

# Bay Area WTP

## Monthly Operations Report



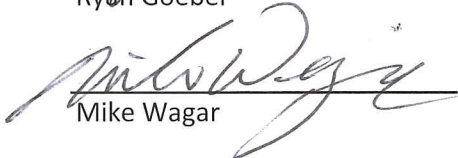
October, 2019

Water Systems Serial Number: 0465

  
\_\_\_\_\_  
Ryan Goebel

Water Plant Superintendent  
\_\_\_\_\_  
Title

F-1  
\_\_\_\_\_  
Classification

  
\_\_\_\_\_  
Mike Wagar

Operations Supervisor  
\_\_\_\_\_  
Title

F-2  
\_\_\_\_\_  
Classification

# Bay Area Water Treatment Plant

## Monthly Operations Report

Supply Name: Bay Area Water System  
WSSN: 0465

Ryan Goebel  
Operator-in-charge

October, 2019  
Month, Year

F-1  
Certification of Operator-in-charge

F-1  
Water Plant Classification

Bay  
County

### Treatment Rate and Membrane Data

Treatment Rate, Approved Rated Plant Capacity	<u>17.4</u>	Millions of Gallons per Day
Treatment Rate, Maximum	<u>7.8</u>	Millions of Gallons per Day
Maximum Approved Transmembrane Pressure	<u>22</u>	PSI
Maximum Operating Transmembrane Pressure	<u>22</u>	PSI

### Chemical Data

Sodium Hypochlorite on hand:	<u>4,263</u>	Gallons	Estimated Supply:	<u>55.8</u>	days
Caustic Soda on hand:	<u>1,965</u>	Gallons	Estimated Supply:	<u>133.7</u>	days
Corrosion Inhibitor on hand:	<u>714</u>	Gallons	Estimated Supply:	<u>33.5</u>	days
Hydrofluosilicic Acid on hand:	<u>1,167</u>	Gallons	Estimated Supply:	<u>63.0</u>	days
Aluminum Chlorohydrate on hand:	<u>752</u>	Gallons	Estimated Supply:	<u>44.5</u>	days
Sulfuric Acid on hand:	<u>701</u>	Gallons	Estimated Supply:	<u>175.9</u>	days
Sodium Bisulfite on hand:	<u>612</u>	Gallons	Estimated Supply:	<u>53.3</u>	days
Citric Acid on hand:	<u>2,023</u>	Gallons	Estimated Supply:	<u>187.4</u>	days
Cost of All Chemicals per Million Gallons:	<u>82.10</u>	Dollars			
Estimated Electrical Cost per Million Gallons:	<u>92.3</u>	Dollars			
Estimated Natural Gas Cost per Million Gallons:	<u>1.08</u>	Dollars			

### Remarks

Number of periods of filter confluence turbidity samples > 0.3 NTU 0  
Percent of membrane period confluence samples > 0.3 NTU: 0.00%

#### **Did any individual membrane skid exceed:**

1.0 NTU in two consecutive measurements taken 15 minutes apart?  
If yes, attach specific filter(s) information and indicate required follow-up status. No

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation?  
If yes, attach specific filter(s) information and indicate required follow-up status. No

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months?  
If yes, attach specific filter(s) information and indicate required follow-up status. No

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months?  
If yes, attach specific filter(s) information and indicate required follow-up status. No

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month?  
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet. No

Did POE disinfectant residual fall below 0.2 ppm during the month?  
If yes, indicate date(s) and duration on a separate sheet. No

Was minimum C\*T credit achieved for the entire month?  
If no, indicate on a separate sheet the date(s) not achieved. Yes

Was continuous POE chlorine residual monitoring equipment off-line during the month?  
If yes, date(s) and duration will be indicated on the rule page. No

### Notes

-There was one Total Coliform positive sample in WSSN 0470. Repeat samples were negative. For more info, see page 12



# Bay Area WTP Monthly Operating Report

Date	Flows									
	Raw Water (MG)			Clarified (MG)	Wasted (MG)	Sludge (MG)	Treated (MG)	Finished Water Pumped (MG)		
	North	South	Total	Total	Total	Total	Total	N. Euclid	Lauria Road	Total
	FIT-1000-1	FIT-1000-2	Calculated	FIT-5520-1	FIT-5520-2	FIT-5180	FIT-4000-1	FIT-4040-1	FIT-4040-2	Calculated
10/1/2019	3.68	3.81	7.49	0.27	0.00	0.03	7.27	3.61	3.46	7.07
10/2/2019	3.66	3.79	7.45	0.24	0.00	0.09	7.80	3.84	3.63	7.47
10/3/2019	3.65	3.78	7.43	0.25	0.00	0.07	6.92	3.46	3.26	6.72
10/4/2019	3.15	3.74	6.89	0.26	0.00	0.06	7.05	3.50	3.31	6.80
10/5/2019	3.07	4.00	7.07	0.17	0.00	0.19	7.42	3.68	3.45	7.13
10/6/2019	3.00	3.90	6.90	0.19	0.00	0.18	7.27	3.67	3.43	7.10
10/7/2019	3.67	4.01	7.67	0.17	0.00	0.18	7.37	3.65	3.45	7.10
10/8/2019	4.10	4.12	8.22	0.14	0.00	0.17	6.83	3.40	3.19	6.59
10/9/2019	3.17	3.98	7.15	0.22	0.00	0.10	7.04	3.47	3.27	6.74
10/10/2019	2.64	3.90	6.54	0.16	0.00	0.16	6.89	3.44	3.24	6.68
10/11/2019	2.70	3.92	6.61	0.21	0.00	0.08	6.56	3.30	3.13	6.43
10/12/2019	2.97	3.68	6.65	0.14	0.00	0.17	7.14	3.50	3.27	6.78
10/13/2019	3.17	3.76	6.93	0.17	0.00	0.17	7.11	3.51	3.31	6.82
10/14/2019	3.06	4.14	7.20	0.21	0.00	0.10	6.82	3.43	3.25	6.68
10/15/2019	2.98	4.17	7.15	0.22	0.00	0.11	6.89	3.38	3.23	6.61
10/16/2019	3.02	4.13	7.15	0.24	0.00	0.07	6.96	3.45	3.25	6.70
10/17/2019	1.25	5.81	7.06	0.26	0.00	0.07	6.88	3.41	3.19	6.60
10/18/2019	0.00	7.09	7.09	0.25	0.00	0.06	6.98	3.50	3.27	6.77
10/19/2019	0.00	6.93	6.93	0.20	0.00	0.09	6.57	3.22	3.02	6.24
10/20/2019	0.00	6.98	6.98	0.22	0.00	0.08	6.63	3.30	3.11	6.41
10/21/2019	0.00	6.45	6.45	0.23	0.00	0.08	7.08	3.46	3.31	6.77
10/22/2019	0.00	5.37	5.37	0.24	0.00	0.06	6.99	3.43	3.26	6.69
10/23/2019	0.00	7.59	7.59	0.23	0.00	0.07	6.28	3.14	2.97	6.11
10/24/2019	0.00	7.10	7.10	0.24	0.00	0.09	6.41	3.20	3.03	6.23
10/25/2019	0.00	7.10	7.10	0.31	0.00	0.08	6.96	3.37	3.19	6.56
10/26/2019	0.00	6.20	6.20	0.31	0.00	0.08	6.70	3.37	3.15	6.52
10/27/2019	0.00	6.66	6.66	0.22	0.00	0.08	6.76	3.35	3.16	6.51
10/28/2019	0.00	7.14	7.14	0.24	0.00	0.08	6.89	3.38	3.21	6.59
10/29/2019	0.00	6.56	6.56	0.23	0.00	0.08	6.13	3.02	2.87	5.89
10/30/2019	0.00	6.16	6.16	0.26	0.00	0.05	6.88	3.41	3.22	6.63
10/31/2019	0.00	6.43	6.43	0.27	0.00	0.04	6.44	3.20	3.00	6.21
Total	52.92	162.40	215.32	6.96	0.00	3.02	213.92	106.05	100.09	206.14
Avg	1.71	5.24	6.95	0.22	0.00	0.10	6.90	3.42	3.23	6.65
Min	0.00	3.68	5.37	0.14	0.00	0.03	6.13	3.02	2.87	5.89
Max	4.10	7.59	8.22	0.31	0.00	0.19	7.80	3.84	3.63	7.47



Raw Water Analysis								
Date	Temp	pH	Turbidity		F <sup>-</sup>	Free Cl	Bacti	
	Average	Average	Average	Maximum	Grab	Average	Positive/Negative	
	°C		NTU		mg/L	mg/L	Total Coliform	E. coli
	TIT-1000	AIT-1000-2	AIT-1000-1		Lab	AIT-1035-2	Lab	
10/1/2019	14.53	7.94	1.39	2.51	0.10	0.28	Negative	Negative
10/2/2019	14.83	7.91	1.33	3.05	0.09	0.27	Negative	Negative
10/3/2019	14.61	7.88	0.89	1.81	0.09	0.35	Negative	Negative
10/4/2019	14.61	7.94	2.88	11.53	0.10	0.18	Negative	Negative
10/5/2019	14.87	7.87	5.29	18.66	0.09	0.26	Negative	Negative
10/6/2019	15.02	7.89	3.36	17.38	0.09	0.37	Negative	Negative
10/7/2019	15.18	7.90	2.81	11.46	0.10	0.26	Negative	Negative
10/8/2019	15.15	7.91	2.01	4.68	0.10	0.28	Negative	Negative
10/9/2019	15.19	7.88	1.14	2.37	0.09	0.50	Negative	Negative
10/10/2019	15.08	7.89	1.21	2.04	0.10	0.44	Negative	Negative
10/11/2019	15.06	7.89	1.29	4.68	0.10	0.43	Negative	Negative
10/12/2019	14.95	7.91	1.73	3.86	0.09	0.36	Negative	Negative
10/13/2019	14.93	7.92	1.90	3.52	0.10	0.38	Negative	Negative
10/14/2019	14.82	7.85	1.93	4.84	0.09	0.52	Negative	Negative
10/15/2019	14.49	7.79	1.30	4.62	0.09	0.68	Negative	Negative
10/16/2019	14.11	7.77	1.01	3.84	0.09	0.77	Negative	Negative
10/17/2019	13.49	7.77	0.93	9.05	0.10	0.77	Negative	Negative
10/18/2019	13.16	7.80	1.06	5.18	0.09	0.60	Negative	Negative
10/19/2019	12.95	7.82	1.41	4.03	0.08	0.53	Negative	Negative
10/20/2019	12.87	7.85	1.42	3.61	0.10	0.48	Negative	Negative
10/21/2019	12.75	7.85	1.25	3.46	0.10	0.53	Negative	Negative
10/22/2019	12.76	7.84	0.84	1.36	0.10	0.59	Negative	Negative
10/23/2019	12.64	7.87	1.52	3.20	0.10	0.42	Negative	Negative
10/24/2019	12.53	7.87	1.81	4.62	0.10	0.38	Negative	Negative
10/25/2019	12.44	7.84	0.78	3.57	0.10	0.63	Negative	Negative
10/26/2019	12.37	7.83	0.71	1.45	0.09	0.65	Negative	Negative
10/27/2019	12.21	7.81	0.73	4.03	0.09	0.72	Negative	Negative
10/28/2019	12.09	7.83	0.65	2.76	0.09	0.62	Negative	Negative
10/29/2019	12.04	7.88	0.84	2.70	0.09	0.52	Negative	Negative
10/30/2019	11.92	7.91	0.54	1.59	0.09	0.58	Negative	Negative
10/31/2019	11.79	7.89	0.40	1.67	0.06	0.60	Negative	Negative
Avg	13.7	7.86	1.50	4.94	0.09	0.48	NA	NA
Min	11.8	7.77	0.40	1.36	0.06	0.18	NA	NA
Max	15.2	7.94	5.29	18.66	0.10	0.77	NA	NA



Finished Water Analysis																		
Date	Temp	pH	Phosphate	Fluoride		Free Cl <sub>2</sub>	Alkalinity (as CaCO <sub>3</sub> )		Chloride	Sulfate	Calcium (as CaCO <sub>3</sub> )	Dissolved Oxygen	Conductivity	Langelier Saturation Index	Chloride:Sulfate Mass Ratio	Larson-Skold Index	Bacti	
	Average	Average	Average	Tap	Dist	Average	Carbonate	Bicarbonate	Grab	Grab	Grab	Grab	Grab	Index	Ratio	Index	Positive/Negative	
	°C		mg/L	mg/L		mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	uS/cm				Total Coliform	E. coli
	AIT-4040-1	AIT-4050-2	AIT-4040-5	Lab		AIT-4050-1	Lab		Lab	Lab	Lab	Lab	Lab				Calculated	
10/1/2019	11.6	7.52	3.37	0.77		1.20	0	79	10	12	68	10.6	231	-0.91	0.85	0.42	Negative	Negative
10/2/2019	12.4	7.56	3.37	0.74		1.19	0	80	10	14	70	10.8	236	-0.83	0.71	0.44	Negative	Negative
10/3/2019	12.7	7.57	3.37	0.75		1.21	0	80	8	12	68	9.7	237	-0.83	0.67	0.36	Negative	Negative
10/4/2019	12.6	7.56	3.38	0.77		1.21	0	80	11	13	68	10.5	233	-0.84	0.81	0.44	Negative	Negative
10/5/2019	12.9	7.59	3.37	0.76		1.20	0	79	11	12	70	9.2	247	-0.80	0.88	0.42	Negative	Negative
10/6/2019	13.5	7.57	3.37	0.75		1.22	0	80	10	13	78	9.5	248	-0.75	0.77	0.42	Negative	Negative
10/7/2019	13.9	7.58	3.37	0.74	0.75	1.20	0	80	10	15	72	9.1	257	-0.77	0.67	0.46	Negative	Negative
10/8/2019	14.1	7.57	3.41	0.76		1.20	0	82	13	13	82	9.7	253	-0.71	1.00	0.48	Negative	Negative
10/9/2019	14.2	7.56	3.43	0.80		1.23	0	81	13	15	82	9.7	249	-0.72	0.86	0.51	Negative	Negative
10/10/2019	14.2	7.53	3.42	0.87		1.21	0	79	12	13	80	9.3	243	-0.77	0.95	0.48	Negative	Negative
10/11/2019	14.2	7.54	3.42	0.88		1.22	0	79	13	17	82	9.4	243	-0.75	0.74	0.55	Negative	Negative
10/12/2019	14.0	7.58	3.41	0.80		1.23	0	79	12	12	84	9.2	244	-0.70	1.03	0.46	Negative	Negative
10/13/2019	14.0	7.60	3.42	0.83		1.22	0	80	13	12	82	9.2	248	-0.69	1.08	0.47	Negative	Negative
10/14/2019	14.0	7.58	3.40	0.81	0.84	1.23	0	79	13	12	80	9.7	246	-0.72	1.08	0.48	Negative	Negative
10/15/2019	13.8	7.59	3.39	0.76		1.24	0	80	10	13	76	9.6	240	-0.73	0.77	0.42	Negative	Negative
10/16/2019	13.4	7.57	3.39	0.76		1.24	0	77	10	12	72	9.7	231	-0.80	0.83	0.42	Negative	Negative
10/17/2019	12.5	7.55	3.39	0.74		1.23	0	75	9	12	76	9.8	228	-0.83	0.75	0.41	Negative	Negative
10/18/2019	11.9	7.53	3.38	0.75		1.23	0	74	9	10	74	9.9	227	-0.88	0.91	0.39	Negative	Negative
10/19/2019	11.6	7.53	3.38	0.77		1.21	0	76	8	11	76	10.3	228	-0.87	0.76	0.38	Negative	Negative
10/20/2019	11.5	7.53	3.39	0.76		1.20	0	74	10	10	72	9.9	231	-0.90	1.00	0.41	Negative	Negative
10/21/2019	11.4	7.54	3.38	0.78	0.72	1.22	0	76	11	11	74	10.7	235	-0.87	0.95	0.42	Negative	Negative
10/22/2019	11.4	7.57	3.36	0.79		1.24	0	78	11	11	78	10.3	235	-0.81	0.95	0.41	Negative	Negative
10/23/2019	11.4	7.55	3.38	0.78		1.22	0	76	11	11	74	10.7	235	-0.86	1.00	0.44	Negative	Negative
10/24/2019	11.3	7.59	3.39	0.76		1.21	0	78	11	11	76	10.8	244	-0.80	1.00	0.43	Negative	Negative
10/25/2019	11.4	7.56	3.37	0.76		1.23	0	77	11	10	76	10.5	242	-0.84	1.10	0.41	Negative	Negative
10/26/2019	11.2	7.57	3.38	0.77		1.24	0	76	11	11	78	10.6	234	-0.82	1.00	0.44	Negative	Negative
10/27/2019	11.2	7.57	3.38	0.76		1.21	0	76	10	9	76	10.8	229	-0.84	1.08	0.37	Negative	Negative
10/28/2019	11.0	7.58	3.38	0.75	0.73	1.22	0	77	10	9	72	10.4	227	-0.85	1.11	0.37	Negative	Negative
10/29/2019	11.0	7.55	3.38	0.73		1.22	0	82	10	9	68	10.6	223	-0.87	1.09	0.35	Negative	Negative
10/30/2019	10.9	7.54	3.38	0.74		1.21	0	79	10	12	72	10.2	227	-0.88	0.83	0.41	Negative	Negative
10/31/2019	10.8	7.56	3.39	0.71		1.21	0	80	10	11	72	10.2	225	-0.86	0.91	0.39	Negative	Negative
Avg	12.5	7.56	3.39	0.77	0.76	1.22	0	78	11	12	75	10.0	237	-0.81	0.91	0.43	NA	NA
Min	10.8	7.52	3.36	0.71	0.72	1.19	0	74	8	9	68	9.1	223	-0.91	0.67	0.35	NA	NA
Max	14.2	7.60	3.43	0.88	0.84	1.24	0	82	13	17	84	10.8	257	-0.69	1.11	0.55	NA	NA



Turbidity										
Date	Raw Water		Clarified Water	Membrane Feed Water	Combined Membrane Filtrate					Finished Water
	Avg	Max	Avg	Avg	Avg	Max	# Samples	# > 0.3	% Exceeded	Avg
	NTU									
	AIT-1000-1		AIT-5030-1	AIT-1035-3	AIT-4000-1				Calculated	
10/1/2019	1.39	2.51	1.49	0.77	0.019	0.019	96	0	0.0	0.015
10/2/2019	1.33	3.05	2.47	1.20	0.019	0.019	96	0	0.0	0.014
10/3/2019	0.89	1.81	1.89	1.11	0.019	0.019	96	0	0.0	0.014
10/4/2019	2.88	11.53	1.83	1.26	0.019	0.019	96	0	0.0	0.014
10/5/2019	5.29	18.66	1.94	3.42	0.019	0.019	96	0	0.0	0.014
10/6/2019	3.36	17.38	0.96	3.62	0.019	0.019	96	0	0.0	0.014
10/7/2019	2.81	11.46	1.80	3.11	0.019	0.019	96	0	0.0	0.014
10/8/2019	2.01	4.68	1.00	2.64	0.019	0.019	96	0	0.0	0.014
10/9/2019	1.14	2.37	1.86	1.96	0.019	0.019	96	0	0.0	0.014
10/10/2019	1.21	2.04	1.58	1.47	0.019	0.019	96	0	0.0	0.014
10/11/2019	1.29	4.68	1.99	1.35	0.019	0.019	96	0	0.0	0.014
10/12/2019	1.73	3.86	3.26	1.47	0.019	0.019	96	0	0.0	0.014
10/13/2019	1.90	3.52	2.17	1.80	0.019	0.019	96	0	0.0	0.014
10/14/2019	1.93	4.84	1.09	1.83	0.019	0.019	96	0	0.0	0.014
10/15/2019	1.30	4.62	1.81	1.81	0.019	0.019	96	0	0.0	0.014
10/16/2019	1.01	3.84	0.85	1.28	0.019	0.019	96	0	0.0	0.014
10/17/2019	0.93	9.05	1.25	1.07	0.019	0.019	96	0	0.0	0.014
10/18/2019	1.06	5.18	1.20	1.00	0.019	0.019	96	0	0.0	0.014
10/19/2019	1.41	4.03	1.52	1.27	0.019	0.019	96	0	0.0	0.014
10/20/2019	1.42	3.61	1.25	1.30	0.019	0.019	96	0	0.0	0.014
10/21/2019	1.25	3.46	1.68	1.38	0.019	0.019	96	0	0.0	0.014
10/22/2019	0.84	1.36	2.21	1.23	0.019	0.021	96	0	0.0	0.015
10/23/2019	1.52	3.20	1.83	1.25	0.019	0.019	96	0	0.0	0.014
10/24/2019	1.81	4.62	2.18	1.55	0.019	0.019	96	0	0.0	0.014
10/25/2019	0.78	3.57	1.51	1.36	0.019	0.019	96	0	0.0	0.014
10/26/2019	0.71	1.45	1.04	0.98	0.019	0.019	96	0	0.0	0.014
10/27/2019	0.73	4.03	0.79	0.90	0.019	0.019	96	0	0.0	0.014
10/28/2019	0.65	2.76	0.94	0.75	0.019	0.019	96	0	0.0	0.014
10/29/2019	0.84	2.70	1.18	0.81	0.019	0.021	96	0	0.0	0.014
10/30/2019	0.54	1.59	1.64	0.76	0.020	0.020	96	0	0.0	0.014
10/31/2019	0.40	1.67	1.38	0.59	0.020	0.020	96	0	0.0	0.014
Avg	1.50	4.94	1.60	1.49	0.019	0.019	96	0	0.0	0.014
Min	0.40	1.36	0.79	0.59	0.019	0.019	96	0	0.0	0.014
Max	5.29	18.66	3.26	3.62	0.020	0.021	96	0	0.0	0.015



Note: % Exceeded are 4 hr compliance periods where 50% of the samples are greater than 0.3 NTU

Date	Membrane Integrity																							
	Membrane 1			Membrane 2			Membrane 3			Membrane 4			Membrane 5			Membrane 6			Membrane 7			Membrane 8		
	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail	Air Hold Start Pressure (PSI)	Air Hold Stop Pressure (PSI)	Pass / Fail
10/1/2019	15.0	14.6	PASS	14.3	13.8	PASS	14.7	14.2	PASS	14.5	14.2	PASS	14.5	13.9	PASS	14.3	14.0	PASS	14.6	14.2	PASS	14.3	13.8	PASS
10/2/2019	14.9	14.5	PASS	14.5	14.1	PASS	14.7	14.3	PASS	14.4	14.1	PASS	14.4	13.9	PASS	14.4	14.0	PASS	14.8	14.4	PASS	14.3	13.8	PASS
10/3/2019	14.6	14.0	PASS	14.3	13.8	PASS	15.5	15.3	PASS	14.5	14.2	PASS	14.4	13.9	PASS	14.4	14.1	PASS	14.8	14.5	PASS	14.3	13.8	PASS
10/4/2019	14.6	14.0	PASS	14.3	13.8	PASS	14.7	14.2	PASS	14.4	14.1	PASS	14.3	13.7	PASS	14.4	14.0	PASS	14.4	14.0	PASS	14.3	13.8	PASS
10/5/2019	14.6	14.0	PASS	14.3	13.8	PASS	14.5	14.0	PASS	14.4	14.0	PASS	14.3	13.7	PASS	14.4	14.0	PASS	14.5	14.1	PASS	14.3	13.8	PASS
10/6/2019	14.6	14.0	PASS	14.3	13.7	PASS	14.7	14.2	PASS	14.6	14.3	PASS	14.3	13.7	PASS	14.4	14.0	PASS	14.3	13.9	PASS	14.3	13.8	PASS
10/7/2019	14.4	14.0	PASS	14.3	13.8	PASS	14.4	13.9	PASS	14.5	14.1	PASS	14.5	13.9	PASS	14.5	14.2	PASS	14.3	13.9	PASS	14.3	13.8	PASS
10/8/2019	14.4	13.9	PASS	14.3	13.8	PASS	14.5	14.0	PASS	14.3	14.0	PASS	14.5	13.9	PASS	14.5	14.2	PASS	14.5	14.1	PASS	14.3	13.8	PASS
10/9/2019	14.8	14.2	PASS	14.6	14.2	PASS	14.6	14.1	PASS	14.3	14.0	PASS	14.2	13.6	PASS	14.4	14.1	PASS	14.4	14.0	PASS	14.4	13.9	PASS
10/10/2019	15.0	14.6	PASS	14.3	13.8	PASS	14.3	13.9	PASS	14.5	14.1	PASS	14.6	14.0	PASS	14.4	14.0	PASS	14.3	13.9	PASS	14.4	13.8	PASS
10/11/2019	14.7	14.1	PASS	14.4	13.9	PASS	15.1	14.7	PASS	14.5	14.1	PASS	14.5	13.9	PASS	14.4	14.0	PASS	14.4	14.0	PASS	14.3	13.8	PASS
10/12/2019	15.1	14.7	PASS	14.3	13.8	PASS	14.6	14.1	PASS	14.5	14.2	PASS	14.5	13.9	PASS	14.4	14.1	PASS	14.5	14.1	PASS	14.4	13.8	PASS
10/13/2019	14.7	14.1	PASS	14.3	13.7	PASS	14.3	13.8	PASS	14.5	14.1	PASS	14.3	13.7	PASS	14.4	14.1	PASS	14.4	14.0	PASS	14.3	13.8	PASS
10/14/2019	14.7	14.2	PASS	14.3	13.8	PASS	14.4	13.9	PASS	14.4	14.1	PASS	15.0	14.5	PASS	14.4	14.1	PASS	15.1	14.8	PASS	14.4	13.8	PASS
10/15/2019	14.6	14.1	PASS	14.3	13.7	PASS	14.6	14.1	PASS	14.4	14.1	PASS	14.2	13.6	PASS	14.4	14.1	PASS	14.2	13.8	PASS	14.4	13.8	PASS
10/16/2019	14.6	14.0	PASS	14.3	13.8	PASS	14.8	14.4	PASS	14.5	14.2	PASS	14.5	13.9	PASS	14.4	14.1	PASS	14.5	14.1	PASS	14.3	13.8	PASS
10/17/2019	14.7	14.2	PASS	14.3	13.8	PASS	14.4	13.9	PASS	14.5	14.2	PASS	14.4	13.9	PASS	14.4	14.1	PASS	14.9	14.5	PASS	14.3	13.8	PASS
10/18/2019	14.5	13.9	PASS	14.3	13.8	PASS	14.6	14.1	PASS	14.4	14.1	PASS	14.5	13.9	PASS	14.4	14.1	PASS	14.6	14.2	PASS	14.4	13.8	PASS
10/19/2019	14.5	13.9	PASS	14.3	13.8	PASS	14.4	13.9	PASS	14.4	14.0	PASS	14.3	13.7	PASS	14.4	14.1	PASS	14.4	14.0	PASS	14.4	13.9	PASS
10/20/2019	14.8	14.3	PASS	14.3	13.8	PASS	14.6	14.1	PASS	14.7	14.4	PASS	14.4	13.9	PASS	14.4	14.1	PASS	14.4	14.0	PASS	14.3	13.8	PASS
10/21/2019	14.7	14.2	PASS	14.3	13.8	PASS	14.7	14.2	PASS	14.4	14.1	PASS	14.4	13.8	PASS	14.4	14.1	PASS	14.4	14.0	PASS	14.3	13.8	PASS
10/22/2019	14.7	14.2	PASS	14.3	13.8	PASS	14.3	13.8	PASS	14.4	14.0	PASS	14.3	13.7	PASS	14.4	14.1	PASS	14.7	14.3	PASS	14.4	13.9	PASS
10/23/2019	14.6	14.1	PASS	14.3	13.7	PASS	14.4	13.9	PASS	14.4	14.1	PASS	14.4	13.8	PASS	14.3	14.0	PASS	14.4	14.0	PASS	14.4	13.9	PASS
10/24/2019	14.0	13.3	PASS	14.3	13.8	PASS	14.3	13.8	PASS	14.3	14.0	PASS	14.3	13.7	PASS	14.4	14.1	PASS	14.5	14.1	PASS	14.3	13.8	PASS
10/25/2019	14.3	13.8	PASS	14.3	13.8	PASS	15.0	14.7	PASS	14.4	14.0	PASS	14.3	13.7	PASS	14.4	14.1	PASS	14.3	13.9	PASS	14.3	13.7	PASS
10/26/2019	14.3	13.8	PASS	14.3	13.8	PASS	14.3	13.8	PASS	14.4	14.0	PASS	14.3	13.7	PASS	14.4	14.0	PASS	14.2	13.8	PASS	14.4	13.9	PASS
10/27/2019	14.7	14.2	PASS	14.3	13.8	PASS	14.6	14.2	PASS	14.4	14.1	PASS	14.3	13.7	PASS	14.4	14.1	PASS	14.4	14.0	PASS	14.3	13.7	PASS
10/28/2019	14.6	14.1	PASS	14.5	14.1	PASS	14.6	14.2	PASS	14.6	14.3	PASS	14.3	13.8	PASS	14.4	14.1	PASS	14.5	14.1	PASS	14.3	13.8	PASS
10/29/2019	14.3	13.7	PASS	14.3	13.8	PASS	14.5	14.0	PASS	14.4	14.1	PASS	14.3	13.8	PASS	14.4	14.0	PASS	14.7	14.3	PASS	14.3	13.8	PASS
10/30/2019	14.6	14.1	PASS	14.3	13.8	PASS	14.5	14.0	PASS	14.5	14.1	PASS	14.3	13.7	PASS	14.4	14.1	PASS	14.5	14.0	PASS	14.3	13.8	PASS
10/31/2019	14.8	14.3	PASS	14.3	13.8	PASS	15.0	14.7	PASS	14.4	14.0	PASS	14.3	13.7	PASS	14.4	14.0	PASS	14.5	14.1	PASS	14.3	13.8	PASS

Integrity test performed every 24-hours



Treatment Chemical Dosages											
Date	Treated Water	Sodium Hypochlorite					Phosphoric Acid		Hydrofluorosilicic Acid		
		Raw Water	Membrane Feed Water	Dose pre-FW Tanks	Treated Water	Post FW Tanks	Dose pre-FW Tanks	Post FW Tanks	Raw Water	Dose pre-FW Tanks	Post FW Tanks
	Volume	Free Cl <sub>2</sub>					PO <sub>4</sub>		F		
	MG	mg/L					mg/L		mg/L		
	FIT-4000-1	AIT-1035-2	AIT-1035-4	Added	AIT-4030-1	AIT-4050-1	Added	AIT-4040-5	Lab	Added	Lab
10/1/2019	7.3	0.28	0.41	0.91	1.30	1.20	3.49	3.37	0.10	0.60	0.77
10/2/2019	7.8	0.27	0.24	1.02	1.34	1.19	3.49	3.37	0.09	0.60	0.74
10/3/2019	6.9	0.35	0.22	0.97	1.36	1.21	3.49	3.37	0.09	0.60	0.75
10/4/2019	7.1	0.18	0.19	0.96	1.35	1.21	3.49	3.38	0.10	0.60	0.77
10/5/2019	7.4	0.26	0.12	0.95	1.36	1.20	3.49	3.37	0.09	0.60	0.76
10/6/2019	7.3	0.37	0.19	0.89	1.38	1.22	3.49	3.37	0.09	0.60	0.75
10/7/2019	7.4	0.26	0.16	0.95	1.36	1.20	3.49	3.37	0.10	0.60	0.74
10/8/2019	6.8	0.28	0.13	1.06	1.38	1.20	3.50	3.41	0.10	0.60	0.76
10/9/2019	7.0	0.50	0.20	0.95	1.39	1.23	3.44	3.43	0.09	0.61	0.80
10/10/2019	6.9	0.44	0.25	1.08	1.33	1.21	3.44	3.42	0.10	0.59	0.87
10/11/2019	6.6	0.43	0.26	1.10	1.37	1.22	3.44	3.42	0.10	0.56	0.88
10/12/2019	7.1	0.36	0.24	1.15	1.34	1.23	3.44	3.41	0.09	0.55	0.80
10/13/2019	7.1	0.38	0.21	1.12	1.36	1.22	3.44	3.42	0.10	0.52	0.83
10/14/2019	6.8	0.52	0.26	1.10	1.36	1.23	3.44	3.40	0.09	0.50	0.81
10/15/2019	6.9	0.68	0.35	0.95	1.36	1.24	3.44	3.39	0.09	0.50	0.76
10/16/2019	7.0	0.77	0.43	0.81	1.35	1.24	3.44	3.39	0.09	0.50	0.76
10/17/2019	6.9	0.77	0.53	0.79	1.31	1.23	3.44	3.39	0.10	0.50	0.74
10/18/2019	7.0	0.60	0.52	0.84	1.32	1.23	3.44	3.38	0.09	0.51	0.75
10/19/2019	6.6	0.53	0.44	0.91	1.28	1.21	3.44	3.38	0.08	0.52	0.77
10/20/2019	6.6	0.48	0.38	0.97	1.28	1.20	3.44	3.39	0.10	0.52	0.76
10/21/2019	7.1	0.53	0.36	1.00	1.28	1.22	3.44	3.38	0.10	0.52	0.78
10/22/2019	7.0	0.59	0.36	0.89	1.26	1.24	3.44	3.36	0.10	0.52	0.79
10/23/2019	6.3	0.42	0.35	0.98	1.29	1.22	3.44	3.38	0.10	0.52	0.78
10/24/2019	6.4	0.38	0.28	1.05	1.27	1.21	3.44	3.39	0.10	0.52	0.76
10/25/2019	7.0	0.63	0.31	0.99	1.34	1.23	3.44	3.37	0.10	0.52	0.76
10/26/2019	6.7	0.65	0.40	0.90	1.28	1.24	3.44	3.38	0.09	0.52	0.77
10/27/2019	6.8	0.72	0.48	0.86	1.28	1.21	3.44	3.38	0.09	0.52	0.76
10/28/2019	6.9	0.62	0.50	0.88	1.29	1.22	3.44	3.38	0.09	0.52	0.75
10/29/2019	6.1	0.52	0.45	0.88	1.28	1.22	3.44	3.38	0.09	0.52	0.73
10/30/2019	6.9	0.58	0.43	0.90	1.28	1.21	3.44	3.38	0.09	0.52	0.74
10/31/2019	6.4	0.60	0.44	0.85	1.27	1.21	3.44	3.39	0.06	0.54	0.71
Avg	6.9	0.48	0.32	0.96	1.32	1.22	3.45	3.39	0.09	0.55	0.77
Min	6.1	0.18	0.12	0.79	1.26	1.19	3.44	3.36	0.06	0.50	0.71
Max	7.8	0.77	0.53	1.15	1.39	1.24	3.50	3.43	0.10	0.61	0.88





Disinfection CT														
Date	Pipeline CT				FW Tank CT							Compliance		
	Whitestone	Travel Time	Residual	CT	FW Tank 1	FW Tank 2	Plant	Contact Time	Free Cl <sub>2</sub>	CT	Total CT	Temp	CT	CT
	Flow	Min	RW	Achieved	Min Level	Min Level	Flow	Min	Min	Achieved	Achieved	Avg	Required	Met
	MGD	Minutes	mg/L	mg-min/L	ft	ft	MGD	Minutes	mg/L	mg-min/L	mg-min/L	°C	mg-min/L	Y/N
	Entry	Calculated	AIT-1035-2	Calculated	LIT-4005-1	LIT-4005-2	Calculated	Calculated	Calculated	Calculated	Calculated	TIT-1000	Calculated	Calculated
10/1/2019	42.6	2,933	0.28	810	28.9	24.4	7.1	517	1.20	617.69	1,427.58	14.5	6.00	Y
10/2/2019	38.0	3,288	0.27	896	29.0	24.7	7.5	493	1.18	579.26	1,475.55	14.8	6.00	Y
10/3/2019	36.5	3,427	0.35	1190	28.9	24.7	6.7	546	1.20	653.14	1,843.64	14.6	6.00	Y
10/4/2019	38.7	3,235	0.18	575	29.0	24.9	6.8	543	1.20	648.92	1,223.90	14.6	6.00	Y
10/5/2019	53.5	2,339	0.26	611	28.9	24.1	7.1	510	1.16	591.89	1,203.33	14.9	6.00	Y
10/6/2019	53.6	2,334	0.37	873	28.9	24.1	7.1	511	1.20	611.64	1,484.48	15.0	4.00	Y
10/7/2019	51.0	2,452	0.26	646	28.9	24.8	7.1	518	1.18	609.22	1,255.50	15.2	4.00	Y
10/8/2019	43.6	2,867	0.28	803	28.9	23.5	6.6	546	1.17	637.36	1,440.81	15.2	4.00	Y
10/9/2019	41.0	3,048	0.50	1522	29.0	25.4	6.7	552	1.20	664.50	2,186.41	15.2	4.00	Y
10/10/2019	42.2	2,962	0.44	1297	28.9	23.6	6.7	538	1.18	636.26	1,933.33	15.1	4.00	Y
10/11/2019	43.1	2,900	0.43	1238	28.9	22.4	6.4	546	1.20	657.20	1,895.65	15.1	4.00	Y
10/12/2019	53.2	2,353	0.36	849	29.0	23.3	6.8	529	1.21	639.33	1,488.08	14.9	6.00	Y
10/13/2019	54.3	2,305	0.38	871	28.8	24.3	6.8	535	1.18	631.87	1,503.21	14.9	6.00	Y
10/14/2019	54.3	2,303	0.52	1208	28.9	24.1	6.7	543	1.21	656.92	1,864.86	14.8	6.00	Y
10/15/2019	51.1	2,449	0.68	1664	28.9	24.0	6.6	549	1.22	667.47	2,331.11	14.5	6.00	Y
10/16/2019	53.5	2,337	0.77	1789	28.9	23.9	6.7	540	1.21	653.41	2,442.90	14.1	6.00	Y
10/17/2019	53.6	2,335	0.77	1801	28.9	24.4	6.6	554	1.21	670.38	2,471.31	13.5	6.00	Y
10/18/2019	49.7	2,519	0.60	1519	28.9	23.0	6.8	526	1.22	643.37	2,162.82	13.2	6.00	Y
10/19/2019	53.3	2,348	0.53	1236	28.9	24.2	6.2	583	1.19	693.19	1,929.40	12.9	6.00	Y
10/20/2019	53.3	2,348	0.48	1126	28.9	24.0	6.4	566	1.18	665.04	1,790.60	12.9	6.00	Y
10/21/2019	52.9	2,363	0.53	1242	28.9	24.6	6.8	541	1.19	643.11	1,884.79	12.8	6.00	Y
10/22/2019	44.3	2,826	0.59	1678	28.0	20.5	6.7	498	1.18	588.11	2,266.39	12.8	6.00	Y
10/23/2019	39.2	3,187	0.42	1338	28.8	24.3	6.1	596	1.20	716.61	2,054.13	12.6	6.00	Y
10/24/2019	39.3	3,185	0.38	1209	28.9	23.5	6.2	576	1.17	676.70	1,885.67	12.5	6.00	Y
10/25/2019	39.2	3,190	0.63	2011	28.7	23.5	6.6	545	1.20	651.95	2,662.62	12.4	6.00	Y
10/26/2019	53.1	2,357	0.65	1539	28.8	23.3	6.5	548	1.21	662.67	2,201.58	12.4	6.00	Y
10/27/2019	53.1	2,357	0.72	1708	28.9	24.3	6.5	560	1.18	661.69	2,369.20	12.2	6.00	Y
10/28/2019	49.0	2,552	0.62	1592	28.9	24.4	6.6	555	1.20	667.65	2,259.26	12.1	6.00	Y
10/29/2019	40.9	3,061	0.52	1592	28.8	24.4	5.9	619	1.19	735.71	2,327.61	12.0	6.00	Y
10/30/2019	36.3	3,443	0.58	1998	29.0	24.3	6.6	550	1.20	658.10	2,656.56	11.9	6.00	Y
10/31/2019	36.4	3,440	0.60	2,056	29.0	23.8	6.2	583	1.19	692.68	2,749.05	11.8	6.00	Y
Avg	46.6	2,743	0.48	1,306	28.9	24.0	6.6	546	1.19	651.07	1,957.14	13.7	5.61	NA
Min	36.3	2,303	0.18	575	28.0	20.5	5.9	493	1.16	579.26	1,203.33	11.8	4.00	NA
Max	54.3	3,443	0.77	2,056	29.0	25.4	7.5	619	1.22	735.71	2,749.05	15.2	6.00	NA



**Notes:**

Pipeline volume factor in SMMWSC to RW tank: 125,090 MG-min/day

Distribution System Monitoring

Chlorine Residual at Bacteriological Monitoring Stations (mg/L Free Cl2)

WSSN: Date	0072	0390				0400			0470							0485				0517	0518		2180		
	Akron	Bangor Twp.				Bangor Monitor Dist.			Bay City							Bay County				Beaver Rd	Beaver Twp		Essexville		
	1	3	4	5	6	7	9	10	11	12	13	14	15	16	17	18	19	20	22	24	26	29	30	32	
10/1/2019		0.37	0.33	0.44	1.09											0.65	0.72	0.84	0.66	0.38				0.11	
10/2/2019									0.85	0.15	0.28	0.86	0.19	0.84	0.32										
10/3/2019						0.84	1.04						0.46												
10/4/2019																									
10/5/2019																									
10/6/2019																									
10/7/2019									0.64	0.14	0.30	0.56	0.13	0.94	0.61										1.09
10/8/2019	0.10			0.43	0.98											0.94	0.83	0.97	0.83	0.52			0.11	0.16	
10/9/2019																									
10/10/2019								1.15	0.51		0.28	0.62	0.08	0.87	0.33						0.94				
10/11/2019																									
10/12/2019																									
10/13/2019																									
10/14/2019																									1.05
10/15/2019		0.85	0.47	0.32	1.14																				
10/16/2019									0.54	0.06	0.30	0.62	0.05	0.89	0.27										
10/17/2019																									
10/18/2019																									
10/19/2019																									
10/20/2019																									
10/21/2019									0.64	0.18	0.37	0.71	0.12	0.91	0.49										1.08
10/22/2019																									
10/23/2019																									
10/24/2019									0.53	0.11	0.44	0.68	0.14	0.95	0.44										
10/25/2019																									
10/26/2019																									
10/27/2019																									
10/28/2019																									0.95
10/29/2019																									
10/30/2019									0.79	0.12	0.41	0.74	0.18	0.89	0.58										
10/31/2019																									
Average	0.10	0.64				1.01			0.47							0.73				0.94	0.13		1.04		
Min	0.10	0.32				0.84			0.05							0.38				0.94	0.11		0.95		
Max	0.10	1.14				1.15			0.95							0.97				0.94	0.16		1.09		



MONITORING STATION ADDRESSES

- |                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>1. Sample station at corner of 5758 M-25 &amp; F</li> <li>3. Bangor Fire Station, 3921 Wheeler</li> <li>4. BCDWS Admin. Bldg. 3933 Patterson Rd.</li> <li>5. 7-11, 3543 S. Old Kawkawlin Rd.</li> <li>6. Admiral Petroleum, 314 S Euclid Ave.</li> <li>7. Sequin Lumber, 3881 Euclid Ave</li> <li>9. B's Boutique, 2981 Midland Rd</li> <li>10. Little Caesars, 3475 E North Union Rd</li> </ul> | <ul style="list-style-type: none"> <li>11. Number 1 Fire Station, 1401 Center Ave</li> <li>12. Number 2 Fire Station, 1000 Fremont Ave</li> <li>13. Skizak's Sport Shop, 807 Salzburg Ave</li> <li>14. Number 4 Fire Station, 212 S. Dean St</li> <li>15. Number 5 Fire Station, 1209 Smith St</li> <li>16. Bay City Hall, 301 Washington Ave,</li> <li>17. Skipper Buds Marina, 1809 S Water St</li> <li>18. Bay Valley Animal Hospital 6015 WS Saginaw Rd</li> </ul> | <ul style="list-style-type: none"> <li>19. Dore's M-84 Party Store, 6183 WS Saginaw Rd</li> <li>20. Pump Station #13, 6000 WS Saginaw Rd</li> <li>22. Duce's Char House, 432 N. Tuscola Rd</li> <li>24. Little Learners Daycare, 1694 Cass Ave.</li> <li>26. Wieland Contracting, 2443 S Mackinaw Rd</li> <li>29. Sample Station, 2515 S. 11 Mile Rd</li> <li>30. Sample Station, 340 W. Beaver Rd</li> <li>32. Essexville City Hall, 1107 Woodside Ave</li> </ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Distribution System Monitoring																								
Chlorine Residual at Bacteriological Monitoring Stations (mg/L Free Cl2)																								
WSSN:	2465		2960			3565			3570		4280		4440			5330		5335		5540	7125			7134
	Date	Fraser Twp.		Hampton Twp.			Kawkawlin Twp.			Kawkawlin Met.		Merritt Twp.		Monitor Twp.			City Pinconning		Pinconning Twp.		Portsmouth	Williams Twp.		
	34	35	37	38	39	40	41	42	43	45	46	48	49	52	55	58	59	61	63	65	68	69	70	72
10/1/2019			0.40	0.78	0.38						0.13									0.45	0.56	0.75	0.25	0.18
10/2/2019																								
10/3/2019	0.41	0.95				1.07	0.58		0.70				0.96	0.59	0.73	0.51		0.46	0.56					
10/4/2019																								
10/5/2019																								
10/6/2019																								
10/7/2019																								
10/8/2019			0.41	0.66	0.59						0.58											0.46	0.52	0.18
10/9/2019																								
10/10/2019								0.60	0.49				1.08	0.71	0.66		0.48							
10/11/2019																								
10/12/2019																								
10/13/2019																								
10/14/2019																						0.61	0.54	0.15
10/15/2019																								
10/16/2019																								
10/17/2019			0.43	0.66	0.36																			
10/18/2019																								
10/19/2019																								
10/20/2019																								
10/21/2019																								
10/22/2019			0.59	0.68	0.58																			
10/23/2019																								
10/24/2019																								
10/25/2019																								
10/26/2019																								
10/27/2019																								
10/28/2019																								
10/29/2019																								
10/30/2019																								
10/31/2019																								
Average	0.68		0.54			0.75			0.60		0.36		0.79			0.50		0.51		0.45	0.45			0.18
Min	0.41		0.36			0.58			0.49		0.13		0.59			0.48		0.46		0.45	0.15			0.18
Max	0.95		0.78			1.07			0.70		0.58		1.08			0.51		0.56		0.45	0.75			0.18



MONITORING STATION ADDRESSES

- 34. Fraser Elevated Tank, 2949 1/2 N. Huron Rd
- 35. Lloyd's Cabinet, 1947 N Huron Rd
- 37. Hampton DPW, 950 Wagner Rd.
- 38. Bay County Golf Course, 584 W Hampton Rd.
- 39. Sewer Lift Station, 902 Nebobish Rd.
- 40. Bay Co. Road Commission, 2600 E Beaver Rd
- 41. Parish Rd. Elevated Tank, 1770 E. Parish Rd
- 42. Linwood Tile, 205 S Huron Rd

- 43. Kawkawlin Party Store, 105 Grove St
- 45. Kawkawlin Restaurant, 103 S Huron Rd
- 46. John's Bar, 1476 S Tuscola Rd
- 48. Tool Shed Bar, 12 W Munger Rd
- 49. Wilder Rd Party Store, 2951 E Wilder Rd
- 52. Monitor Twp. Elevated Tank, 1611 E. Midland Rd
- 55. Auburn Fertilizer, 4640 S 7 Mile Rd
- 58. Pinconning City Hall, 208 S Manitou St

- 59. Marathon Gas Station, 511 S Mabel St
- 61. Pinconning Meter Pit, 3005 N Huron Rd
- 63. Master Meter Pit, 2865 Pinconning Rd
- 65. Ike's Welding, 50 N Finn Rd
- 68. Williams Township Hall, 1080 W Midland Rd
- 69. Pump Station, 490 W. Salzburg & 9 Mile Rd
- 70. 11 Mile Elevated Tank, 5003 S. 11 Mile Rd
- 72. Lindy's Sales, 9051 M-25

Distribution System Bacteriological							
Water Supplier Bacteriological Analysis Report							
MICHIGAN DEPARTMENT OF PUBLIC HEALTH Bureau of Environmental Health Water Supplier Bacteriological Analysis Report				Name of Water Supply			
				Bay Area Water Treatment Plant			
				October, 2019			
COUNTY	COMMUNITY	WSSN NUMBER	DISTRIBUTION SYSTEM SAMPLES				NUMBER REPEAT SAMPLES
			avg free cl2 mg/L	NUMBER REQUIRED	NUMBER COLLECTED	NUMBER POSITIVE	
Tuscola	Akron	0072	0.10	1	1	0	0
BAY	Bangor Township	0390	0.64	10	10	0	0
BAY	Bangor-Monitor Dist.	0400	1.01	3	3	0	0
BAY	Bay City	0470	0.47	40	49	1	3
BAY	Bay County (Frankl./Monitor/Portsm.)	0485	0.73	10	10	0	0
BAY	Beaver Road Area	0517	0.94	1	1	0	0
BAY	Beaver Township	0518	0.13	2	3	0	0
BAY	Essexville	2180	1.04	4	4	0	0
BAY	Fraser Township	2465	0.68	2	2	0	0
BAY	Hampton Township	2960	0.54	10	12	0	0
BAY	Kawkawlin Township	3565	0.75	3	3	0	0
BAY	Kawkawlin Metro Dist.	3570	0.60	2	2	0	0
BAY	Merritt Township	4280	0.36	2	2	0	0
BAY	Monitor Township	4440	0.79	6	6	0	0
BAY	City of Pinconning	5330	0.50	2	2	0	0
BAY	Pinconning Township	5335	0.51	2	2	0	0
BAY	Portsmouth Township	5540	0.45	1	1	0	0
BAY	Williams Township	7125	0.45	6	9	0	0
Tuscola	Wisner	7134	0.18	1	1	0	0
Average Free Cl2 Residual of All Distribution Sites			0.57	mg/L			
1. Total distribution samples			123				
2. Total distribution samples with detectable free cl2 residual			123				
3. Total distribution samples with no detectable free cl2 residual			0				
4. Total distribution samples with no detectable free cl2 residual and HPC was <500			NA				
5. Total distribution samples with no detectable free cl2 residual and HPC was >500			NA				
6. Percent of distribution samples with no detectable free cl2 residual			0.00%				
7. Percent shown line #6 in previous monthly report			0.00%				
<p>10/2/2019, Sample #15, 1209 E. Smith St. Bay City, was positive for Total Coliform, negative for E. coli.</p> <p>10/3/2019, Sample #15, 15A, and 15B repeat samples were negative for total coliforms and E. coli.</p> <p>Free chlorine at #15A was 0.16 mg/L, free chlorine at #15B was 0.12 mg/L.</p>							

