D-5a 1/86
Authority; Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

For Month of February 2016

Flint Water Plant — 2310 — Genesee
NAME OF WATER SYSTEM — WSSN — COUNTY

Michael Glasgow — F-1R
CERTIFIED OPERATOR — CLASSIFICATION

Michael Glasgow
SIGNATURE OF APPROPRIATE OFFICIAL

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

Feb-16

DATE	Total Million Gallons Purchased	Phosphate as PO4 (mg/L) CSII	Phosphate applied as PO4 (mg/L)	Phosphate as PO4 (mg/L) Tap	Turbidity, NTU units						
					Raw				Plant Tap		
					# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	6	7	8	9	10	11	12	13
1	14.0	1.13	2.75	3.79					2	0.12	0.14
2	13.5	1.10	2.66	3.70					2	0.10	0.12
3	13.7	1.18	2.66	3.74					2	0.11	0.13
4	13.1	1.17	2.69	3.80					2	0.09	0.10
5	12.1	1.22	2.64	3.76					2	0.09	0.09
6	13.2	1.11	2.73	3.75					2	0.10	0.12
7	12.9	1.07	2.69	3.74					2	0.08	0.08
8	13.1	1.07	2.68	3.60					2	0.09	0.11
9	14.7	1.21	2.60	3.70					2	0.14	0.19
10	15.3	1.12	2.60	3.72					2	0.10	0.10
11	14.6	1.26	2.72	3.83					2	0.10	0.11
12	12.3	1.19	2.67	3.85					2	0.09	0.10
13	12.0	1.17	2.72	3.72					2	0.10	0.11
14	12.3	1.11	2.71	3.67					2	0.09	0.09
15	12.8	1.14	2.70	3.65					2	0.08	0.09
16	14.8	1.17	2.64	3.50					2	0.10	0.11
17	14.1	1.17	2.62	3.63					2	0.09	0.09
18	15.0	1.42	2.66	3.90					2	0.10	0.10
19	12.2	1.27	2.62	3.65					2	0.09	0.10
20	14.1	1.20	2.70	3.80					2	0.10	0.12
21	14.9	1.09	2.63	3.72					2	0.09	0.10
22	13.9	1.20	2.79	3.84					2	0.09	0.10
23	12.6	1.27	2.63	3.94					2	0.08	0.09
24	13.7	1.30	2.69	3.72					2	0.09	0.09
25	13.7	1.16	2.73	3.79					2	0.13	0.17
26	13.3	1.15	2.72	3.76					2	0.10	0.10
27	12.0	1.25	2.68	3.75					2	0.09	0.10
28	13.0	1.17	2.79	3.92					2	0.11	0.13
29	14.1	1.13	2.70	3.61					2	0.08	0.09
AVG	13.48	1.18	2.68	3.74					2	0.10	0.11
MAX	15.30	1.42	2.79	3.94					2	0.14	0.19
MIN	11.95	1.07	2.60	3.50					2	0.08	0.08
Total	390.82										

Flouridation & Chlorination **WSSN 2310** **Feb-16**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L		Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist					Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.75						1.1					1.0	
2			0.74						1.0					1.0	
3			0.73						0.9					0.9	
4			0.74						1.0					0.9	
5			0.72						0.9					0.9	
6			0.69						1.0					1.0	
7			0.68						1.0					1.0	
8			0.68						1.0					1.0	
9			0.68						1.0					0.9	
10			0.70						1.0					1.0	
11			0.68						0.9					0.9	
12			0.68						0.9					0.1	
13			0.68						0.9					0.9	
14			0.65						1.0					0.8	
15			0.72						1.0					0.9	
16			0.67						0.9					0.9	
17			0.68						0.9					0.9	
18			0.67						0.9					0.8	
19			0.66						1.0					0.9	
20			0.66						1.0					1.0	
21			0.67						1.1					1.1	
22			0.71						1.1					1.0	
23			0.73						1.1					1.1	
24			0.72						0.9					0.9	
25			0.73						0.9					0.9	
26			0.68						1.0					1.0	
27			0.69						1.0					1.0	
28			0.69						1.1					0.9	
29			0.67						1.0					1.0	
AVG			0.69						1.0					0.9	
MAX			0.75						1.1					1.1	
MIN			0.65						0.9					0.1	

Chemical Analyses **WSSN 2310** **Feb-16**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l		Iron mg/L		Calcium Ca ++ mg/l		Magnesium as Mg ++ 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	38	39	40	41	42	43	44
1	7.27	7.39		104		74		30		0.05		31.3		6.3		12
2	7.39	7.28		102		70		32		0.02		34.5		3.9		15
3	7.28	7.22		100		72		28		0.02		36.9		1.5		15
4	7.38	7.24		102		70		32		0.03		35.3		3.4		15
5	7.26	7.05		102		72		30		0.02		36.1		4.4		14
6	7.36	7.27		98		70		28		0.03		33.7		3.4		13
7	7.35	7.25		100		70		30		0.02		32.1		4.9		12
8	7.33	7.22		98		70		28		0.02		31.3		4.9		10
9	7.31	7.26		102		70		32		0.05		34.5		3.9		13
10	7.31	7.19		104		72		32		0.02		35.3		3.9		15
11	7.34	7.21		100		70		30		0.01		32.1		4.9		10
12	7.35	7.21		100		72		28		0.02		31.3		5.3		15
13	7.26	7.18		104		70		34		0.03		32.9		5.3		14
14	7.34	7.23		98		72		26		0.02		32.1		4.4		12
15	7.34	7.21		100		72		28		0.02		29.7		6.3		12
16	7.37	7.22		102		70		32		0.02		33.7		4.4		15
17	7.23	7.17		100		70		30		0.02		36.1		2.4		11
18	7.25	7.15		100		68		32		0.03		30.5		5.8		13
19	7.32	7.18		104		68		36		0.03		36.1		3.4		12
20	7.25	7.18		98		70		28		0.03		32.1		4.4		12
21	7.33	7.20		98		70		28		0.02		29.7		5.8		12
22	7.32	7.17		100		70		30		0.02		32.1		4.9		11
23	7.28	7.18		98		70		28		0.03		36.1		1.9		11
24	7.27	7.17		98		70		28		0.04		35.3		2.4		12
25	7.28	7.17		98		68		30		0.02		36.9		1.5		12
26	7.28	7.17		96		72		24		0.02		31.3		4.4		11
27	7.27	7.21		98		72		26		0.02		31.3		4.9		10
28	7.32	7.19		102		72		30		0.02		31.3		5.8		12
29	7.33	7.20		100		74		26		0.03		31.3		5.3		12
AVG	7.31	7.21		100		71		30		0.03		33.2		4.3		12.5
MAX	7.39	7.39		104		74		36		0.05		36.9		6.3		15.0
MIN	7.23	7.05		96		68		24		0.01		29.7		1.5		10.0

Bacteriological & Physical Parameters **WSSN 2310** **Feb-16**

DATE	Total Coliform							Standard Plate Count		Conductivity (mS)	Temp deg.C	Color		Odor	
	Plant Tap														
			Dort	3MG Well	Sta II	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69		71	72	73	74
1					2/0	2/0				0.22	12.1				
2					2/0	2/0			<2	0.22	9.60				
3					2/0	2/0				0.22	12.3				
4					2/0	2/0			<2	0.21	11.8				
5					2/0	2/0				0.22	12.6				
6					2/0	2/0				0.22	12.3				
7					2/0	2/0				0.22	12.6				
8					2/0	2/0				0.22	12.5				
9					2/0	2/0			<2	0.22	12.8				
10					2/0	2/0			<2	0.21	12.1				
11					2/0	2/0			<2	0.21	12.1				
12					2/0	2/0				0.21	12.6				
13					2/0	2/0				0.22	12.2				
14					2/0	2/0				0.22	11.6				
15					2/0	2/0				0.22	11.5				
16					2/0	2/0				0.22	11.6				
17					2/0	2/0				0.22	11.1				
18					2/0	2/0				0.22	10.6				
19					2/0	2/0				0.21	9.8				
20					2/0	2/0				0.21	9.0				
21					2/0	2/0				0.21	11.4				
22					2/0	2/0				0.21	10.9				
23					2/0	2/0			<2	0.21	10.9				
24					2/0	2/0				0.21	11.8				
25					2/0	2/0				0.21	12.0				
26					2/0	2/0				0.21	11.3				
27					2/0	2/0				0.20	12.2				
28					2/0	2/0				0.22	10.9				
29					2/0	2/0				0.22	9.2				
											11.5				
											12.8				
											9.0				

Distribution System Monitoring **WSSN 2310** **Feb-16**

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1											0
2											0
3	0.7	1.0	0.8	0.8	0.8	0.3	0.7	0.8	1.7	2.3	10
4	0.8	0.9	0.8	0.9	0.8	0.3	0.8	0.9	2.0	2.2	10
5	0.8	0.9	0.7	1.2	0.8	0.4	0.7	0.9	1.6	2.0	10
6											0
7											0
8											0
9	1.0	0.8	0.8	0.9	0.9	0.3			1.7	2.4	8
10	0.5	0.9	0.9	0.8	0.7	0.5	1.0	0.3	1.1	2.3	10
11	0.5	0.4	0.7	0.7	0.5	0.3	0.4	0.3	0.8	1.6	10
12											0
13											0
14											0
15											0
16											0
17	0.9	0.8	0.8	1.1	0.7	0.5	0.5	0.9	1.7	2.3	10
18	0.9	0.9	0.8	0.9	1.0	0.5	0.7	0.9	1.2	2.4	10
19											0
20											0
21											0
22											0
23	1.0	1.1	0.9	1.0	0.7	0.4	0.7	0.8	1.7	2.3	10
24	1.1	0.9	1.0	1.0	1.1	0.4	0.9	0.9	1.0	2.3	10
25							0.7	0.8			2
26											0
27											0
28											0
29											0

Monthly Cl_2 Avg.	**0.974**
Total Samples	**100**

Distribution System Monitoring **WSSN 2310** **Feb-16**

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1											0
2											0
3	0.9	1.2	1.0	1.0	1.0	0.5	0.9	1.0	2.0	2.5	10
4	1.0	1.1	1.0	1.0	0.9	0.5	1.0	1.0	2.2	2.4	10
5	1.0	1.1	0.9	1.4	1.0	0.6	0.9	1.1	1.8	2.3	10
6											0
7											0
8											0
9	1.2	1.1	1.0	1.1	1.1	0.5			1.9	2.6	8
10	0.7	1.1	1.1	1.0	0.9	0.7	1.2	0.5	1.3	2.5	10
11	0.6	0.5	0.9	0.8	0.8	0.5	0.6	0.4	0.9	1.8	10
12											0
13											0
14											0
15											0
16											0
17	1.0	0.9	0.9	1.2	0.8	0.7	0.8	1.0	1.9	2.6	10
18	1.1	1.1	1.0	1.1	1.2	0.7	0.9	1.1	1.4	2.6	10
19											0
20											0
21											0
22											0
23	1.2	1.3	1.1	1.2	0.9	0.6	0.9	1.0	1.9	2.5	10
24	1.3	1.1	1.3	1.1	1.3	0.6	1.1	1.1	1.2	2.5	10
25							0.9	1.0			2
26											0
27											0
28											0
29											0

Monthly Cl_2 Avg.	**1.165**
Total Samples	**100**

ROUTINE POSITIVE DISTRIBUTION SAMPLES Feb-16

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				**100**			
Total number of routine distribution samples required:				**100**			