2310

Jan-20

D A T E	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	26	27	28	29	30		21	22	23	24	25	
1																1.62	1.66															2
2	1.46		1.55	1.53	1.74															1.62			1.71				1.47				7	
3												1.23				1.61	1.62		1.31							1.65				1.44	6	
4																															0	
5																															0	
6	1.42	1.67			1.43	1.81	1.60																								7	
7							1.03	1.68	1.20	1.73	0.95	1.19																			8	
8																1.66	1.58	1.72	1.36	1.35	1.38						1.59				8	
9	1.43				1.60	1.51	1.56												1.44		1.30		1.81			1.50				7		
10													1.36				1.70	1.70											1.68	1.52	6	
11																															0	
12																															0	
13	1.48	1.69			1.51	1.79	1.63														1.60							1.49			7	
14							1.10	1.71	1.30	1.73	1.10	1.22									1.60						1.44			8		
15																1.55		1.63	1.69	1.32										4		
16	1.38			1.59	1.57	1.78											1.67	1.62		1.45						1.55				7		
17													1.29						1.45		1.33		1.70							6		
18																															0	
19																															0	
20	1.45	1.66			1.51	1.74	1.51															1.68									6	
21							1.10	1.70	1.35	1.75		1.26									1.62						1.42				7	
22																1.24	1.45	1.61	1.70	1.50	1.41										8	
23	1.52			1.57	1.61	1.76														1.35			1.71								7	
24													1.70			1.68	1.66		1.41						1.63					1.28	6	
25																															0	
26																															0	
27	1.52	1.71			1.45	1.70	1.63																1.65								7	
28												1.00	1.65	1.51	1.54							1.54									6	
29																								1.26						1.74	9	
30	1.50				1.41	1.52	1.73									1.69				1.40											7	
31																	1.65	1.62		1.40										1.51	6	
Monthly Cl ₂ Avg.	1.53																															
Total Samples	132																															

Chlorine only sites mg/l



Distribution System Monitoring

WSSN 2310

Jan-20

DATE	Total Chlorine Residual at Bacteriological Monitoring Stations mg/l																									Chlorine only sites 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	26	27	28	29	30	21	22	23	24	25						
1																1.81	1.83																		2	
2	1.66		1.74	1.75	1.89																						1.61								7	
3													1.38			1.82	1.77		1.54																6	
4																																			0	
5																																			0	
6	1.69	1.95			1.68	1.99	1.80																												7	
7								1.21	1.94	1.37	1.96	1.18	1.37																						8	
8																1.88	1.72	1.96	2.00	1.74	1.64											2.01			8	
9	1.64				1.85	1.80	1.86																												7	
10																1.86	1.85		1.63																6	
11																																			0	
12																																			0	
13	1.61	1.79			1.65	1.97	1.85																												7	
14								1.19	1.88	1.43	1.95	1.21	1.43																						8	
15																1.78																			4	
16	1.50				1.79	1.75	1.90																												7	
17																		1.43																	6	
18																																			0	
19																																			0	
20	1.60	1.86			1.70	1.88	1.78																												6	
21								1.20	1.82	1.47	1.94		1.45																						7	
22																																			8	
23	1.63				1.73	1.76	1.95																												7	
24																																			7	
25																		1.81																	6	
26																																			0	
27	1.63	1.87			1.66	1.86	1.81																												7	
28																																			6	
29																																				9
30	1.73				1.83	1.81	1.91																												7	
31																																			6	
Monthly Cl ₂ Avg.	1.73																																			
Total Samples	132																																			



ROUTINE POSITIVE DISTRIBUTION SAMPLES

Jan-20

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	Rest of Sanden, Upstream & Downstream	Total Coliform	E. coli Bacteria	Free	Total
Total number of routine distribution samples analyzed:			132							
Total number of routine distribution samples required:			100							