

ADRIAN WWTP

INFLUENT SHEET

ADRIAN, MICHIGAN

MAY 2020

DAY	CHEMICALS ADDED FeCl ₃ Gals.	FLOW		BOD ₅	
		TOTAL	MAX RATE	mg/L	Lbs.
		MGD	MGD	00310	85001
1	640	4.898	7.6	136	5556
2	340	4.831	7.4	156	6285
3	320	4.886	7.2	162	6601
4	250	4.760	8.0	177	7027
5	250	4.622	6.7	169	6515
6	250	4.663	7.3	226	8789
7	290	4.658	7.1	148	5749
8	480	4.579	7.2	154	5881
9	300	4.520	6.6	159	5994
10	360	4.657	11.6	182	7069
11	320	4.736	5.2	154	6083
12	400	4.639	7.4	168	6500
13	370	4.623	7.3	188	7248
14	320	5.600	11.5	206	9621
15	240	8.357	8.2	168	11709
16	260	5.063	8.2	122	5152
17	250	6.057	12.0	144	7274
18	220	13.689	21.1	116	13243
19	0	17.857	15.7	54	8042
20	0	11.482	11.7	70	6703
21	0	7.996	12.5	88	5868
22	0	6.889	10.1	83	4769
23	0	6.172	9.4	111	5714
24	0	5.833	8.4	105	5108
25	0	5.710	8.8	110	5238
26	0	5.589	8.9	134	6246
27	0	5.353	8.9	138	6161
28	0	6.874	15.1	160	9173
29	240	5.666	8.4	126	5954
30	510	5.259	8.0	176	7719
31	580	5.020	7.7	133	5568
TOTAL	7190	195.538		4423	214559
AVERAGE	232	6.308		143	6921

ADRIAN WWTP

INFLUENT SHEET

ADRIAN, MICHIGAN

MAY 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	120	4902	116	7.4				
2	146	5882	138	7.4				
3	136	5542	126	7.4	3.5	143	20.7	844
4	150	5955	138	7.4	4.0	159	24.6	977
5	146	5628	128	7.3	4.0	154	21.6	833
6	276	10733	240	7.4	4.8	187	24.0	933
7	136	5283	136	7.4	3.6	140	21.5	835
8	146	5576	124	7.4				
9	150	5655	144	7.4				
10	175	6797	148	7.4	4.0	155	20.1	781
11	122	4819	108	7.3	3.4	134	18.6	735
12	142	5494	134	7.3	3.8	147	18.3	708
13	156	6015	142	7.4	3.9	150	20.2	779
14	228	10649	190	7.3	4.4	205	18.7	873
15	252	17564	152	7.3				
16	112	4729	82	7.3				
17	154	7779	124	no data	2.9	146	13.3	672
18	246	28085	126	7.1	2.3	263	7.0	799
19	98	14595	52	7.2	1.2	179	2.9	432
20	100	9576	91	7.3	1.3	124	5.7	546
21	68	4535	58	7.3	1.8	120	10.0	667
22	70	4022	66	7.4				
23	86	4427	82	7.3				
24	110	5351	102	7.3	2.2	107	11.3	550
25	68	3238	64	7.3	2.6	124	12.4	591
26	120	5593	114	7.3	3.1	144	15.2	709
27	116	5179	108	7.3	3.1	138	12.9	576
28	158	9058	148	7.4	4.3	247	14.1	808
29	110	5198	108	7.4				
30	105	4605	101	7.2				
31	96	4019	88	7.2	3.0	126	15.0	628
TOTAL		226482	3678		67.2	3293	328.1	15273
AVERAGE	139	7306	119	7.3	3.2	157	15.6	727

PRIMARY EFFLUENT SHEET

ADRIAN, MICHIGAN

MAY 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	2.906	2.232	62	2657	22	943	20					75
2	2.868	2.226	70	2974	30	1275	28					79
3	2.905	2.263	79	3405	30	1293	30	1.6	69	15.9	685	79
4	2.835	2.182	72	3013	40	1674	30	1.9	79	17.3	724	79
5	2.753	2.098	91	3682	40	1618	36	2.2	89	17.2	696	78
6	2.789	2.129	82	3363	44	1805	36	2.3	94	18.3	751	76
7	2.786	2.126	76	3113	34	1393	34	2.0	82	15.7	643	80
8	2.749	2.097	68	2748	46	1859	46					80
9	2.719	2.077	70	2800	30	1200	30					80
10	2.750	2.136	72	2934	42	1711	42	1.6	65	16.4	668	80
11	2.862	2.162	68	2849	30	1257	26	1.7	71	14.1	591	75
12	2.799	2.130	72	2960	40	1644	36	1.6	66	13.9	571	78
13	2.756	2.154	68	2785	32	1310	30	1.6	66	13.3	545	67
14	3.285	2.603	76	3732	72	3536	68	1.7	83	12.8	629	63
15	4.800	3.948	69	5034	64	4669	50					56
16	2.983	2.282	62	2722	40	1756	36					59
17	3.561	2.798	62	3288	28	1485	26	1.4	74	9.0	477	58
18	7.485	6.614	62	7290	66	7761	40	1.5	176	5.6	658	57
19	9.481	8.812	64	9764	102	15561	58	1.3	198	2.2	336	75
20	6.649	5.255	48	4765	42	4170	40	1.1	109	4.2	417	137
21	4.746	3.614	36	2510	20	1394	20	1.3	91	5.9	411	139
22	4.080	3.115	48	2880	16	960	14					134
23	3.628	2.805	54	2897	16	858	10					129
24	3.426	2.670	47	2390	38	1932	30	1.8	92	8.0	407	129
25	3.355	2.615	54	2689	26	1295	24	2.0	100	9.0	448	132
26	3.261	2.570	66	3210	40	1945	38	2.4	117	11.6	564	90
27	3.140	2.453	82	3825	28	1306	26	2.7	126	9.7	452	81
28	4.003	3.159	92	5495	36	2150	34	2.7	161	9.4	561	86
29	3.342	2.574	58	2862	46	2270	46					72
30	3.092	2.384	78	3562	28	1279	28					76
31	2.950	2.268	54	2350	24	1044	22	1.0	44	11.5	500	74
TOTAL	113.744	90.551	2062	110548	1192	74354	1034	37.4	2052	241.0	11736	
AVERAGE	3.669	2.921	67	3566	38	2399	33	1.8	98	11.5	559	86

ADRIAN WWTP

EAST ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

MAY 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	8.9	17.7	0.20	3.2	10.3	1050	841	10	1.05	1460	1174	2.687	92	64
2	144	9.0	9.4	0.30	3.1	10.0	750	619	10	0.75	2020	1656	2.688	94	64
3	144	8.9	13.2	0.24	3.1	9.6	1070	885	10	1.07	2200	1828	2.686	92	63
4	144	9.1	10.0	0.22	3.4	10.0	1050	869	10	1.05	1700	1406	2.689	95	62
5	144	9.4	11.4	0.24	3.5	10.5	1170	959	10	1.17	1500	1236	2.687	98	63
6	144	9.3	8.7	0.26	3.4	10.5	990	804	10	0.99	1300	1054	2.690	96	60
7	144	9.3	11.9	0.23	3.3	10.1	1050	864	10	1.05	1560	1300	2.692	97	56
8	144	9.4	8.9	0.21	3.5	10.3	1040	845	10	1.04	1340	890	2.695	98	57
9	144	9.5	13.7	0.22	3.5	10.6	1040	809	10	1.04	1520	1234	2.692	99	58
10	144	9.4	9.6	0.22	3.4	10.6	1030	835	11	0.94	1440	1184	2.693	98	58
11	144	9.0	13.0	0.21	3.4	10.4	1040	843	10	1.04	1620	1306	2.689	94	53
12	144	9.2	9.6	0.24	3.2	10.5	1000	793	10	1.00	1440	1156	2.688	96	58
13	144	9.4	12.3	0.21	3.4	10.4	1010	810	10	1.01	1540	1270	2.690	98	57
14	144	7.9	4.6	0.29	3.3	10.1	1000	789	10	1.00	1440	1156	2.694	82	56
15	144	5.4	3.5	0.38	3.2	9.9	1010	799	10	1.01	1920	1520	2.692	56	58
16	144	8.7	12.3	0.16	3.2	10.0	1360	1092	10	1.36	1820	1324	2.690	90	57
17	144	7.3	12.6	0.23	3.2	10.0	1170	892	11	1.06	2300	1780	2.690	76	58
18	144	3.5	2.6	0.47	3.2	9.7	1210	914	10	1.21	2360	1774	2.691	36	62
19	144	2.7	1.2	0.80	3.2	10.6	1120	708	10	1.12	4640	3076	2.689	28	59
20	144	3.9	5.1	0.35	3.2	10.4	1330	842	9	1.48	3680	2374	2.687	40	55
21	144	5.4	16.3	0.17	3.2	10.0	1440	917	10	1.44	3360	2182	2.685	57	60
22	144	6.3	20.1	0.25	3.2	10.0	1220	725	11	1.11	3920	2562	2.677	66	64
23	144	7.1	23.9	0.22	3.1	9.8	1290	830	10	1.29	3220	2304	2.677	74	63
24	144	7.5	12.9	0.13	3.0	9.8	1560	1140	10	1.56	3960	2884	2.677	78	63
25	144	7.7	19.0	0.15	3.0	9.2	1540	1138	10	1.54	3440	2528	2.679	80	64
26	144	7.9	9.8	0.25	3.0	9.1	1190	805	10	1.19	2520	1780	2.682	82	64
27	144	8.2	15.3	0.27	3.0	8.8	1250	887	10	1.25	3040	2176	2.681	85	61
28	144	6.5	9.9	0.36	3.0	8.7	1320	963	10	1.32	2820	2048	2.678	67	65
29	144	7.7	8.3	0.21	2.9	8.5	1180	860	10	1.18	2700	1976	2.648	79	68
30	144	8.4	15.8	0.24	3.0	9.3	1270	936	10	1.27	1960	1442	2.675	87	68
31	144	8.8	20.7	0.14	3.2	9.8	1360	1028	10	1.36	2880	2174	2.672	91	69
AVERAGE	144	7.8	11.7	0.26	3.2	9.9	1165	872	10	1.16	2343	1734	2.685	81	61

ADRIAN WWTP

WEST #1 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

MAY 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	9.8	14.3	0.24	0.8	7.7	770	637	9	0.86	2180	1806	1.197	107	32
2	61	9.8	12.8	0.21	0.8	7.0	940	801	9	1.04	2100	1766	1.197	108	34
3	61	9.7	12.1	0.26	0.8	6.0	900	765	9	1.00	1980	1682	1.193	105	33
4	61	10.0	10.2	0.21	0.8	6.4	980	831	10	0.98	2000	1660	1.194	109	33
5	61	10.4	9.7	0.28	0.8	7.0	890	747	10	0.89	1560	1310	1.193	114	33
6	61	10.3	8.0	0.28	0.9	7.0	820	687	10	0.82	1660	1396	1.192	112	31
7	61	10.3	11.0	0.24	1.0	8.5	870	733	11	0.79	1820	1534	1.194	112	29
8	61	10.4	8.4	0.21	1.0	9.0	890	743	11	0.81	1640	1370	1.194	114	29
9	61	10.5	13.8	0.18	1.0	9.4	940	872	12	0.78	1800	1444	1.194	115	29
10	61	10.3	9.7	0.21	1.0	9.2	950	790	14	0.68	1840	1540	1.194	112	29
11	61	10.1	13.6	0.20	1.0	9.3	970	805	15	0.65	1920	1582	1.194	110	30
12	61	10.3	10.8	0.20	1.0	8.9	1010	833	14	0.72	1960	1628	1.194	112	30
13	61	10.2	14.4	0.18	1.0	9.2	1090	911	16	0.68	1860	1554	1.191	111	30
14	61	8.4	4.9	0.26	1.0	8.5	1010	833	18	0.56	1880	1560	1.190	91	30
15	61	5.5	3.6	0.36	1.0	9.3	1000	818	16	0.63	2700	2236	1.191	60	30
16	61	9.6	12.5	0.15	1.0	10.2	1250	1016	18	0.69	2220	1818	1.191	104	30
17	61	7.8	12.7	0.22	1.0	10.1	1090	853	16	0.68	1760	1398	1.192	85	30
18	61	3.3	2.1	0.57	1.0	9.5	1020	786	15	0.68	2080	1618	1.191	36	30
19	61	2.5	1.2	0.83	1.0	9.9	1140	748	10	1.14	4940	3278	1.191	27	30
20	61	4.2	4.5	0.41	1.0	10.0	1100	668	10	1.10	4460	2864	1.194	45	30
21	61	6.1	17.2	0.16	1.0	10.3	1360	881	11	1.24	3020	2004	1.193	66	31
22	61	7.0	20.9	0.23	1.0	10.2	1140	719	11	1.04	2920	1894	1.192	77	32
23	61	7.8	23.8	0.21	1.0	9.9	1170	792	10	1.17	2560	1704	1.194	85	32
24	61	8.2	11.0	0.16	1.0	9.9	1220	874	11	1.11	1900	1362	1.194	89	32
25	61	8.4	16.1	0.18	1.0	9.4	1200	880	10	1.20	2480	1780	1.194	91	32
26	61	8.5	8.3	0.30	1.0	9.3	940	629	10	0.94	1960	1352	1.195	93	32
27	61	8.9	13.3	0.32	1.0	9.1	1000	696	10	1.00	2100	1468	1.194	97	33
28	61	6.9	9.1	0.41	1.0	8.3	1140	786	10	1.14	2260	1594	1.195	76	38
29	61	8.5	8.5	0.21	0.9	9.0	1100	764	10	1.10	1780	1252	1.179	92	38
30	61	9.2	15.3	0.25	1.0	9.8	1120	811	9	1.24	1800	1330	1.191	100	34
31	61	9.7	15.9	0.20	1.0	10.1	950	683	9	1.06	1520	1100	1.192	105	33
AVERAGE	61	8.5	11.3	0.27	1.0	8.9	1031	787	12	0.92	2215	1674	1.193	92	32

ADRIAN WWTP

WEST #2 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

MAY 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	9.8	16.4	0.21	1.0	8.4	880	729	9	0.98	2080	1718	1.204	108	33
2	61	9.8	13.3	0.21	0.9	7.3	970	819	9	1.08	1940	1606	1.205	108	33
3	61	9.7	12.2	0.26	0.9	6.5	910	768	9	1.01	2000	1676	1.205	106	33
4	61	10.0	10.5	0.20	1.0	7.1	1000	842	9	1.11	2100	1780	1.201	110	36
5	61	10.4	10.0	0.27	1.0	7.8	920	774	9	1.02	1840	1540	1.201	114	38
6	61	10.3	8.9	0.25	1.0	7.6	910	764	10	0.91	1820	1520	1.202	113	37
7	61	10.3	13.5	0.19	0.9	7.3	1070	916	11	0.97	2000	1688	1.200	113	35
8	61	10.4	9.3	0.19	1.0	7.8	980	818	10	0.98	2040	1686	1.203	115	31
9	61	10.5	14.1	0.21	1.0	8.9	960	763	10	0.96	1920	1592	1.203	116	30
10	61	10.3	10.2	0.20	1.0	8.2	1000	841	12	0.83	1760	1450	1.202	113	31
11	61	10.1	13.1	0.21	0.9	8.5	930	759	13	0.72	1880	1542	1.198	111	30
12	61	10.3	10.7	0.20	0.9	8.1	1000	823	12	0.83	2000	1644	1.200	113	27
13	61	10.2	13.2	0.19	0.9	8.6	1000	825	14	0.71	2120	1776	1.200	111	27
14	61	8.4	5.0	0.26	0.9	8.0	1020	848	15	0.68	1940	1598	1.200	92	27
15	61	5.5	3.7	0.35	0.9	9.2	1020	843	15	0.68	2600	2160	1.199	61	29
16	61	9.6	11.6	0.17	0.9	10.1	1160	915	15	0.77	2120	1700	1.199	105	26
17	61	7.8	13.2	0.21	0.9	10.0	1130	903	14	0.81	1720	1372	1.199	86	27
18	61	3.3	2.1	0.57	0.9	9.1	1010	793	12	0.84	2000	1582	1.197	36	28
19	61	2.5	1.1	0.88	0.9	9.8	1090	705	10	1.09	4940	3278	1.198	27	29
20	61	4.2	4.5	0.41	0.9	9.9	1080	674	10	1.08	3820	2452	1.196	46	29
21	61	6.1	16.2	0.17	1.0	10.3	1280	838	10	1.28	2760	1796	1.198	66	29
22	61	7.0	21.1	0.22	0.9	10.2	1150	747	10	1.15	2840	1848	1.199	77	29
23	61	7.8	22.2	0.23	0.9	9.8	1090	723	10	1.09	2460	1636	1.198	85	28
24	61	8.2	10.5	0.16	0.9	9.6	1170	847	10	1.17	2180	1550	1.199	90	28
25	61	8.4	15.6	0.18	0.9	9.2	1160	856	10	1.16	2580	1878	1.199	92	29
26	61	8.5	9.2	0.26	0.9	9.3	1040	717	10	1.04	1880	1306	1.200	93	29
27	61	8.9	11.4	0.37	0.9	8.9	860	596	10	0.86	2040	1426	1.199	98	29
28	61	6.9	8.0	0.44	0.9	8.0	1000	719	10	1.00	2080	1480	1.200	76	29
29	61	8.5	7.5	0.24	0.9	8.8	970	691	10	0.97	1900	1344	1.184	92	29
30	61	9.2	17.5	0.21	1.0	9.6	1280	953	9	1.42	1860	1388	1.201	101	29
31	61	9.7	16.6	0.19	1.0	10.1	990	725	9	1.10	1780	1292	1.200	106	29
AVERAGE	61	8.5	11.4	0.27	0.9	8.8	1033	791	11	0.98	2226	1687	1.200	93	30

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

MAY 2020

DAY	FLOW		CBOD ₅		SUSPENDED SOLIDS			V.S.S.	pH
	MGD 50050	mg/L 80082	Lbs. 80082	% Rem 80091	mg/L 00530	Lbs. 00530	% Rem 81011	mg/L 00535	SU 00400
1	3.468	1.6	46	99	2	58	98	2	7.5
2	3.449	1.0	29	99	2	58	99	2	7.1
3	3.444	1.6	46	99	3	86	98	3	6.9
4	3.309	2.3	63	99	3	83	98	3	7.1
5	3.328	2.0	56	99	5	139	97	4	7.1
6	3.249	3.0	81	99	3	81	99	3	7.1
7	3.271	2.8	76	98	2	55	99	2	7.1
8	3.116	4.2	109	97	2	52	99	2	7.2
9	3.081	4.2	108	97	2	51	99	2	7.1
10	3.359	4.9	137	97	1	28	99	1	7.0
11	3.359	3.9	109	97	2	56	98	1	7.0
12	3.267	3.8	104	98	1	27	99	1	7.2
13	3.219	3.0	81	98	1	27	99	1	7.1
14	4.241	2.7	95	99	2	71	99	1	7.2
15	6.456	1.2	65	99	2	108	99	2	7.0
16	4.115	1.5	51	99	1	34	99	1	7.2
17	4.721	2.6	102	98	1	39	99	1	*G
18	12.056	2.8	282	98	4	402	98	3	7.2
19	14.464	1.8	217	97	5	603	95	4	7.1
20	9.300	2.0	155	97	2	155	98	2	7.2
21	6.477	1.6	86	98	1	54	99	1	7.2
22	5.796	2.0	97	98	2	97	97	1	7.4
23	4.860	1.8	73	98	1	41	99	1	7.2
24	4.591	2.8	107	97	2	77	98	2	7.2
25	4.301	2.1	75	98	1	36	99	1	7.2
26	4.196	1.7	59	99	1	35	99	1	7.2
27	3.928	2.3	75	98	3	98	97	3	7.1
28	5.335	2.0	89	99	2	89	99	2	7.3
29	4.382	2.0	73	98	2	73	98	2	7.0
30	3.971	2.0	66	99	2	66	98	2	7.3
31	3.696	1.6	49	99	2	62	98	2	7.2
TOTAL	149.805	74.8	2864		65	2940			
AVERAGE	4.832	2.4	92	98.2	2	95	98.4	2	7.2

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

MAY 2020

DAY	TOTAL PHOSPHORUS			AMMONIA-N			TEMP °F	D.O. mg/L 00300	FECAL COLIFORM cts/100 mL 74055	AvCN	
	mg/L 00665	Lbs. 00665	% Rem 81012	mg/L 00610	Lbs. 00610	% Rem				ug/L 01257	Lbs. 01257
1							58	8.2	3		
2							60	7.8	4		
3	0.91	26	74	0.10	3	100	60	7.2	5		
4	0.93	26	77	0.07	2	100	59	7.5	0		
5	1.00	28	75	0.06	2	100	58	7.9	2		
6	1.15	31	76	0.09	2	100	59	7.9	2		
7	1.22	33	66	0.04	1	100	59	7.9	8		
8							57	8.3	10		
9							57	8.6	0		
10	0.85	24	79	0.04	1	100	58	8.1	2		
11	0.76	21	78	0.04	1	100	55	9.2	5		
12	0.78	21	79	0.03	1	100	56	8.9	2		
13	0.73	20	81	0.03	1	100	56	9.0	8		
14	0.74	26	83	0.03	1	100	57	8.5	1		
15							59	8.1	45		
16							59	7.2	1		
17	0.69	27	76	0.04	2	100	59	7.7	0		
18	0.66	66	71	0.06	6	99	58	7.9	8		
19	0.44	53	63	0.03	4	99	58	8.3	70		
20	0.39	30	70	0.03	2	99	57	8.2	32	<2.0	<0.16
21	0.55	30	69	0.04	2	100	59	7.6	2		
22							58	7.4	1		
23							59	7.9	2		
24	1.00	38	55	0.10	4	99	60	7.9	10		
25	1.09	39	58	0.05	2	100	63	7.5	10		
26	1.21	42	61	0.05	2	100	63	7.5	0		
27	1.36	45	56	0.07	2	99	61	7.5	4		
28	1.51	67	65	0.06	3	100	62	8.0	21		
29							62	7.6	0		
30							62	7.8	2		
31	0.75	23	75	0.09	3	99	61	8.0	2		
TOTAL	18.72	717		1.15	46						
AVERAGE	0.89	34	71	0.05	2	100	59	8.0	3		

ADRIAN WWTP

THICKENER SLUDGE

ADRIAN, MICHIGAN

MAY 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	12.8	5.4	4.74	82
2	00S	00S	00S	00S	13.0	5.6	4.52	82
3	00S	00S	00S	00S	13.2	5.5	4.69	80
4	00S	00S	00S	00S	13.6	5.6	4.16	80
5	00S	00S	00S	00S	13.6	5.4	4.62	80
6	00S	00S	00S	00S	13.7	5.5	4.34	80
7	00S	00S	00S	00S	12.9	5.4	4.22	80
8	00S	00S	00S	00S	13.3	5.4	3.53	80
9	00S	00S	00S	00S	13.5	5.4	4.52	80
10	00S	00S	00S	00S	12.8	5.3	4.32	80
11	00S	00S	00S	00S	11.8	5.4	4.18	79
12	00S	00S	00S	00S	12.5	5.4	4.86	79
13	00S	00S	00S	00S	12.5	5.4	4.84	80
14	00S	00S	00S	00S	13.0	5.4	4.91	80
15	00S	00S	00S	00S	13.0	5.4	4.86	79
16	00S	00S	00S	00S	12.8	5.5	5.50	73
17	00S	00S	00S	00S	12.3	5.3	5.40	71
18	00S	00S	00S	00S	12.6	5.6	5.66	71
19	00S	00S	00S	00S	19.7	5.2	5.16	71
20	00S	00S	00S	00S	19.9	5.4	6.06	65
21	00S	00S	00S	00S	20.7	5.3	5.72	59
22	00S	00S	00S	00S	19.2	5.7	5.41	64
23	00S	00S	00S	00S	17.0	5.1	7.06	62
24	00S	00S	00S	00S	17.3	5.2	5.13	65
25	00S	00S	00S	00S	16.8	5.3	5.70	67
26	00S	00S	00S	00S	16.7	5.3	4.72	69
27	00S	00S	00S	00S	15.0	5.6	4.04	74
28	00S	00S	00S	00S	14.2	5.5	4.28	75
29	00S	00S	00S	00S	11.6	5.4	4.55	75
30	00S	00S	00S	00S	12.3	5.4	4.84	75
31	00S	00S	00S	00S	12.2	5.4	4.29	75
TOTAL	0.0				445.5			
AVERAGE	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	14.4	5.4	4.87	75

ADRIAN WWTP

PRIMARY SLUDGE

ADRIAN, MICHIGAN

MAY 2020

DAY	PRIMARIES #1 - #4			PRIMARIES #5 - #7		
	pH SU	SOLIDS %	VOL. SOLIDS %	pH SU	SOLIDS %	VOL. SOLIDS %
1						
2						
3						
4						
5						
6	7.1	1.51	76	7.2	0.22	55
7						
8						
9						
10						
11						
12						
13	5.1	0.96	73	5.3	1.40	76
14						
15						
16						
17						
18						
19						
20	6.8	0.15	35	6.0	2.95	71
21						
22						
23						
24						
25						
26						
27	6.8	0.62	72	6.7	0.30	60
28						
29						
30						
31						
AVERAGE	6.5	0.81	64	6.3	1.22	66

ADRIAN WWTP

DIGESTED SLUDGE

ADRIAN, MICHIGAN

MAY 2020

DAY	#	FLOW KGAL.	pH SU	SOLIDS %	SOLIDS VOL. %
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22	4	67.2	7.3	2.46	58
23					
24					
25	2	39.6	7.3	2.29	60
26					
27					
28					
29	6	60.0	7.3	2.66	57
30					
31					
TOTAL		166.8			

CITY OF ADRIAN
 135 E. Maumee St.
 ADRIAN, MICHIGAN
 MAY 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	3.468	1.6	46	2	58				7.5	8.2	3
2	3.449	1.0	29	2	58				7.1	7.8	4
3	3.444	1.6	46	3	86	0.91	0.10	3	6.9	7.2	5
4	3.309	2.3	63	3	83	0.93	0.07	2	7.1	7.5	0
5	3.328	2.0	56	5	139	1.00	0.06	2	7.1	7.9	2
6	3.249	3.0	81	3	81	1.15	0.09	2	7.1	7.9	2
7	3.271	2.8	76	2	55	1.22	0.04	1	7.1	7.9	8
8	3.116	4.2	109	2	52				7.2	8.3	10
9	3.081	4.2	108	2	51				7.1	8.6	0
10	3.359	4.9	137	1	28	0.85	0.04	1	7.0	8.1	2
11	3.359	3.9	109	2	56	0.76	0.04	1	7.0	9.2	5
12	3.267	3.8	104	1	27	0.78	0.03	1	7.2	8.9	2
13	3.219	3.0	81	1	27	0.73	0.03	1	7.1	9.0	8
14	4.241	2.7	95	2	71	0.74	0.03	1	7.2	8.5	1
15	6.456	1.2	65	2	108				7.0	8.1	45
16	4.115	1.5	51	1	34				7.2	7.2	1
17	4.721	2.6	102	1	39	0.69	0.04	2	*G	7.7	0
18	12.056	2.8	282	4	402	0.66	0.06	6	7.2	7.9	8
19	14.464	1.8	217	5	603	0.44	0.03	4	7.1	8.3	70
20	9.300	2.0	155	2	155	0.39	0.03	2	7.2	8.2	32
21	6.477	1.6	86	1	54	0.55	0.04	2	7.2	7.6	2
22	5.796	2.0	97	2	97				7.4	7.4	1
23	4.860	1.8	73	1	41				7.2	7.9	2
24	4.591	2.8	107	2	77	1.00	0.10	4	7.2	7.9	10
25	4.301	2.1	75	1	36	1.09	0.05	2	7.2	7.5	10
26	4.196	1.7	59	1	35	1.21	0.05	2	7.2	7.5	0
27	3.928	2.3	75	3	98	1.36	0.07	2	7.1	7.5	4
28	5.335	2.0	89	2	89	1.51	0.06	3	7.3	8.0	21
29	4.382	2.0	73	2	73				7.0	7.6	0
30	3.971	2.0	66	2	66				7.3	7.8	2
31	3.696	1.6	49	2	62	0.75	0.09	3	7.2	8.0	2
TOTAL	149.805	74.8	2864	65	2940	18.72	1.15	46			
MAX	14.464	4.9	282	5	603	1.51	0.10	6	7.5	9.2	
MIN	3.081	1.0	29	1	27	0.39	0.03	1	6.9	7.2	
AVE	4.832	2.4	92	2	95	0.89	0.05	2	7.2	8.0	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: 2020-05-01 To 2020-05-31

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
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)
Limit	(Report)MGD	30 mg/L	1800 lbs/day	(Report)mg/L	(Report) lbs/day	10 mg/L	580 lbs/day	(Report) lbs/day	2.0 mg/L	120 lbs/day	(Report) lbs/day	(Report)mg/L	(Report) lbs/day
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
1	3.468			2	58	1.6		46					
2	3.449			2	58	1.0		29					
3	3.444			3	86	1.6		46	0.10		3	0.91	26
4	3.309			3	83	2.3		63	0.07		2	0.93	26
5	3.328			5	139	2.0		56	0.06		2	1.00	28
6	3.249			3	81	3.0		81	0.09		2	1.15	31
7	3.271	3	80	2	55	2.8	57	76	0.04	1	1	1.22	33
8	3.116	3	79	2	52	4.2	66	109		1			
9	3.081	3	78	2	51	4.2	77	108		1			
10	3.359	3	70	1	28	4.9	90	137	0.04	1	1	0.85	24
11	3.359	2	66	2	56	3.9	97	109	0.04	1	1	0.76	21
12	3.267	2	50	1	27	3.8	104	104	0.03	1	1	0.78	21
13	3.219	2	42	1	27	3.0	103	81	0.03	1	1	0.73	20
14	4.241	2	45	2	71	2.7	106	95	0.03	1	1	0.74	26
15	6.456	2	53	2	108	1.2	100	65		1			
16	4.115	1	50	1	34	1.5	92	51		1			
17	4.721	1	52	1	39	2.6	87	102	0.04	1	2	0.69	27
18	12.056	2	101	4	402	2.8	111	282	0.06	1	6	0.66	66
19	14.464	2	183	5	603	1.8	128	217	0.03	2	4	0.44	53
20	9.300	2	202	2	155	2.0	138	155	0.03	2	2	0.39	30
21	6.477	2	199	1	54	1.6	137	86	0.04	2	2	0.55	30
22	5.796	2	198	2	97	2.0	142	97		2			
23	4.860	2	199	1	41	1.8	145	73		2			
24	4.591	2	204	2	77	2.8	145	107	0.10	3	4	1.00	38
25	4.301	2	152	1	36	2.1	116	75	0.05	2	2	1.09	39
26	4.196	1	71	1	35	1.7	93	59	0.05	2	2	1.21	42
27	3.928	2	62	3	98	2.3	82	75	0.07	2	2	1.36	45
28	5.335	2	67	2	89	2.0	82	89	0.06	2	3	1.51	67
29	4.382	2	64	2	73	2.0	79	73		2			
30	3.971	2	68	2	66	2.0	78	66		2			
31	3.696	2	66	2	62	1.6	70	49	0.09	2	3	0.75	23

Available Cyanide 01257	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)	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)
(Report) ug/L	(Report) 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
Maximum Daily	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		3	7.5	7.5	8.2
									4	7.1	7.1	7.8
									5	6.9	6.9	7.2
									<1	7.1	7.1	7.5
									2	7.1	7.1	7.9
									2	7.1	7.1	7.9
								2	8	7.1	7.1	7.9
								3	10	7.2	7.2	8.3
								1	<1	7.1	7.1	8.6
								1	2	7.0	7.0	8.1
								2	5	7.0	7.0	9.2
								2	2	7.2	7.2	8.9
								3	8	7.1	7.1	9.0
								2	<1	7.2	7.2	8.5
								3	45	7.0	7.0	8.1
								4	<1	7.2	7.2	7.2
								2	<1	*G	*G	7.7
								2	8	7.2	7.2	7.9
								4	70	7.1	7.1	8.3
<2.0	<0.16							5	32	7.2	7.2	8.2
								6	2	7.2	7.2	7.6
								3	<1	7.4	7.4	7.4
								4	2	7.2	7.2	7.9
								7	10	7.2	7.2	7.9
								7	10	7.2	7.2	7.5
								3	<1	7.2	7.2	7.5
								2	4	7.1	7.1	7.5
								3	21	7.3	7.3	8.0
								2	<1	7.0	7.0	7.6
								2	2	7.3	7.3	7.8
								2	2	7.2	7.2	8.0

Michigan Department of Environmental Quality Discharge Monitoring Report (DMR)

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

PERMIT NUMBER: M10022152
 MONITORING POINT: 001A
 Monitoring Period: 2020-05-01 To: 2020-05-31

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	4.832	14.464	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	95	204	lbs/day	*****	2	3	mg/l	0	Daily	24-HR Composite
	Permit Requirement	1200 Maximum Monthly Average	1800 Maximum 7-Day Average		*****	20 Maximum Monthly Average	30 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	92	145	lbs/day	*****	2.4	4.9	mg/l	0	Daily	24-HR Composite
	Permit Requirement	230 Maximum Monthly Average	580 Maximum 7-Day Average		*****	4 Maximum Monthly Average	10 Maximum Daily		Daily	24-HR Composite	
Ammonia Nitrogen (as N) PARAM CODE: 00610 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	2	3	lbs/day	*****	0.05	0.10	mg/l	0	Daily	24-HR Composite
	Permit Requirement	29 Maximum Monthly Average	120 Maximum 7-Day Average		*****	0.5 Maximum Monthly Average	2.0 Maximum Daily		Daily	24-HR Composite	
Total Phosphorus (as P) PARAM CODE: 00665 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	34	67	lbs/day	*****	0.89	1.51	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	2020-06-16		

Michigan Department of Environmental Quality Discharge Monitoring Report (DMR)

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

PERMIT NUMBER: M10022152
 MONITORING POINT: 001A

DISTRICT: Jackson
 COUNTY: Lenawee

Monitoring Period: 2020-05-01 To: 2020-05-31

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	*****	0.000022	lbs/day	*****	*****	0.59	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	7	cts/100 ml	0	Daily	Grab
	Permit Requirement	*****	*****		*****	200 Max Monthly Geometric Mean	400 Max 7-Day Geometric Mean		Daily	Grab	
pH PARAM CODE: 00400 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	*****	*****	*****	6.9	*****	7.5	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	*****	*****	*****	7.2	*****	*****	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	2020-06-16		