

**MONTHLY OPERATION REPORT  
OF  
WATER TREATMENT PLANT**

**For Month of December 2018**

Flint Water Plant

NAME OF WATER SYSTEM

2310

WSSN

Genesee

COUNTY

Robert Jones

CERTIFIED OPERATOR

D-1

CLASSIFICATION

SIGNATURE OF APPROPRIATE OFFICIAL

**TREATMENT RATE AND FILTER DATA**

1. Treatment Rate, Maximum 10.90 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 3715 gal.: Estimated supply 64 days
8. Sodium Hypochlorite on hand at outstations 357 gal: Estimated supply 66 days.
9. Phosphoric Acid on hand 632 gal.: Estimated supply 30 days
9. Sodium Hydroxide on hand 2185 gal.: Estimated supply 17 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**

**Dec-18**

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 OCT	Post Chlorine mg/L	Sta II	Dort	3MG Well	Tap	
								Free	Free	Free	Free	
1	0.71	0.71		1.14			1.0				1.6	
2	0.65	0.71		1.02			1.0				1.7	
3	0.64	0.70		1.09			1.1				1.7	
4	0.74	0.77		1.08			1.1				1.7	
5	0.64	0.67		0.82			1.1				1.6	
6	0.57	0.54		1.02			1.1				1.4	
7	0.60	0.70		0.96			1.1				1.6	
8	0.65	0.70		1.00			1.1				1.6	
9	0.61	0.60		0.96			1.1				1.6	
10	0.64	0.67		0.95			1.1				1.6	
11	0.62	0.65		1.03			1.0				1.7	
12	0.60	0.68		0.98			1.1				1.8	
13	0.68	0.69		0.89			1.1				1.6	
14	0.71	0.72		0.86			1.1				1.6	
15	0.71	0.72		0.88			1.1				1.7	
16	0.71	0.72		0.97			1.1				1.7	
17	0.71	0.71		1.02			1.1				1.7	
18	0.72	0.72		1.03			1.1				1.8	
19	0.70	0.70		0.99			1.2				1.8	
20	0.66	0.69		0.99			1.1				1.7	
21	0.60	0.61		0.96			1.1				1.8	
22	0.58	0.57		1.09			1.1				1.8	
23	0.56	0.62		0.96			1.1				1.8	
24	0.65	0.69		0.95			1.1				1.7	
25	0.66	0.61		1.01			1.1				1.8	
26	0.73	0.69		1.12			1.1				1.8	
27	0.66	0.69		1.02			1.1				1.7	
28	0.76	0.77		1.13			1.0				1.8	
29	0.66	0.64		1.14			1.0				1.7	
30	0.57	0.63		1.13			1.1				1.7	
31	0.65	0.70		1.17			1.1				1.6	
AVG	0.66	0.68		1.01			1.1				1.7	
MAX	0.76	0.77		1.17			1.2				1.8	
MIN	0.56	0.54		0.82			1.0				1.4	



Chemical Analyses

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D A T E	pH		Total Hardness as CaCO <sub>3</sub> mg/l		Total Alkalinity as CaCO <sub>3</sub> mg/l		NonCarbonate Hardness as CaCO <sub>3</sub> mg/l		Iron mg/L		Calcium Ca <sup>2+</sup> mg/l		Magnesium as Mg <sup>2+</sup> mg/l		Chloride as Cl <sup>-</sup> 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	38.00	39	40	41	42	43	44
1	7.49	7.57	100		82		32	0.01	0.02		27.3		7.8		16	
2	7.32	7.54	106		82		36	0.0	0.01		28.1		8.7		13	
3	7.47	7.52	100		82		32	0.01	0.02		27.3		7.8		15	
4	7.38	7.43	100		82		30	0.04	0.04	28.1	27.3	7.29	7.8	14	16	
5	7.38	7.38	102		78		34	0.01	0.01		27.3		8.3		16	
6	7.44	7.48	100		82		30	0.01	0.01		28.1		7.3		14	
7	7.42	7.43	102		82		30	0.02	0.02		28.9		7.3		15	
8	7.47	7.49	102		100		30	0.01	0.02		28.9		7.3		16	
9	7.36	7.61	106		80		36	0.01	0.02		28.1		8.7		14	
10	7.41	7.58	104		84		32	0.01	0.02		28.9		7.8		14	
11	7.31	7.57	102		80		32	0.01	0.02	28.1	28.9	7.8	6.8	14	14	
12	7.42	7.51	98		82		30	0.01	0.02		27.3		7.3		16	
13	7.40	7.46	100		82		30	0.02	0.02		28.1		7.3		14	
14	7.41	7.47	102		80		32	0.01	0.00		28.1		7.8		17	
15	7.27	7.45	102		80		32	0.02	0.02		28.1		7.8		14	
16	7.40	7.61	102		80		30	0.02	0.01		28.9		7.3		16	
17	7.30	7.35	102		80		32	0.02	0.02		28.1		7.8		16	
18	7.33	7.49	100		82		30	0.02	0.02	28.1	28.1	7.29	7.3	15	15	
19	7.35	7.48	100		82		30	0.02	0.01		28.1		7.3		16	
20	7.40	7.60	104		82		36	0.03	0.02		27.3		8.7		13	
21	7.41	7.58	104		82		34	0.01	0.02		28.1		8.3		15	
22	7.38	7.56	102		80		32	0	0.03		28.1		7.8		13	
23	7.32	7.56	104		82		34	0.02	0.02		28.1		8.3		14	
24	7.32	7.49	104		82		34	0	0.01		28.1		8.3		14	
25	7.36	7.49	102		80		30	0.02	0.02	28.1	28.1	7.8	7.3	15	15	
26	7.42	7.40	102		80		32	0.02	0.03		28.1		7.8		16	
27	7.32	7.55	106		80		36	0	0.02		28.1		8.7		15	
28	7.24	7.56	104		82		34	0.02	0.02		28.1		8.3		14	
29	7.24	7.57	106		84		36	0.01	0.01		28.1		8.7		14	
30	7.39	7.55	96		82		26	0.01	0.02		28.1		6.3		13	
31	7.35	7.55	104		82		34	0.01	0.01	28.1	28.1	8.3	8.3	13	14	
AVG	7.37	7.51	102		82		32		0.02		28.1		7.8		15	
MAX	7.49	7.61	106		100		36		0.04		28.9		8.7		17.0	
MIN	7.24	7.35	96		78		26		0.00		27.3		6.3		13.0	



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DATE	Total Coliform					Standard Plate Count		Conductivity (ms)	Temp deg C	Color			Odor	
	Plant Tap					Raw Tap	Tap			71	72	73	74	
	Dort	3MG Well	Sa II	Lab Tap	Lab Tap									
1	60	51	42	43	54	55	66	67	68	69				
2						2/0				0.22	10.9			
3						2/0				0.23	11.3			
4						2/0				0.22	10.7			
5						2/0				0.23	10.4			
6						2/0				0.22	10.6			
7						2/0				0.21	10.5			
8						2/0				0.20	9.1			
9						2/0				0.18	12.0			
10						2/0				0.23	11.3			
11						2/0				0.23	11.1			
12						2/0				0.23	10.7			
13						2/0				0.23	11.7			
14						2/0				0.21	11.1			
15						2/0				0.23	11.1			
16						2/0				0.24	10.9			
17						2/0				0.21	10.5			
18						2/0				0.19	10.3			
19						2/0				0.23	9.4			
20						2/0				0.23	10.7			
21						2/0				0.23	10.7			
22						2/0				0.23	10.7			
23						2/0				0.23	10.8			
24						2/0				0.23	9.8			
25						2/0				0.23	10.2			
26						2/0				0.23	10.2			
27						2/0				0.22	10.4			
28						2/0				0.23	10.2			
29						2/0				0.23	9.2			
30						2/0				0.24	8.4			
31						2/0				0.23	9.3			
AVG										0.22	10.4			
MAX										0.24	12.0			
MIN										0.18	8.4			



		Free Chlorine Residual at Bacteriological Monitoring Stations mg/l																												Chlorine only sites mg/l				
D	A	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	Number of Samples		
	1																															0		
	2											1.07													1.51			1.23				1		
	3	1.22	1.66	1.54	1.59	1.77	1.26																									8		
	4							1.41	1.44	1.39	1.42			0.64									1.29				1.33					7		
	5														1.66	1.23	1.54	1.14	1.35	0.68						1.62				1.44		8		
	6	1.36	1.62	1.35	1.33	1.41											1.55	1.52	1.28	0.55	0.98			1.72					1.37		8			
	7											1.31																		0.51	7			
	8																														0			
	9											1.26																				0		
	10	1.49																							1.48			1.14				7		
	11																					1.42						1.47				8		
	12																															7		
	13	1.32	1.44	1.28	1.32	1.41									1.24	1.47	1.37	1.14	0.78							1.59			1.53			7		
	14														1.33															1.26		8		
	15																															6		
	16																															0		
	17	1.26	1.59	1.51	1.21	1.59	1.53																									1		
	18																															9		
	19																																8	
	20	1.42													1.44	1.21	1.59	1.57	1.29	1.11						1.69			1.60			8		
	21																							1.78						1.58		6		
	22																															6		
	23																															0		
	24	1.63																														1		
	25																															7		
	26																															0		
	27	1.49	1.83	1.60	1.55	1.85									1.69	1.10	1.50	1.59	1.51													11		
	28																																11	
	29																																5	
	30																																0	
	31	1.46																															0	
																																	12	
		Monthly Cl <sub>2</sub> Avg.																												1.45				
		Total Samples																												140				



**Distribution System Monitoring**

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		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					
D	1																																				
A	2											1.19																									
T	3	1.46	1.91	1.72	1.81	2.05	1.68																				1.58										
E	4											1.20													1.45												
	5													1.87	1.37	1.68	1.67	1.48	0.83						1.87												
	6	1.58	1.87	1.71	1.62	1.70						1.69					1.77	1.71	1.54	0.74	1.08				1.94												
	7																																				
	8																																1.44				
	9											1.26																									
	10	1.49			1.55	0.95	1.71	1.38																													
	11												1.13																								
	12														1.24	1.47	1.37	1.14	0.78																		
	13	1.55	1.80	1.67	1.72	2.04								1.71											1.96												
	14																																				
	15																																				
	16																																				
	17	1.44	1.92	1.69	1.76	1.97	1.79						1.31																								
	18																																				
	19												1.31																								
	20	1.56													1.86	1.49	1.84	1.88	1.57	1.27																	
	21																																				
	22																																				
	23																																				
	24	1.75																																			
	25																																				
	26																																				
	27	1.63	2.02	1.72	1.77	2.07									1.86	1.37	1.75	1.88	1.68																		
	28																																				
	29																																				
	30																																				
	31	1.66			1.79	1.68	1.99							1.81		1.42																					
			<b>Monthly Cl<sub>2</sub> Avg.</b>																																		
			1.65																																		
			<b>Total Samples</b>																																		
			140																																		



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### ROUTINE POSITIVE DISTRIBUTION SAMPLES

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	Retest of Station, Upstream & Downstream	Total Coliform	E. coli Bacteria	Free	Total	
Total number of routine distribution samples analyzed:							140				
Total number of routine distribution samples required:							100				