

ADRIAN WWTP

INFLUENT SHEET

ADRIAN, MICHIGAN

MARCH 2020

DAY	CHEMICALS ADDED FeCl ₃ Gals.	FLOW		BOD ₅	
		TOTAL	MAX RATE	mg/L	Lbs.
		MGD	MGD	00310	85001
1	380	5.134	7.4	178	7622
2	230	8.909	16.2	211	15678
3	250	6.873	9.4	182	10432
4	240	5.918	9.4	160	7897
5	280	5.631	8.5	116	5448
6	180	5.469	8.5	126	5747
7	230	5.430	8.0	140	6340
8	220	5.345	8.7	144	6419
9	250	5.398	8.1	142	6393
10	260	5.598	8.1	143	6676
11	250	5.301	6.5	160	7074
12	260	5.338	8.3	156	6945
13	390	5.041	8.4	168	7063
14	320	4.767	6.6	77	3061
15	370	4.880	8.5	160	6512
16	580	4.865	7.5	198	8034
17	600	4.738	6.9	156	6164
18	350	5.648	14.1	189	8903
19	310	6.654	14.9	154	8546
20	280	7.159	8.9	94	5612
21	270	5.737	9.1	101	4833
22	260	5.535	8.8	116	5355
23	250	6.017	13.7	108	5420
24	210	5.486	8.1	103	4713
25	200	5.308	7.4	137	6065
26	260	5.635	8.4	141	6626
27	250	5.787	10.6	134	6467
28	240	8.482	14.2	116	8206
29	250	8.354	14.2	95	6619
30	210	6.641	9.6	113	6259
31	130	6.014	9.2	104	5216
TOTAL	8760	183.092		4322	212343
AVERAGE	283	5.906		139	6850

ADRIAN WWTP

INFLUENT SHEET

ADRIAN, MICHIGAN

MARCH 2020

DAY	SUS. SOLIDS		VOLATILE SS mg/L 00535	pH SU 00400	T. PHOSPHORUS		AMMONIA-N	
	mg/L 00530	Lbs. 8500			mg/L 00665	Lbs. 85004	mg/L 00611	Lbs. 81020
1	182	7793	150	7.3	4.4	188	23.8	1019
2	314	23331	252	7.1	3.7	275	15.0	1115
3	218	12496	182	7.4	3.0	172	20.1	1152
4	166	8193	144	7.3	3.1	153	21.0	1036
5	122	5729	106	7.4	3.2	150	18.0	845
6	130	5929	126	7.4				
7	116	5253	112	7.2				
8	120	5349	106	7.4	3.4	152	21.1	941
9	134	6033	122	7.3	3.6	162	23.0	1035
10	185	8637	168	7.4	3.6	168	19.8	924
11	136	6013	114	7.4	4.1	181	21.2	937
12	146	6500	126	7.4	3.7	165	22.0	979
13	130	5465	116	7.5				
14	144	5725	134	7.4				
15	390	15873	368	7.4	3.9	159	23.5	956
16	156	6330	136	7.5	4.2	170	25.4	1031
17	138	5453	124	7.4	4.0	158	24.5	968
18	230	10834	196	7.4	4.1	193	21.5	1013
19	170	9434	140	7.5	3.2	178	18.1	1004
20	87	5194	85	7.4				
21	84	4019	80	7.3				
22	98	4524	88	7.4	3.0	138	17.0	785
23	116	5821	110	7.2	2.6	130	16.1	808
24	84	3843	82	7.4	2.6	119	16.8	769
25	108	4781	102	7.4	2.9	128	19.3	854
26	124	5827	120	7.4	3.0	141	17.2	808
27	112	5406	104	7.4				
28	132	9338	114	7.4				
29	90	6271	74	7.4	2.7	188	10.8	752
30	129	7145	123	7.5	2.2	122	13.1	726
31	92	4614	88	7.5	2.7	135	17.6	883
TOTAL		227153	4092		76.9	3727	445.9	21342
AVERAGE	148	7328	132	7.4	3.3	162	19.4	928

PRIMARY EFFLUENT SHEET

ADRIAN, MICHIGAN

MARCH 2020

DAY	FLOW		BOD ₅		SUS. SOLIDS		VSS	T. PHOSPHORUS		AMMONIA-N		PRIMARY SLUDGE Kgal
	MGD		mg/L	Lbs.	mg/L	Lbs.	mg/L	mg/L	Lbs.	mg/L	Lbs.	
	1-4	5-7	00310	85001	00530	85002	00535	00665	85004	00610	81019	
1	3.074	2.385	63	2868	48	2185	44	1.8	82	16.1	733	69
2	5.257	4.096	72	5616	48	3744	46	1.9	148	9.9	772	63
3	4.101	3.135	60	3621	30	1810	28	1.5	91	9.7	585	63
4	3.547	2.659	54	2795	16	828	16	1.5	78	11.5	595	57
5	3.371	2.550	57	2815	14	691	14	1.9	94	12.8	632	65
6	3.304	2.458	58	2787	28	1346	26					68
7	3.299	2.476	72	3468	32	1541	30					67
8	3.221	2.425	66	3108	26	1224	24	2.0	94	14.8	697	60
9	3.249	2.452	87	4137	42	1997	38	2.1	100	15.4	732	49
10	3.331	2.510	79	3848	36	1754	36	1.9	93	15.0	731	56
11	3.204	2.388	70	3265	38	1772	26	2.1	98	15.5	723	57
12	3.239	2.414	80	3772	48	2263	44	2.1	99	15.6	735	51
13	3.063	2.253	75	3325	30	1330	28					65
14	2.893	2.109	80	3337	52	2169	50					70
15	2.988	2.186	76	3279	36	1553	34	1.9	82	15.1	652	70
16	2.998	2.163	84	3616	34	1463	32	1.7	73	18.3	788	70
17	2.923	2.103	68	2850	40	1677	28	1.4	59	17.8	746	62
18	3.438	2.533	80	3984	54	2689	48	1.9	95	17.4	866	59
19	3.969	3.013	86	5008	52	3028	44	1.7	99	16.8	978	63
20	4.266	3.255	75	4704	36	2258	34					60
21	3.446	2.590	84	4229	18	906	16					70
22	3.332	2.529	86	4204	30	1466	28	1.5	73	14.8	723	71
23	3.595	2.769	73	3875	24	1274	24	1.6	85	14.5	770	69
24	3.271	2.492	67	3220	28	1346	28	1.6	77	14.7	707	74
25	3.172	2.423	84	3920	38	1773	38	1.8	84	16.2	756	74
26	3.391	2.611	76	3804	30	1502	30	1.8	90	14.2	711	70
27	3.474	2.677	68	3488	38	1949	36					62
28	5.015	3.927	77	5742	40	2983	40					59
29	4.939	3.866	67	4920	34	2497	32	1.7	125	9.0	661	59
30	3.952	3.060	65	3801	30	1754	28	1.4	82	11.0	643	61
31	3.585	2.752	63	3330	26	1374	24	1.7	90	13.5	713	62
TOTAL	109.907	83.259	2252	116736	1076	56149		40.5	2089	329.6	16650	
AVERAGE	3.545	2.686	73	3766	35	1811	32	1.8	91	14.3	724	64

ADRIAN WWTP

EAST ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

MARCH 2020

DAY	AERATION	DETENTION	SLUDGE	ORGANIC	AIR	D.O.	SS	MIXED LIQUOR			S.S.	RETURN ACTIVATED SLUDGE		WASTE	
	VOLUME	TIME	AGE	LOADING	SUPPLIED		mg/L	VSS	SETTLED	SDI	mg/L	V.S.S.	RETURN	RETURN	SLUDGE
	KCF	HOURS	DAYS	F-M	MIL CU. FT.			mg/L	%	%		mg/L	MGD	%	Kgal.
	80993	81001	80990	80992	81000	00300	70323	70323	81004	81007	81006	70325			80991
1	144	8.4	8.8	0.18	3.6	9.6	1210	998	10	1.21	2520	2084	2.671	87	98
2	144	4.9	4.4	0.42	3.4	9.9	1040	832	10	1.04	2060	1670	2.661	51	123
3	144	6.3	9.7	0.26	3.5	10.7	1110	885	11	1.01	2820	2298	2.619	64	76
4	144	7.3	22.2	0.19	3.6	11.1	1170	927	12	0.98	2040	1620	2.644	75	74
5	144	7.7	25.3	0.21	3.7	11.3	1110	856	12	0.93	2000	1564	2.672	79	78
6	144	7.8	12.3	0.21	3.7	11.0	1060	842	12	0.88	2580	2066	2.674	81	79
7	144	7.8	11.8	0.24	3.8	10.8	1160	936	12	0.97	1820	1456	2.673	81	78
8	144	8.0	14.4	0.22	3.6	11.1	1120	906	11	1.02	1760	1406	2.674	83	78
9	144	8.0	8.8	0.29	3.5	10.2	1120	900	10	1.12	1740	1394	2.669	82	79
10	144	7.8	10.4	0.26	3.6	10.8	1160	951	10	1.16	2060	1682	2.673	80	78
11	144	8.1	10.4	0.22	3.6	10.8	1170	951	10	1.17	1860	1510	2.670	83	78
12	144	8.0	7.5	0.28	3.5	10.7	1080	861	10	1.08	1800	1438	2.669	82	78
13	144	8.4	11.7	0.27	3.6	10.7	1000	788	10	1.00	2100	1678	2.671	87	79
14	144	8.9	7.7	0.25	3.8	11.2	1080	873	10	1.08	1760	1408	2.669	92	78
15	144	8.7	11.0	0.23	3.8	11.3	1100	898	10	1.10	1700	1376	2.674	89	79
16	144	8.6	10.8	0.28	3.7	10.7	1020	823	10	1.02	1300	1032	2.677	89	79
17	144	8.8	9.7	0.22	3.6	10.9	1050	852	9	1.17	1580	1278	2.676	92	74
18	144	7.5	6.1	0.30	3.7	11.1	1060	861	9	1.18	1280	1030	2.680	78	72
19	144	6.5	4.7	0.45	3.6	9.7	900	705	9	1.00	1560	1240	2.677	67	68
20	144	6.1	6.5	0.40	3.5	10.6	930	735	8	1.16	1860	1510	2.682	63	64
21	144	7.5	18.9	0.31	3.8	11.4	1090	870	9	1.21	1800	1438	2.680	78	64
22	144	7.8	11.6	0.31	3.8	11.3	1080	858	9	1.20	1700	1388	2.683	81	64
23	144	7.2	13.6	0.28	3.7	11.2	1090	877	8	1.36	1580	1254	2.682	75	65
24	144	7.9	13.5	0.21	3.7	11.5	1150	948	8	1.44	2080	1722	2.681	82	64
25	144	8.1	10.0	0.27	3.6	11.3	1120	915	8	1.40	2320	1900	2.684	85	64
26	144	7.6	12.0	0.26	3.5	10.8	1130	932	8	1.41	1620	1348	2.681	79	65
27	144	7.4	8.8	0.25	3.5	10.7	1080	879	8	1.35	3340	2712	2.684	77	64
28	144	5.2	5.9	0.40	3.5	10.6	1100	903	7	1.57	2300	1878	2.682	53	82
29	144	5.2	7.2	0.34	3.4	10.1	1120	916	8	1.40	3500	2862	2.683	54	87
30	144	6.5	10.5	0.26	3.5	11.0	1160	935	8	1.45	2200	1730	2.683	68	66
31	144	7.2	13.1	0.23	3.6	10.7	1130	897	8	1.41	2320	1874	2.688	75	65
AVERAGE	144	7.5	11.0	0.27	3.6	10.8	1094	881	9	1.18	2031	1640	2.674	77	75

ADRIAN WWTP

WEST #1 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

MARCH 2020

DAY	AERATION	DETENTION	SLUDGE	ORGANIC	AIR	D.O.	SS	MIXED LIQUOR			S.S.	RETURN ACTIVATED SLUDGE		WASTE	
	VOLUME	TIME	AGE	LOADING	SUPPLIED		mg/L	VSS	SETTLED	SDI	mg/L	V.S.S.	RETURN	RETURN	SLUDGE
	KCF	HOURS	DAYS	F-M	MIL CU. FT.			mg/L	%	%		mg/L	MGD	%	Kgal.
	80993	81001	80990	80992	81000	00300	70323	70323	81004	81007	81006	70325			80991
1	61	9.2	10.0	0.16	0.7	10.3	1250	1017	18	0.69	2160	1776	1.194	100	23
2	61	5.3	5.4	0.34	0.6	9.2	1170	939	17	0.69	2040	1648	1.194	58	24
3	61	7.0	12.2	0.20	0.7	9.6	1260	1019	18	0.70	3640	2956	1.192	76	24
4	61	8.2	26.8	0.16	0.7	9.5	1250	1006	17	0.74	3080	2474	1.193	90	21
5	61	8.6	32.7	0.16	0.7	9.3	1280	1025	16	0.80	2880	2326	1.192	93	19
6	61	8.9	18.7	0.14	0.7	9.1	1410	1144	17	0.83	3600	2918	1.192	97	21
7	61	8.8	16.2	0.17	0.7	8.9	1410	1159	16	0.88	3120	2540	1.192	96	23
8	61	9.0	21.4	0.14	0.7	8.5	1480	1213	17	0.87	3000	2454	1.191	98	22
9	61	8.9	12.0	0.21	0.7	7.0	1350	1094	16	0.84	3260	2658	1.191	97	24
10	61	8.7	14.2	0.19	0.7	8.3	1410	1159	15	0.94	2940	2392	1.190	95	26
11	61	9.2	15.1	0.15	0.7	8.6	1500	1242	15	1.00	3360	2784	1.191	100	30
12	61	9.1	10.6	0.19	0.7	8.6	1350	1093	15	0.90	2980	2446	1.191	99	32
13	61	9.7	18.5	0.17	0.7	8.9	1370	1121	15	0.91	3080	2510	1.190	106	32
14	61	10.4	11.8	0.16	0.7	9.5	1420	1171	14	1.01	2520	2072	1.191	113	33
15	61	10.0	16.2	0.16	0.7	9.1	1400	1164	14	1.00	2640	2180	1.192	109	34
16	61	10.1	16.6	0.18	0.7	7.4	1340	1102	14	0.96	2620	2160	1.191	110	36
17	61	10.4	14.2	0.15	0.7	8.0	1310	1080	13	1.01	2200	1810	1.190	113	34
18	61	8.6	8.6	0.21	0.7	8.7	1290	1063	13	0.99	2440	2028	1.191	94	34
19	61	7.3	7.3	0.27	0.7	7.8	1260	1035	13	0.97	2620	2168	1.191	79	34
20	61	6.7	9.2	0.28	0.7	8.8	1180	964	13	0.91	3140	2594	1.190	73	35
21	61	8.5	23.9	0.24	0.7	9.6	1220	999	12	1.02	2800	2316	1.192	92	34
22	61	8.7	13.8	0.24	0.7	9.3	1150	974	12	0.96	2480	2044	1.190	94	34
23	61	7.9	15.0	0.25	0.8	9.1	1090	879	12	0.91	2540	2090	1.189	86	34
24	61	8.8	16.0	0.18	0.8	9.3	1220	1021	13	0.94	2520	2116	1.194	96	33
25	61	9.0	12.4	0.21	0.8	8.7	1250	1046	12	1.04	2860	2406	1.193	98	33
26	61	8.4	12.9	0.24	0.8	8.3	1110	924	11	1.01	2560	2154	1.192	91	34
27	61	8.2	10.0	0.22	0.9	8.7	1110	927	10	1.11	2740	2310	1.193	89	34
28	61	5.6	6.4	0.36	0.9	8.8	1100	918	10	1.10	2220	1850	1.194	61	36
29	61	5.7	7.2	0.33	0.9	9.0	1040	863	10	1.04	3060	2530	1.192	62	36
30	61	7.2	9.8	0.28	0.9	9.7	990	791	10	0.99	3020	2458	1.191	78	34
31	61	8.0	13.1	0.23	0.9	8.7	1030	839	9	1.14	2860	2342	1.193	87	33
AVERAGE	61	8.4	14.1	0.21	0.7	8.8	1258	1032	14	0.93	2806	2307	1.192	91	30

ADRIAN WWTP

WEST #2 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

MARCH 2020

DAY	AERATION	DETENTION	SLUDGE	ORGANIC	AIR	D.O.	SS	MIXED LIQUOR			S.S.	RETURN ACTIVATED SLUDGE		WASTE	
	VOLUME	TIME	AGE	LOADING	SUPPLIED		mg/L	VSS	SETTLED	SDI	mg/L	V.S.S.	RETURN	RETURN	SLUDGE
	KCF	HOURS	DAYS	F-M	MIL CU. FT.			mg/L	%	%		mg/L	MGD	%	Kgal.
	80993	81001	80990	80992	81000	00300	70323	70323	81004	81007	81006	70325			80991
1	61	9.2	10.3	0.16	0.8	10.4	1290	1050	18	0.72	2300	1884	1.197	100	29
2	61	5.3	5.5	0.34	0.8	10.0	1190	963	17	0.70	2080	1688	1.198	58	29
3	61	7.0	11.3	0.22	0.8	9.9	1160	936	17	0.68	3640	2950	1.195	76	34
4	61	8.2	24.0	0.18	0.8	10.4	1120	891	17	0.66	3040	2446	1.194	90	37
5	61	8.6	29.4	0.18	0.8	10.0	1150	906	16	0.72	2600	2078	1.199	94	37
6	61	8.9	14.9	0.17	0.8	9.6	1120	903	15	0.75	3260	2632	1.199	98	38
7	61	8.8	13.6	0.20	0.8	9.6	1180	960	15	0.79	2540	2054	1.198	97	39
8	61	9.0	16.2	0.19	0.8	9.0	1120	907	13	0.86	2180	1776	1.200	99	39
9	61	8.9	9.8	0.26	0.8	8.2	1110	903	13	0.85	2460	2006	1.196	98	39
10	61	8.7	10.8	0.25	0.8	8.5	1070	875	14	0.76	2420	1972	1.198	95	39
11	61	9.2	11.7	0.19	0.8	8.8	1160	967	13	0.89	2420	1988	1.199	100	38
12	61	9.1	8.5	0.24	0.8	9.0	1080	891	12	0.90	2220	1828	1.201	100	38
13	61	9.7	14.2	0.21	0.8	9.3	1050	867	12	0.88	2320	1918	1.199	106	38
14	61	10.4	9.0	0.20	0.8	9.8	1080	902	11	0.98	2240	1864	1.200	114	38
15	61	10.0	12.5	0.20	0.8	9.4	1080	902	13	0.83	2300	1914	1.199	110	38
16	61	10.1	13.2	0.23	0.8	8.4	1060	876	12	0.88	2160	1788	1.200	111	38
17	61	10.4	11.3	0.18	0.8	8.4	1040	862	11	0.95	1940	1600	1.200	114	38
18	61	8.6	6.9	0.26	0.8	8.9	1030	852	10	1.03	2140	1766	1.199	95	38
19	61	7.3	6.5	0.30	0.8	8.0	1110	941	11	1.01	2280	1900	1.200	80	38
20	61	6.7	7.9	0.32	0.8	8.8	1010	833	10	1.01	2320	1926	1.200	74	38
21	61	8.5	20.0	0.28	0.8	9.7	1020	841	9	1.13	2220	1812	1.199	93	35
22	61	8.7	11.9	0.31	0.8	9.4	990	768	10	0.99	2260	1884	1.198	95	33
23	61	7.9	12.5	0.30	0.9	9.3	910	744	10	0.91	2080	1726	1.189	86	33
24	61	8.8	15.0	1.12	1.0	9.5	1150	164	10	1.15	2340	1982	1.198	96	34
25	61	9.0	10.6	0.25	0.9	8.9	1070	904	10	1.07	2424	2044	1.201	99	33
26	61	8.4	12.1	0.25	1.0	8.6	1040	885	9	1.16	2360	2010	1.192	91	32
27	61	8.2	9.1	0.23	1.0	9.1	1010	855	9	1.12	2520	2130	1.200	90	35
28	61	5.6	5.5	0.42	1.0	8.9	950	790	9	1.06	2180	1810	1.199	61	35
29	61	5.7	6.5	0.37	1.0	9.2	930	776	9	1.03	2920	2430	1.199	62	36
30	61	7.2	8.4	0.33	1.0	10.0	850	670	9	0.94	2740	2210	1.199	78	30
31	61	8.0	12.1	0.22	1.0	9.3	950	879	8	1.19	2460	1996	1.200	87	29
AVERAGE	61	8.4	12.0	0.28	0.9	9.2	1067	854	12	0.92	2431	2000	1.198	92	36

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

MARCH 2020

DAY	FLOW		CBOD ₅		SUSPENDED SOLIDS			V.S.S.	pH	AvCN	
	MGD 50050	mg/L 80082	Lbs. 80082	% Rem 80091	mg/L 00530	Lbs. 00530	% Rem 81011	mg/L 00535	SU 00400	ug/L 01257	Lbs. 01257
1	3.703	1.2	37	99.3	3	93	98.4	2	7.2		
2	6.989	1.4	82	99.3	3	175	99.0	3	6.8		
3	6.327	0.2	11	99.9	1	53	99.5	1	6.9		
4	5.795	1.2	58	99.3	2	97	98.8	2	6.8		
5	4.465	0.6	22	99.5	2	74	98.4	2	7.0		
6	4.127	1.4	48	98.9	2	69	98.5	2	7.1		
7	3.920	0.4	13	99.7	3	98	97.4	3	7.3		
8	4.047	0.1	3	99.9	2	68	98.3	2	7.2		
9	3.965	1.6	53	98.9	3	99	97.8	3	7.1		
10	4.423	1.6	59	98.9	2	74	98.9	2	7.2		
11	3.855	1.6	51	99.0	3	96	97.8	2	7.2	<2.0	<0.064
12	3.856	1.4	45	99.1	3	96	97.9	3	7.2		
13	3.697	1.3	40	99.2	3	92	97.7	3	7.1		
14	3.484	0.4	12	99.5	3	87	97.9	3	7.1		
15	3.439	1.2	34	99.3	3	86	99.2	3	6.9		
16	3.500	0.6	18	99.7	3	88	98.1	3	7.0		
17	3.444	5.1	146	96.7	4	115	97.1	3	7.0		
18	4.277	1.8	64	99.0	5	178	97.8	4	7.0		
19	5.285	2.7	119	98.2	4	176	97.6	4	7.0		
20	5.758	1.4	67	98.5	4	192	95.4	3	6.8		
21	4.494	0.6	22	99.4	3	112	96.4	2	7.2		
22	4.228	3.0	106	97.4	3	106	96.9	3	7.1		
23	4.529	2.6	98	97.6	3	113	97.4	3	6.9		
24	4.291	5.1	183	95.0	3	107	96.4	3	7.2		
25	4.076	3.8	129	97.2	3	102	97.2	3	7.3		
26	4.176	4.0	139	97.2	3	104	97.6	3	7.2		
27	4.256	3.0	106	97.8	3	106	97.3	2	7.2		
28	6.594	3.6	198	96.9	4	220	97.0	4	7.0		
29	6.763	2.6	147	97.3	4	226	95.6	3	7.1		
30	5.427	3.4	154	97.0	2	91	98.4	2	7.2		
31	4.659	3.4	132	96.7	2	78	97.8	2	7.6		
TOTAL	141.849	62.3	2398		91	3472					
AVERAGE	4.576	2.0	77	98.4	3	112	97.7	3	7.1		

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

MARCH 2020

DAY	TOTAL PHOSPHORUS			AMMONIA-N			TEMP °F	D.O. mg/L 00300	FECAL COLIFORM cts/100 mL 74055
	mg/L 00665	Lbs. 00665	% Rem 81012	mg/L 00610	Lbs. 00610	% Rem			
1	0.91	28	79	0.06	2	100	51	10.0	0
2	0.72	42	81	0.07	4	100	51	8.8	42
3	0.81	43	73	0.05	3	100	50	8.5	1
4	0.74	36	76	0.05	2	100	50	8.4	8
5	0.89	33	72	0.06	2	100	52	8.6	0
6							51	9.2	3
7							52	9.4	1
8	0.97	33	71	0.06	2	100	53	8.6	0
9	0.97	32	73	0.08	3	100	52	8.9	6
10	0.97	36	73	0.06	2	100	53	8.5	1
11	1.14	37	72	0.07	2	100	52	9.3	4
12	1.20	39	68	0.06	2	100	52	8.8	5
13							52	8.6	3
14							52	8.9	0
15	1.00	29	74	0.06	2	100	52	9.0	2
16	0.91	27	78	0.12	4	100	52	8.7	4
17	0.66	19	84	0.20	6	99	52	8.4	7
18	0.81	29	80	0.15	5	99	52	8.6	5
19	0.93	41	71	0.29	13	98	53	8.5	15
20							53	7.4	38
21							54	8.1	5
22	0.71	25	76	0.04	1	100	54	8.6	0
23	0.70	26	73	0.03	1	100	53	9.6	6
24	0.76	27	71	0.03	1	100	54	8.8	9
25	0.82	28	72	0.04	1	100	53	8.7	20
26	0.91	32	70	0.03	1	100	55	8.4	6
27							53	9.1	10
28							53	8.8	33
29	0.92	52	66	0.03	2	100	55	7.8	2
30	0.67	30	70	0.03	1	100	53	7.9	8
31	0.76	30	72	0.03	1	100	53	8.4	8
TOTAL	19.88	752		1.70	64				
AVERAGE	0.86	33	74	0.07	3	100	52	8.7	3

ADRIAN WWTP

THICKENER SLUDGE

ADRIAN, MICHIGAN

MARCH 2020

DAY	THICKENER #1				THICKENER #2			
	FLOW KGAL	pH SU	SOLIDS %	VOL. SOLIDS %	FLOW KGAL	pH SU	SOLIDS %	VOL. SOLIDS %
1	00S	00S	00S	00S	14.2	5.8	4.29	80
2	00S	00S	00S	00S	14.6	5.6	4.35	79
3	00S	00S	00S	00S	14.0	5.7	4.09	78
4	00S	00S	00S	00S	13.9	5.7	4.67	76
5	00S	00S	00S	00S	13.9	5.6	3.93	77
6	00S	00S	00S	00S	14.2	5.8	5.01	76
7	00S	00S	00S	00S	14.1	5.7	4.62	78
8	00S	00S	00S	00S	14.7	5.8	4.55	78
9	00S	00S	00S	00S	12.2	5.6	4.86	78
10	00S	00S	00S	00S	14.8	5.6	4.34	78
11	00S	00S	00S	00S	14.9	5.8	4.79	79
12	00S	00S	00S	00S	14.2	5.7	5.03	80
13	00S	00S	00S	00S	14.0	5.6	4.14	80
14	00S	00S	00S	00S	13.9	5.6	4.28	80
15	00S	00S	00S	00S	15.3	5.6	4.44	80
16	00S	00S	00S	00S	15.5	5.6	4.90	80
17	00S	00S	00S	00S	16.2	5.6	4.84	80
18	00S	00S	00S	00S	16.6	5.7	4.78	80
19	00S	00S	00S	00S	16.4	5.6	5.12	79
20	00S	00S	00S	00S	17.4	5.8	5.03	79
21	00S	00S	00S	00S	16.4	5.6	4.97	78
22	00S	00S	00S	00S	16.4	6.0	5.23	79
23	00S	00S	00S	00S	16.5	5.6	4.63	78
24	00S	00S	00S	00S	16.5	5.8	4.72	79
25	00S	00S	00S	00S	17.2	6.1	4.73	80
26	00S	00S	00S	00S	16.9	5.7	4.57	80
27	00S	00S	00S	00S	16.7	5.6	4.45	79
28	00S	00S	00S	00S	38.5	5.6	5.05	81
29	00S	00S	00S	00S	15.9	5.7	4.68	80
30	00S	00S	00S	00S	26.7	5.6	4.89	80
31	00S	00S	00S	00S	32.3	5.8	4.18	79
TOTAL	0.0				525.0			
AVERAGE	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	16.9	5.7	4.65	79

ADRIAN WWTP

PRIMARY SLUDGE

ADRIAN, MICHIGAN

MARCH 2020

DAY	PRIMARIES #1 - #4			PRIMARIES #5 - #7		
	pH SU	SOLIDS %	VOL. SOLIDS %	pH SU	SOLIDS %	VOL. SOLIDS %
1						
2						
3						
4	6.9	1.31	77	7.0	0.88	76
5						
6						
7						
8						
9						
10						
11	6.9	2.06	80	7.1	0.79	75
12						
13						
14						
15						
16						
17						
18	6.9	1.65	76	6.2	1.06	73
19						
20						
21						
22						
23						
24						
25	6.8	0.41	66	6.0	1.50	74
26						
27						
28						
29						
30						
31						
AVERAGE	6.9	1.36	75	6.6	1.06	75

ADRIAN WWTP

DIGESTED SLUDGE

ADRIAN, MICHIGAN

MARCH 2020

DAY	#	FLOW KGAL.	pH SU	SOLIDS %	SOLIDS VOL. %
1					
2					
3					
4					
5	6	100.8	7.3	3.20	59
6					
7					
8					
9					
10					
11					
12					
13	4	57.6	7.1	4.57	57
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
TOTAL		158.4			

CITY OF ADRIAN
 135 E. Maumee St.
 ADRIAN, MICHIGAN
 MARCH 2020

DISCHARGE MONITORING REPORT DAILY MONITORING

CARL NELSON WASTEWATER TREATMENT PLANT
 1001 OAKWOOD RD ADRIAN, MI 49221

DISCHARGE NUMBER
 001 A

PARA#	50050	80082	80082	00530	00530	00665	00610	00610	00400	00300	74055
PARA	FLOW	CBOD	CBOD	SS	SS	PHOSPHORUS	AMMONIA	AMMONIA	pH	D.O.	FECAL
LIMIT	REPORT					1.0			6.5-9.0	≥ 6.0	cts/
DAY	MGD	mg/L	Lbs.	mg/L	Lbs.	mg/L	mg/L	Lbs.	S.U.	mg/L	100 mL
1	3.703	1.2	37	3	93	0.91	0.06	2	7.2	10.0	0
2	6.989	1.4	82	3	175	0.72	0.07	4	6.8	8.8	42
3	6.327	0.2	11	1	53	0.81	0.05	3	6.9	8.5	1
4	5.795	1.2	58	2	97	0.74	0.05	2	6.8	8.4	8
5	4.465	0.6	22	2	74	0.89	0.06	2	7.0	8.6	0
6	4.127	1.4	48	2	69				7.1	9.2	3
7	3.920	0.4	13	3	98				7.3	9.4	1
8	4.047	0.1	3	2	68	0.97	0.06	2	7.2	8.6	0
9	3.965	1.6	53	3	99	0.97	0.08	3	7.1	8.9	6
10	4.423	1.6	59	2	74	0.97	0.06	2	7.2	8.5	1
11	3.855	1.6	51	3	96	1.14	0.07	2	7.2	9.3	4
12	3.856	1.4	45	3	96	1.20	0.06	2	7.2	8.8	5
13	3.697	1.3	40	3	92				7.1	8.6	3
14	3.484	0.4	12	3	87				7.1	8.9	0
15	3.439	1.2	34	3	86	1.00	0.06	2	6.9	9.0	2
16	3.500	0.6	18	3	88	0.91	0.12	4	7.0	8.7	4
17	3.444	5.1	146	4	115	0.66	0.20	6	7.0	8.4	7
18	4.277	1.8	64	5	178	0.81	0.15	5	7.0	8.6	5
19	5.285	2.7	119	4	176	0.93	0.29	13	7.0	8.5	15
20	5.758	1.4	67	4	192				6.8	7.4	38
21	4.494	0.6	22	3	112				7.2	8.1	5
22	4.228	3	106	3	106	0.71	0.04	1	7.1	8.6	0
23	4.529	2.6	98	3	113	0.70	0.03	1	6.9	9.6	6
24	4.291	5.1	183	3	107	0.76	0.03	1	7.2	8.8	9
25	4.076	3.8	129	3	102	0.82	0.04	1	7.3	8.7	20
26	4.176	4	139	3	104	0.91	0.03	1	7.2	8.4	6
27	4.256	3	106	3	106				7.2	9.1	10
28	6.594	3.6	198	4	220				7.0	8.8	33
29	6.763	2.6	147	4	226	0.92	0.03	2	7.1	7.8	2
30	5.427	3.4	154	2	91	0.67	0.03	1	7.2	7.9	8
31	4.659	3.4	132	2	78	0.76	0.03	1	7.6	8.4	8
TOTAL	137.190	58.9	2266	89	3395	19.12	1.67	62			
MAX	6.989	5.1	198	5	226	1.20	0.29	13	7.3	10.0	
MIN	3.439	0.1	3	1	53	0.66	0.03	1	6.8	7.4	
AVE	4.576	2.0	77	3	112	0.86	0.07	3	7.1	8.7	3

PERMITTEE NAME: Adrian WWTP
MAILING ADDRESS: 135 E. Maumee St.
Adrian, MI 49221
FACILITY: Adrian WWTP
LOCATION: 1001 Oakwood Road
Adrian, MI 49221

PERMIT NUMBER: MI0022152
DISTRICT: Jackson
COUNTY: Lenawee
MONITORING POINT: 001A
MONITORING PERIOD: 2020-03-01 To 2020-03-31

Parameter	Flow 50050	Total Suspended Solids 00530	Total Suspended Solids 00530	Total Suspended Solids 00530	Total Suspended Solids 00530	Carbonaceous Biochemical Oxygen Demand (CBOD5) 80082	Carbonaceous Biochemical Oxygen Demand (CBOD5) 80082	Carbonaceous Biochemical Oxygen Demand (CBOD5) 80082	Ammonia Nitrogen (as N) 00610	Ammonia Nitrogen (as N) 00610	Ammonia Nitrogen (as N) 00610	Total Phosphorus (as P) 00665	Total Phosphorus (as P) 00665	Available Cyanide 01257
Stage	Final Effluent (1)	Prior to Disinfection (B)	Prior to Disinfection (B)	Conventional Daily	Conventional Daily	Prior to Disinfection (B)	Prior to Disinfection (B)	Conventional Daily	Prior to Disinfection (B)	Prior to Disinfection (B)	Conventional Daily	Prior to Disinfection (B)	Prior to Disinfection (B)	Final Effluent (1)
Limit	(Report)MGD	45 mg/L	2600 lbs/day	(Report)mg/L	(Report) lbs/day	21 mg/L	1200 lbs/day	(Report) lbs/day	14mg/L	820 lbs/day	(Report) lbs/day	(Report)mg/L	(Report) lbs/day	ug/L
Stat Base	Maximum Daily	Maximum 7-Day Average	Maximum 7-Day Average	Maximum Daily	Maximum Daily	Maximum Daily	Maximum 7-Day Average	Maximum Daily	Maximum Daily	Maximum 7-Day Average	Maximum Daily	Maximum Daily	Maximum Daily	Report Maximum Daily
1	3.703			3	93	1.2		37	0.06		2	0.91	28	
2	6.989			3	175	1.4		82	0.07		4	0.72	42	
3	6.327			1	53	0.2		11	0.05		3	0.81	43	
4	5.795			2	97	1.2		58	0.05		2	0.74	36	
5	4.465			2	74	0.6		22	0.06		2	0.89	33	
6	4.127			2	69	1.4		48						
7	3.920	2	94	3	98	0.4	39	13		2				
8	4.047	2	90	2	68	0.1	34	3	0.06	2	2	0.97	33	
9	3.965	2	80	3	99	1.6	30	53	0.08	2	3	0.97	32	
10	4.423	2	83	2	74	1.6	37	59	0.06	2	2	0.97	36	
11	3.855	2	83	3	96	1.6	36	51	0.07	2	2	1.14	37	<2.0
12	3.856	3	86	3	96	1.4	39	45	0.06	2	2	1.20	39	
13	3.697	3	89	3	92	1.3	38	40		2				
14	3.484	3	88	3	87	0.4	38	12		2				
15	3.439	3	90	3	86	1.2	42	34	0.06	2	2	1.00	29	
16	3.500	3	89	3	88	0.6	37	18	0.12	2	4	0.91	27	
17	3.444	3	94	4	115	5.1	50	146	0.20	2	6	0.66	19	
18	4.277	3	106	5	178	1.8	51	64	0.15	3	5	0.81	29	
19	5.285	4	118	4	176	2.7	62	119	0.29	4	13	0.93	41	
20	5.758	4	132	4	192	1.4	66	67		4				
21	4.494	4	135	3	112	0.6	67	22		4				
22	4.228	4	138	3	106	3.0	78	106	0.04	4	1	0.71	25	
23	4.529	4	142	3	113	2.6	89	98	0.03	4	1	0.70	26	
24	4.291	4	141	3	107	5.1	94	183	0.03	3	1	0.76	27	
25	4.076	3	130	3	102	3.8	103	129	0.04	3	1	0.82	28	
26	4.176	3	120	3	104	4.0	106	139	0.03	1	1	0.91	32	
27	4.256	3	107	3	106	3.0	112	106		1				
28	6.594	3	123	4	220	3.6	137	198		1				
29	6.763	3	140	4	226	2.6	143	147	0.03	1	2	0.92	52	
30	5.427	3	137	2	91	3.4	151	154	0.03	1	1	0.67	30	
31	4.659	3	132	2	78	3.4	144	132	0.03	1	1	0.76	30	

Available Cyanide 01257	Total Mercury 71900	Total Mercury 71900	Total Mercury - uncorrected 7190a	Total Mercury - field duplicate 7190b	Total Mercury - field blank 7190c	Total Mercury - laboratory method blank 7190d	Fecal Coliform 74055	Fecal Coliform 74055	pH 00400	pH 00400	Dissolved Oxygen 00300
Final Effluent (1)	Final Effluent (1)	Final Effluent (1)	Mercury QA- Effluent	Mercury QA- Effluent	Mercury QA- Effluent	Mercury QA- Effluent	Final Effluent (1)	Fecal Daily	Final Effluent (1)	Final Effluent (1)	Final Effluent (1)
lbs/day	(Report) ng/L	(Report) lbs/day	(Report) ng/L	(Report) ng/L	(Report) ng/L	(Report) ng/L	400 #/100ml	(Report) #/100ml	6.5 SU	9.0 SU	6.0 mg/L
Report Maximum Daily	Maximum Daily	Maximum Daily	Maximum Daily	Maximum Daily	Maximum Daily	Maximum Daily	Max 7-Day Geometric Mean	Maximum Daily	Minimum Daily	Maximum Daily	Minimum Daily
	*G	*G	*G	*G	*G	*G		<1	7.2	7.2	10.0
								42	6.8	6.8	8.8
								<1	6.9	6.9	8.5
								8	6.8	6.8	8.4
								<1	7.0	7.0	8.6
								3	7.1	7.1	9.2
							1	<1	7.3	7.3	9.4
							1	<1	7.2	7.2	8.6
							1	6	7.1	7.1	8.9
							1	<1	7.2	7.2	8.5
<0.064							1	4	7.2	7.2	9.3
							2	5	7.2	7.2	8.8
							2	3	7.1	7.1	8.6
							1	<1	7.1	7.1	8.9
							2	2	6.9	6.9	9.0
							2	4	7.0	7.0	8.7
							2	7	7.0	7.0	8.4
							2	5	7.0	7.0	8.6
							3	15	7.0	7.0	8.5
							4	38	6.8	6.8	7.4
							7	5	7.2	7.2	8.1
							5	<1	7.1	7.1	8.6
							5	6	6.9	6.9	9.6
							5	9	7.2	7.2	8.8
							6	20	7.3	7.3	8.7
							5	6	7.2	7.2	8.4
							4	10	7.2	7.2	9.1
							6	33	7.0	7.0	8.8
							9	2	7.1	7.1	7.8
							9	8	7.2	7.2	7.9
							9	8	7.6	7.6	8.4

Michigan Department of Environmental Quality Discharge Monitoring Report (DMR)

PERMITTEE NAME: Adrian WWTP
 MAILING ADDRESS: 135 E. Maumee St.
 Adrian, MI 49221
 FACILITY: Adrian WWTP
 LOCATION: 1001 Oakwood Road
 Adrian, MI 49221

PERMIT NUMBER: M10022152
 MONITORING POINT: 001A
 Monitoring Period: 2020-03-01 To: 2020-03-31

DISTRICT: Jackson
 COUNTY: Lenawee

NO DISCHARGE FROM SITE: ()

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
		Average	Maximum		Minimum	Average	Maximum				
Flow PARAM CODE: 50050 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	4.576	6.989	MGD	*****	*****	*****	*****	0	Daily	Report Total Daily Flow
	Permit Requirement	(report) Maximum Monthly Average	(report) Maximum Daily		*****	*****	*****		Daily	Report Total Daily Flow	
Total Suspended Solids PARAM CODE: 00530 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	112	142	lbs/day	*****	3	4	mg/l	0	Daily	24-HR Composite
	Permit Requirement	1800 Maximum Monthly Average	2600 Maximum 7-Day Average		*****	30 Maximum Monthly Average	45 Maximum 7-Day Average		Daily	24-HR Composite	
Carbonaceous Biochemical Oxygen Demand (CBOD5) PARAM CODE: 80082 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	77	151	lbs/day	*****	2.0	5.1	mg/l	0	Daily	24-HR Composite
	Permit Requirement	820 Maximum Monthly Average	1200 Maximum 7-Day Average		*****	14 Maximum Monthly Average	21 Maximum Daily		Daily	24-HR Composite	
Ammonia Nitrogen (as N) PARAM CODE: 00610 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	3	4	lbs/day	*****	0.07	0.29	mg/l	0	Daily	24-HR Composite
	Permit Requirement	Maximum Monthly Average	820 Maximum 7-Day Average		*****	Maximum Monthly Average	14 Maximum Daily		Daily	24-HR Composite	
Total Phosphorus (as P) PARAM CODE: 00665 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	33	52	lbs/day	*****	0.86	1.20	mg/l	0	Daily	24-HR Composite
	Permit Requirement	58 Maximum Monthly Average	(Report) Maximum Daily		*****	1.0 Maximum Monthly Average	(Report) Maximum Daily		Daily	24-HR Composite	
Available Cyanide PARAM CODE: 01257 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	0.000	0.000	lbs/day	*****	0.0	0.0	ug/l	0	Quarterly	Grab
	Permit Requirement	0.34 Maximum Monthly Average	(Report) Maximum Daily		*****	5.8 Maximum Monthly Average	(Report) Maximum Daily		Quarterly	Grab	
Total Mercury PARAM CODE: 71900 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	*G	*G	lbs/day	*****	*G	*G	ng/l	0	Quarterly	Grab
	Permit Requirement	Maximum Monthly Average	(Report) Maximum Daily		*****	Maximum Monthly Average	(Report) Maximum Daily		Quarterly	Grab	
Name/Title of Principle Executive Officer Or Authorized Agent	I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe is 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.					Signature of Principal Executive Officer Or Authorized Agwnt		Telephone No	Date (YYYY-MM-DD)		
Ryan L. White WWTP Superintendent								517-264-4867	2020-04-10		

Michigan Department of Environmental Quality Discharge Monitoring Report (DMR)

PERMITTEE NAME: Adrian WWTP
 MAILING ADDRESS: 135 E. Maumee St.
 Adrian, MI 49221
 FACILITY: Adrian WWTP
 LOCATION: 1001 Oakwood Road
 Adrian, MI 49221

PERMIT NUMBER: M10022152
 MONITORING POINT: 001A
 Monitoring Period: 2020-03-01 To: 2020-03-31

DISTRICT: Jackson
 COUNTY: Lenawee

NO DISCHARGE FROM SITE: ()

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
		Average	Maximum		Minimum	Average	Maximum				
Total Mercury PARAM CODE: 71900 Mon. Site No.: 001A Stage Code: X	Sample Measurement	*****	0.000019	lbs/day	*****	*****	0.45	ng/l	0	Monthly	Calculation
	Permit Requirement	*****	0.00012 12-Month Rolling Average		*****	*****	2.0 12-Month Rolling Average			Monthly	Calculation
Fecal Coliform PARAM CODE: 74055 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	*****	*****	*****	*****	3	9	cts/100 ml	0	Daily	Grab
	Permit Requirement	*****	*****		*****	200 Max Monthly Geometric Mean	400 Max 7-Day Geometric Mean			Daily	Grab
CBOD5 Minimum % Removal PARAM CODE: 80091 Mon. Site No.: 001A Stage Code: K	Sample Measurement	*****	*****	*****	98.4	*****	95.0	%	0	Monthly	Calculation
	Permit Requirement	*****	*****		85 Minimum Monthly % Removal	*****	Report Minimum Daily % Removal			Monthly	Calculation
Total Suspended Solids Minimum % Removal PARAM CODE: 81011 Mon. Site No.: 001A Stage Code: K	Sample Measurement	*****	*****	*****	97.7	*****	95.4	%	0	Monthly	Calculation
	Permit Requirement	*****	*****		85 Minimum Monthly % Removal	*****	Report Minimum Daily % Removal			Monthly	Calculation
pH PARAM CODE: 00400 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	*****	*****	*****	6.8	*****	7.3	S.U.	0	5X Weekly	Grab
	Permit Requirement	*****	*****		6.5 Minimum Daily	*****	9.0 Maximum Daily			5X Weekly	Grab
Dissolved Oxygen PARAM CODE: 00300 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	*****	*****	*****	7.4	*****	*****	mg/l	0	5X Weekly	Grab
	Permit Requirement	*****	*****		6.0 Minimum Daily	*****	*****			5X Weekly	Grab
Name/Title of Principle Executive Officer Or Authorized Agent	I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe is 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.					Signature of Principal Executive Officer Or Authorized Agwnt		Telephone No	Date (YYYY-MM-DD)		
Ryan L. White WWTP Superintendent								517-264-4867	2020-04-10		

When completed mail this report to: PCS-Data Entry, MDEQ-WD, P.O. Box 30273, Lansing, MI 48909-7773