



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:

April 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: _____

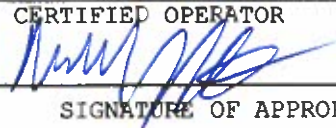
Signature: _____ Date: _____

F&V Operations Representative: Robert Jones _____

Signature: _____ Date: 5/5/20 _____

**MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT**

For Month of April 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	
 <u>5/5/20</u> SIGNATURE OF APPROPRIATE OFFICIAL		

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum 9.79 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 3998 gal.: Estimated supply 74 days
8. Sodium Hypochlorite on hand at outstations 420 gal: Estimated supply 62 days.
9. Phosphoric Acid on hand 1004 gal.: Estimated supply 56 days
9. Sodium Hydroxide on hand 5649 gal.: Estimated supply 57 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

Apr-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	Post Chlorine mg/L	Sta II			Tap		
								Free	Deft	3MG Well			
1	0.89	0.75		0.98				1.1				1.7	
2	0.75	0.71		1.04				1.0				1.7	
3	0.65	0.65		0.94				1.1				1.6	
4	0.55	0.67		0.86				1.1				1.8	
5	0.57	0.66		0.88				1.1				1.8	
6	0.65	0.65		1.03				1.0				1.6	
7	0.68	0.71		0.94				1.0				1.7	
8	0.66	0.56		0.87				1.0				1.7	
9	0.57	0.68		0.96				1.0				1.8	
10	0.58	0.54		1.02				1.0				1.7	
11	0.69	0.74		1.00				1.3				1.7	
12	0.67	0.77		1.07				1.0				1.7	
13	0.69	0.71		0.94				1.0				1.6	
14	0.51	0.54		1.05				1.0				1.7	
15	0.55	0.53		1.02				1.0				1.7	
16	0.57	0.58		1.02				1.1				1.7	
17	0.58	0.57		1.00				1.0				1.7	
18	0.67	0.74		0.99				1.1				1.8	
19	0.64	0.71		0.92				1.1				1.7	
20	0.61	0.64		0.91				1.0				1.6	
21	0.64	0.74		0.96				1.0				1.8	
22	0.65	0.69		0.97				1.0				1.7	
23	0.69	0.66		0.87				1.1				1.7	
24	0.64	0.63		0.92				1.1				1.8	
25	0.66	0.71		0.95				1.1				1.8	
26	0.78	0.69		0.92				1.1				1.6	
27	0.66	0.65		1.03				1.0				1.7	
28	0.68	0.73		1.01				1.0				1.6	
29	0.61	0.61		0.98				1.1				1.5	
30	0.70	0.75		1.03				1.0				1.6	
31													
AVG				0.67				1.0				1.7	
MAX				1.07				1.3				1.8	
MIN				0.86				1.0				1.5	



Chemical Analyses

WSSN 2310

Apr-20

DATE	pH		Total Hardness as CaCO ₃ mg/l		Total Alkalinity as CaCO ₃ mg/l		Non-carbonate 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	7.31	7.57		100		82		28	0.00	0.03		28.9		6.8		16
2	7.32	7.61		100		82		26	0.03	0.03		29.7		7.4		
3	7.28	7.55		102		86		30	0.01	0.02		28.9		7.3		
4	7.48	7.53		102		86		32	0.01	0.02		28.1		7.8		
5	7.40	7.49		104		80		38	0.02	0.01		26.5		9.2		
6	7.28	7.50		100		80		32	0.01	0.02		27.3		7.8		
7	7.30	7.53	96	102	78	86	24	28	0.01	0.02	28.9	29.7	5.8	6.8		
8	7.28	7.54		102		80		30	0.01	0.03		28.9		7.3		
9	7.27	7.52		100		76		30	0.01	0.02		28.1		7.3		
10	7.32	7.48		104		86		34	0.01	0.03		28.1		8.3		
11	7.36	7.44		102		86		32	0.05	0.03		28.1		7.8		
12	7.46	7.51		100		84		28	0.02	0.02		28.9		6.8		
13	7.26	7.55		102		86		32	0.01	0.01		28.1		7.8		
14	7.25	7.50	100	102	80	80	28	36	0.01	0.02	28.9	26.5	6.8	8.7		
15	7.31	7.52		102		84		30	0.01	0.01		28.9		7.3		
16	7.26	7.49		102		82		30	0.01	0.02		28.9		7.3		
17	7.35	7.52		104		84		34	0.01	0.01		28.1		8.3		
18	7.38	7.44		104		78		36	0.01	0.02		27.3		8.8		
19	7.33	7.52		100		78		30	0.01	0.00		28.1		7.3		
20	7.32	7.63		102		84		32	0.00	0.00		28.1		7.8		
21	7.37	7.58	96	98	80	82	26	32	0.01	0.01	28.1	26.5	6.3	7.8		
22	7.28	7.58		102		88		30	0.01	0.01		28.9		7.3		
23	7.30	7.63		100		80		30	0.01	0.01		28.1		7.3		
24	7.45	7.63		104		84		38	0.07	0.03		26.5		9.2		
25	7.27	7.54		102		82		36	0.01	0.02		26.5		8.75		
26	7.38	7.63		100		84		30	0.01	0.01		28.1		7.3		
27	7.33	7.64		96		82		26	0.02	0.01		28.1		6.3		
28	7.30	7.59	102	100	80	84	30	30	0.00	0.00	28.9	28.1	7.3	7.3		
29	7.34	7.60		102		82		32	0.01	0.03		28.1		7.8		
30	7.30	7.58		102		82		30	0.01	0.01		28.9		7.3		
31																
AVG	7.33	7.55		101		83		31		0.02		28.1		7.7		16
MAX	7.48	7.64		104		88		38		0.03		29.7		9.2		16.0
MIN	7.25	7.44		96		76		26		0.00		26.5		6.3		16.0



WSSN 2310

Apr-20

DATE	Total Coliform					Standard Plate Count	Conductivity (ms)	Temp deg C	Color			Odor	
	Plant Tap								Raw Tap	Raw Tap	Raw Tap	Raw Tap	
	Dort	3MG Well	Sta II	Lab Tap	Raw Tap								
60	61	62	63	64	65	66	67	68	69	71	72	73	74
1					2/0		0.23	9.7					
2					2/0		0.23	9.5					
3					2/0		0.23	9.8					
4					2/0		0.23	9.8					
5					2/0		0.21	8.4					
6					2/0		0.23	8.7					
7					2/0		0.23	9.0					
8					2/0		0.23	9.9					
9					2/0		0.23	9.7					
10					2/0		0.22	9.3					
11					2/0		0.23	9.2					
12					2/0		0.23	9.1					
13					2/0		0.24	10.6					
14					2/0		0.23	9.8					
15					2/0		0.23	9.7					
16					2/0		0.23	9.7					
17					2/0		0.23	8.7					
18					2/0		0.23	8.8					
19					2/0		0.22	9.4					
20					2/0		0.23	10.4					
21					2/0		0.22	10.1					
22					2/0		0.22	10.2					
23					2/0		0.22	9.9					
24					2/0		0.22	9.2					
25					2/0		0.22	9.4					
26					2/0		0.22	10.5					
27					2/0		0.22	10.0					
28					2/0		0.23	10.5					
29					2/0		0.23	11.0					
30					2/0		0.22	10.4					
31													
AVG							0.23	9.7					
MAX							0.24	11.0					
MIN							0.21	8.4					



Distribution System Monitoring

WSSN 2310

Apr-20

DATE	Total Chlorine Residual at Bacteriological Monitoring Stations mg/l																									Number of Samples						
	1	2	3	4	CS	6	7	8-B	9	10	WR	12	13-B	14	15	16	17-B	18	19-B	20	26	27	28	29	30		21	22	23	24	25	
1																																9
2	1.50			1.62	1.92									1.73	1.63	1.69	1.85	1.58	1.69	1.48					1.90			2.02	1.56		4	
3													1.34		1.85	1.82			1.71						1.96					1.66	6	
4																															0	
5																															0	
6	1.56	1.92		1.60	1.82																									1.50	7	
7							2.00	1.54	1.99	1.37	1.46	1.87															1.24			8		
8								1.54	1.99	1.37	1.46	1.87		1.88	1.73	1.85	1.88		1.71		1.79				1.93		1.68	2.05	1.68	8		
9	1.54			1.75	2.02					1.66										1.19										1.66	7	
10																															3	
11																															0	
12																															0	
13	1.65			1.68	1.86																									1.20	6	
14							1.88	1.49	1.90	1.29	1.38	1.52		1.79	1.76	1.11	1.89		1.73		1.84									1.56	8	
15																				1.59										1.64	7	
16	1.66			1.74	2.04					1.65						1.69	1.90		1.79												3	
17																															0	
18																															0	
19																															0	
20	1.61	1.97		1.63	1.84													1.75												1.23	7	
21							2.00	1.57	1.93	1.24	1.34	2.01		1.87	1.74	1.56	1.78		1.81		1.34									1.55	8	
22																				1.22											1.60	9
23	1.70			1.75	2.15					1.89						1.67	1.86		1.70											1.96	8	
24																															3	
25																															0	
26																															0	
27	1.71	1.88		1.70	2.06													1.56												1.80	7	
28																															8	
29																															9	
30	1.49			1.73	1.82									1.88	1.66	1.79	1.77		1.62		1.85									1.91	8	
31										1.62										1.39										1.52	0	
Monthly Cl₂ Avg.	1.69																															
Total Samples	130																															



ROUTINE POSITIVE DISTRIBUTION SAMPLES

Apr-20

Total number of positive routine samples:				Total Coliform: 0				E.coli Bacteria: 0		Chlorine Residual (mg/L)	
Date	Monitoring Station	Total Coliform	E.coli Bacteria	Date	Time	Reset of Station, Upstream & Downstream		Total Coliform	E.coli Bacteria	Free	Total
Total number of routine distribution samples analyzed:				130							
Total number of routine distribution samples required:				100							