

ADRIAN WWTP

INFLUENT SHEET

ADRIAN, MICHIGAN

JANUARY 2020

DAY	CHEMICALS ADDED FeCl ₃ Gals.	FLOW		BOD ₅	
		TOTAL	MAX RATE	mg/L	Lbs.
		MGD	MGD	00310	85001
1	350	5.646	15.4	120	5651
2	170	5.162	7.3	132	5683
3	0	4.893	7.3	160	6529
4	0	4.975	7.4	159	6597
5	0	4.740	7.0	172	6799
6	180	4.771	7.0	160	6366
7	740	4.614	7.1	162	6234
8	520	4.452	7.6	159	5904
9	440	4.458	6.9	172	6395
10	220	4.899	8.6	150	6129
11	270	15.525	21.3	106	13725
12	270	16.202	21.0	26	3513
13	80	10.694	15.0	32	2854
14	0	8.205	12.8	74	5064
15	10	7.103	11.7	91	5391
16	140	6.312	10.9	89	4685
17	260	5.741	8.7	99	4740
18	250	6.812	10.8	46	2613
19	240	6.259	11.1	96	5011
20	290	6.090	9.7	112	5689
21	0	5.682	8.1	117	5544
22	30	5.618	8.7	130	6091
23	390	5.427	6.1	118	5341
24	360	7.974	14.7	145	9643
25	360	8.612	10.0	75	5387
26	400	7.817	11.4	91	5933
27	350	7.315	10.8	70	4270
28	230	7.280	10.5	100	6072
29	50	6.796	6.8	99	5611
30	0	6.482	9.5	141	7622
31	30	6.110	9.3	110	5605
TOTAL	6630	212.666		3513	182691
AVERAGE	214	6.860		113	5893

ADRIAN WWTP

INFLUENT SHEET

ADRIAN, MICHIGAN

JANUARY 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	98	4615	88	7.3	2.4	113	13.2	622
2	114	4908	106	7.3	2.7	116	14.6	629
3	116	4734	106	7.5				
4	130	5394	110	7.3				
5	120	4744	108	7.3	3.3	130	17.0	672
6	124	4934	116	7.4	3.4	135	19.0	756
7	148	5695	130	7.3	3.6	139	18.2	700
8	160	5941	142	7.4	3.6	134	18.9	702
9	142	5280	134	7.4	3.9	145	20.6	766
10	154	6292	144	7.5				
11	206	26673	126	7.3				
12	58	7837	40	7.3	0.9	122	2.9	392
13	120	10703	98	7.5	1.2	107	4.7	419
14	90	6159	72	7.4	1.8	123	8.9	609
15	90	5332	84	7.5	2.0	118	10.4	616
16	96	5054	84	7.4	2.2	116	11.2	590
17	100	4788	94	7.5				
18	140	7954	138	7.5				
19	84	4385	76	7.5	1.8	94	10.9	569
20	113	5739	99	7.3	2.5	127	12.6	640
21	126	5971	108	7.2	2.8	133	12.9	611
22	130	6091	118	7.4	3.1	145	17.3	811
23	140	6337	120	7.5	3.1	140	15.9	720
24	158	10507	130	7.4				
25	90	6464	82	7.4				
26	92	5998	82	7.2	2.0	130	10.7	698
27	82	5003	70	7.1	2.1	128	11.1	677
28	90	5464	76	7.3	2.3	140	12.4	753
29	98	5555	82	7.4	2.7	153	15.4	873
30	116	6271	102	7.4	3.1	168	17.8	962
31	112	5707	104	7.4				
TOTAL		206525	3169		56.5	2856	296.6	14785
AVERAGE	117	6662	102	7.4	2.6	130	13.5	672

PRIMARY EFFLUENT SHEET

ADRIAN, MICHIGAN

JANUARY 2020

DAY	FLOW		BOD ₅		SUS. SOLIDS		VSS	T. PHOSPHORUS		AMMONIA-N		PRIMARY
	MGD		mg/L	Lbs.	mg/L	Lbs.	mg/L	mg/L	Lbs.	mg/L	Lbs.	SLUDGE
	1-4	5-7	00310	85001	00530	85002	00535	00665	85004	00610	81019	Kgal
1	3.457	2.519	54	2691	22	1096	20	1.0	50	8.9	444	56
2	3.153	2.266	68	3073	32	1446	28	1.4	63	10.9	493	47
3	3.006	2.151	89	3828	40	1720	36		0		0	56
4	3.070	2.220	69	3044	32	1412	24		0		0	56
5	2.879	2.106	81	3368	42	1746	38	2.5	104	11.9	495	57
6	2.909	2.149	69	2911	28	1181	26	2.5	105	12.5	527	58
7	2.794	2.078	50	2032	12	488	12	1.3	53	13.0	528	51
8	2.660	2.048	52	2042	40	1571	38	1.2	47	13.1	514	56
9	2.657	2.056	50	1965	24	943	22	1.4	55	14.2	558	59
10	2.956	2.240	61	2643	34	1473	34					58
11	8.355	7.574	60	7971	52	6908	40					42
12	9.119	7.512	26	3606	18	2497	18	0.8	111	2.4	333	96
13	6.294	4.757	26	2396	20	1843	18	0.8	74	3.6	332	129
14	4.935	3.680	45	3233	26	1868	24	1.5	108	6.3	453	101
15	4.255	3.198	59	3667	28	1740	26	2.0	124	7.5	466	40
16	3.774	2.851	42	2321	34	1879	32	1.7	94	8.6	475	62
17	3.399	2.594	48	2399	24	1200	22					70
18	4.003	3.101	61	3614	24	1422	22					75
19	3.659	2.904	52	2846	20	1095	20	1.3	71	8.3	454	107
20	3.591	2.843	65	3488	52	2790	50	2.0	107	10.2	547	120
21	3.358	2.645	69	3454	60	3004	50	2.4	120	10.2	511	126
22	3.346	2.626	60	2988	42	2092	40	2.6	129	11.6	578	116
23	3.253	2.471	52	2482	24	1146	22	1.9	91	13.1	625	104
24	4.682	3.683	54	3767	64	4465	56					79
25	5.034	3.942	41	3069	28	2096	24					59
26	4.607	3.569	50	3409	32	2182	30	1.3	89	8.9	607	62
27	4.324	3.322	53	3380	28	1785	26	1.2	77	9.9	631	63
28	4.339	3.329	54	3453	32	2046	28	1.4	90	10.1	646	67
29	4.052	3.103	56	3342	34	2029	30	1.8	107	12.4	740	62
30	3.884	2.946	78	4443	48	2734	38	2.3	131	14.4	820	64
31	3.663	2.747	58	3101	38	2031	34					64
TOTAL	125.467	97.230		100028		61930			2000		11777	
AVERAGE	4.047	3.136	57	3227	33	1998	30	1.7	83	10.1	491	73

ADRIAN WWTP

EAST ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

JANUARY 2020

DAY	AERATION	DETENTION	SLUDGE	ORGANIC	AIR	D.O.	S.S.	MIXED LIQUOR			S.S.	RETURN ACTIVATED SLUDGE		WASTE	
	VOLUME	TIME	AGE	LOADING	SUPPLIED		mg/L	V.S.S.	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	7.5	14.7	0.21	3.5	10.3	1040	828	14	0.74	2880	2312	2.662	77	80
2	144	8.2	11.8	0.22	3.2	9.8	1110	905	12	0.93	2180	1800	2.666	85	81
3	144	8.6	8.4	0.34	3.2	9.5	940	738	12	0.78	1640	1298	2.682	89	76
4	144	8.4	10.9	0.25	3.3	9.8	990	801	12	0.83	2080	1702	2.689	88	71
5	144	9.0	9.4	0.25	3.4	8.7	1050	864	11	0.95	2760	2296	2.690	93	72
6	144	8.9	13.9	0.21	3.3	8.7	1050	872	11	0.95	1680	1376	2.690	92	71
7	144	9.3	33.1	0.15	3.4	9.1	1030	847	11	0.94	1640	1356	2.688	96	71
8	144	9.7	10.2	0.15	3.5	9.6	1010	832	10	1.01	1620	1328	2.688	101	71
9	144	9.7	16.7	0.15	3.5	9.5	990	813	10	0.99	1660	1378	2.691	101	71
10	144	8.7	10.4	0.21	3.2	9.2	970	796	10	0.97	1660	1396	2.683	91	69
11	144	3.1	2.9	0.46	3.2	9.6	1170	1002	9	1.30	1800	1500	2.692	32	71
12	144	2.8	6.4	0.29	3.5	10.4	970	748	10	0.97	3580	2788	2.695	30	30
13	144	4.1	9.5	0.19	3.4	9.6	1110	802	10	1.11	3840	2838	2.693	43	44
14	144	5.2	11.2	0.21	3.4	10.3	1330	976	10	1.33	3020	2210	2.691	55	65
15	144	6.1	12.7	0.23	3.4	9.6	1400	1034	10	1.40	3100	2260	2.688	63	63
16	144	6.8	11.2	0.15	3.5	10.2	1330	979	10	1.33	2860	2128	2.688	71	63
17	144	7.6	18.5	0.15	3.6	10.2	1400	1043	10	1.40	3240	2412	2.688	79	63
18	144	6.5	17.3	0.19	3.4	9.6	1540	1171	10	1.54	2780	2102	2.689	67	69
19	144	7.1	20.3	0.17	3.6	10.2	1380	1065	10	1.38	3240	2478	2.688	73	63
20	144	7.2	7.7	0.21	3.7	10.1	1330	1017	12	1.11	2440	1860	2.689	75	64
21	144	7.7	6.1	0.24	3.6	10.0	1150	884	13	0.88	2900	2258	2.690	80	66
22	144	7.7	9.8	0.19	3.6	9.1	1280	996	13	0.98	2880	2242	2.690	80	66
23	144	7.9	19.9	0.14	3.5	9.5	1440	1132	13	1.11	2560	2034	2.689	83	68
24	144	5.5	5.2	0.20	3.4	8.2	1450	1154	13	1.12	2620	2110	2.691	57	82
25	144	5.1	10.4	0.18	3.4	9.8	1360	1067	13	1.05	3120	2492	2.689	53	82
26	144	5.6	10.2	0.20	3.4	9.8	1390	1092	13	1.07	3620	2878	2.688	58	77
27	144	6.0	12.1	0.20	3.4	9.2	1360	1084	14	0.97	2860	2252	2.691	62	73
28	144	6.0	9.9	0.22	3.4	9.7	1270	997	15	0.85	2780	2188	2.692	62	75
29	144	6.4	10.6	0.19	3.5	9.5	1360	1092	15	0.91	3280	2618	2.682	66	74
30	144	6.7	7.3	0.28	3.5	8.7	1270	1007	14	0.91	3200	2536	2.690	69	72
31	144	7.1	10.6	0.18	3.5	8.3	1370	1104	14	0.98	3160	2562	2.688	73	71
AVERAGE	144	7.0	11.9	0.21	3.4	9.5	1221	959	12	1.06	2667	2096	2.687	72	69

ADRIAN WWTP

WEST #1 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

JANUARY 2020

DAY	AERATION	DETENTION	SLUDGE	ORGANIC	AIR	D.O.	S.S.	MIXED LIQUOR		SDI	S.S.	RETURN ACTIVATED SLUDGE		WASTE	
	VOLUME	TIME	AGE	LOADING	SUPPLIED		mg/L	V.S.S.	SETTLED	%	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	8.7	22.2	0.14	0.6	10.5	1350	1064	18	0.75	2500	1998	1.197	95	17
2	61	9.7	16.6	0.16	0.5	10.3	1320	1038	16	0.83	2500	2014	1.190	105	15
3	61	10.2	12.7	0.23	0.5	10.2	1200	931	16	0.75	2040	1602	1.190	111	16
4	61	9.9	15.8	0.18	0.6	10.1	1230	950	17	0.72	1960	1564	1.191	107	17
5	61	10.4	13.0	0.19	0.6	9.9	1260	999	16	0.79	2060	1642	1.189	113	18
6	61	10.2	18.7	0.17	0.6	9.6	1230	974	12	1.03	2560	2038	1.191	111	17
7	61	10.5	48.3	0.11	0.6	10.3	1320	1065	15	0.88	2120	1718	1.192	115	17
8	61	10.7	12.4	0.13	0.6	10.6	1110	889	15	0.74	1880	1492	1.190	116	17
9	61	10.7	22.0	0.12	0.6	10.4	1190	948	15	0.79	2060	1654	1.190	116	17
10	61	9.8	15.5	0.14	0.6	10.2	1290	1040	17	0.76	1800	1456	1.187	106	16
11	61	2.9	2.8	0.50	0.6	9.2	1230	1000	14	0.88	2380	1936	1.194	32	10
12	61	2.9	8.6	0.22	0.6	8.5	1280	978	11	1.16	5960	4508	1.193	32	0
13	61	4.6	14.1	0.13	0.6	9.8	1470	1066	12	1.23	4440	3234	1.198	50	11
14	61	6.0	15.0	0.16	0.6	10.8	1570	1115	12	1.31	3480	2468	1.198	65	24
15	61	6.8	14.5	0.20	0.6	10.4	1420	1025	12	1.18	3140	2248	1.197	75	24
16	61	7.7	12.8	0.13	0.6	10.9	1360	973	12	1.13	2800	2034	1.197	84	24
17	61	8.4	21.3	0.13	0.6	11.1	1450	1046	13	1.12	2820	2056	1.195	92	24
18	61	7.1	16.2	0.21	0.6	10.4	1320	972	14	0.94	2560	1870	1.196	77	24
19	61	7.5	21.5	0.16	0.6	11.0	1370	1026	13	1.05	2780	2068	1.197	82	24
20	61	7.7	7.3	0.23	0.6	10.8	1190	865	14	0.85	2380	1758	1.197	84	24
21	61	8.3	6.8	0.23	0.6	10.8	1180	879	13	0.91	2380	1778	1.197	91	24
22	61	8.3	10.0	0.19	0.6	10.0	1210	902	14	0.86	2540	1910	1.198	91	24
23	61	8.9	17.5	0.16	0.6	10.0	1140	859	14	0.81	2380	1816	1.197	97	24
24	61	5.9	4.9	0.22	0.6	9.1	1260	971	13	0.97	1860	1440	1.196	65	24
25	61	5.6	9.9	0.19	0.6	9.8	1200	909	14	0.86	2380	1818	1.197	61	23
26	61	6.1	10.1	0.20	0.6	10.2	1270	994	15	0.85	3080	2445	1.198	67	23
27	61	6.6	12.1	0.20	0.6	10.0	1230	968	15	0.82	2160	1688	1.198	72	23
28	61	6.6	9.5	0.23	0.6	9.9	1110	851	15	0.74	2420	1884	1.197	72	23
29	61	7.1	9.8	0.22	0.6	9.8	1130	870	15	0.75	2200	1726	1.188	77	23
30	61	7.4	7.4	0.28	0.6	9.7	1140	888	15	0.76	2240	1768	1.191	81	24
31	61	8.0	10.1	0.19	0.6	9.2	1160	915	15	0.77	2160	1704	1.191	87	24
AVERAGE	61	7.8	14.2	0.19	0.6	10.1	1264	967	14	0.90	2581	1979	1.194	85	20

ADRIAN WWTP

WEST #2 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

JANUARY 2020

DAY	AERATION	DETENTION	SLUDGE	ORGANIC	AIR	D.O.	S.S.	MIXED LIQUOR			S.S.	RETURN ACTIVATED SLUDGE		WASTE	
	VOLUME	TIME	AGE	LOADING	SUPPLIED		mg/L	V.S.S.	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	8.7	17.0	0.19	0.7	10.9	1030	797	16	0.64	2180	1750	1.050	83	23
2	61	9.7	13.6	0.19	0.6	10.5	1080	868	12	0.90	2200	1760	1.114	98	26
3	61	10.2	10.1	0.28	0.6	10.4	950	741	12	0.79	1600	1262	1.143	106	24
4	61	9.9	12.7	0.21	0.7	10.4	990	788	12	0.83	1700	1354	1.144	103	23
5	61	10.4	10.6	0.23	0.7	10.0	1030	821	16	0.64	1740	1398	1.149	109	23
6	61	10.2	15.3	0.20	0.7	9.7	1010	801	12	0.84	2260	1810	1.149	107	23
7	61	10.5	41.0	0.13	0.7	10.6	1120	897	12	0.93	1760	1416	1.154	111	23
8	61	10.7	11.7	0.14	0.7	10.8	1050	835	12	0.88	1760	1412	1.153	113	23
9	61	10.7	20.5	0.13	0.7	10.7	1110	888	13	0.85	1880	1508	1.154	112	23
10	61	9.8	13.3	0.17	0.7	10.3	1110	894	14	0.79	1720	1392	1.178	105	23
11	61	2.9	2.5	0.57	0.7	9.8	1090	873	14	0.78	2020	1618	1.208	32	13
12	61	2.9	9.4	0.20	0.7	9.6	1400	1096	10	1.40	5180	3946	1.203	32	0
13	61	4.6	12.3	0.15	0.7	10.3	1280	933	11	1.16	4220	3084	1.205	51	10
14	61	6.0	14.8	0.16	0.7	10.9	1550	1124	12	1.29	3560	2560	1.197	65	21
15	61	6.8	15.7	0.18	0.7	10.7	1540	1122	12	1.28	3320	2422	1.193	75	22
16	61	7.7	13.7	0.12	0.7	11.2	1460	1064	12	1.22	3120	2274	1.194	84	22
17	61	8.4	23.0	0.12	0.8	11.4	1570	1139	13	1.21	3020	2190	1.198	92	22
18	61	7.1	18.6	0.18	0.7	10.6	1520	1121	13	1.17	2940	2154	1.199	77	22
19	61	7.5	23.9	0.15	0.8	11.4	1520	1139	13	1.17	3360	2498	1.204	83	22
20	61	7.7	8.6	0.20	0.8	11.1	1400	1032	15	0.93	2720	2014	1.210	85	23
21	61	8.3	8.9	0.17	0.8	11.4	1540	1164	15	1.03	3080	2330	1.210	91	24
22	61	8.3	11.4	0.17	0.8	10.5	1380	1034	15	0.92	2900	2190	1.209	92	25
23	61	8.9	26.0	0.11	0.8	10.6	1690	1291	14	1.21	2840	2182	1.199	97	27
24	61	5.9	5.9	0.19	0.7	9.8	1520	1168	15	1.01	2540	1952	1.229	67	28
25	61	5.6	12.3	0.15	0.7	10.2	1490	1148	15	0.99	3140	2404	1.230	62	28
26	61	6.1	13.1	0.15	0.7	10.5	1640	1273	19	0.86	3600	2814	1.212	68	29
27	61	6.6	13.5	0.18	0.7	10.7	1380	1056	18	0.77	3120	2432	1.214	73	29
28	61	6.6	11.6	0.19	0.8	10.3	1350	1036	18	0.75	2960	2292	1.205	72	29
29	61	7.1	11.0	0.20	0.8	10.4	1270	970	17	0.75	2580	2004	1.213	78	27
30	61	7.4	8.7	0.24	0.8	10.5	1350	1049	17	0.79	2600	2052	1.213	82	29
31	61	8.0	12.2	0.16	0.8	10.0	1390	1091	17	0.82	2580	2046	1.212	88	29
AVERAGE	61	7.8	14.3	0.19	0.7	10.5	1316	1008	14	0.96	2716	2081	1.185	84	23

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

JANUARY 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	4.404	3.4	125	97.2	3	110	96.9	3	7.2		
2	4.179	3.2	112	97.6	3	105	97.4	3	7.1		
3	3.684	2.6	80	98.4	4	123	96.6	3	7.3		
4	3.672	3.9	119	97.5	4	122	96.9	4	7.3		
5	3.660	3.3	101	98.1	3	92	97.5	3	7.2		
6	3.471	2.4	69	98.5	4	116	96.8	4	7.1		
7	3.408	2.4	68	98.5	2	57	98.6	2	7.3		
8	3.294	1.6	44	99.0	3	82	98.1	2	7.3		
9	3.280	3.2	88	98.1	4	109	97.2	4	7.3		
10	3.599	2.6	78	98.3	4	120	97.4	4	7.2		
11	12.420	2.9	300	97.3	5	518	97.6	4	7.1		
12	12.962	3.3	357	87.3	7	757	87.9	4	7.3		
13	8.555	4.0	285	87.5	4	285	96.7	4	7.3		
14	6.564	3.2	175	95.7	2	109	97.8	2	7.3	<2.0	<0.11
15	5.878	2.5	123	97.3	2	98	97.8	2	7.4		
16	5.117	3.6	154	96.0	3	128	96.9	2	7.4		
17	4.694	4.0	157	96.0	3	117	97.0	3	7.2		
18	5.551	3.9	181	91.5	3	139	97.9	3	7.3		
19	5.070	4.0	169	95.8	4	169	95.2	3	7.2		
20	4.872	2.8	114	97.5	2	81	98.2	2	7.0		
21	4.292	3.4	122	97.1	2	72	98.4	2	7.1		
22	4.149	3.1	107	97.6	2	69	98.5	2	7.3		
23	3.987	4.0	133	96.6	3	100	97.9	2	7.2		
24	6.121	3.1	158	97.9	4	204	97.5	2	7.2		
25	6.864	2.7	155	96.4	2	114	97.8	1	7.3		
26	6.231	4.4	229	95.2	4	208	95.7	3	7.1		
27	5.756	3.0	144	95.7	4	192	95.1	3	7.3		
28	5.660	2.6	123	97.4	3	142	96.7	3	7.1		
29	5.102	2.2	94	97.8	2	85	98.0	2	7.0		
30	4.907	2.9	119	97.9	2	82	98.3	2	7.1		
31	4.680	2.4	94	97.8	3	117	97.3	2	7.0		
TOTAL	166.083	96.6	4374		100	4823					
AVERAGE	5.358	3.1	141	96.5	3	156	97.0	3	7.2		

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

JANUARY 2020

DAY	TOTAL PHOSPHORUS			AMMONIA-N			TEMP °F	D.O. mg/L 00300	FECAL COLIFORM cts/100 mL 74055	MERCURY	
	mg/L 00665	Lbs. 00665	% Rem 81012	mg/L 00610	Lbs. 00610	% Rem				ng/L 71900	Lbs. 71900
1	0.46	17	81	0.05	2	100	55	10.0	1		
2	0.48	17	82	0.05	2	100	52	8.4	4		
3							54	8.6	10		
4							55	8.4	10		
5	1.37	42	58	0.04	1	100	56	8.0	14		
6	1.48	43	56	0.06	2	100	53	8.2	2		
7	1.30	37	64	0.05	1	100	54	8.6	23		
8	0.80	22	78	0.05	1	100	54	10.8	4		
9	0.70	19	82	0.06	2	100	53	8.7	12		
10							54	8.6	2		
11							55	8.5	11		
12	0.59	64	34	0.03	3	99	52	9.7	63		
13	0.42	30	65	0.03	2	99	50	8.9	15		
14	0.58	32	68	0.03	2	100	52	8.6	0		
15	0.79	39	61	0.04	2	100	52	8.8	0	1.01	0.000050
16	1.01	43	54	0.04	2	100	51	8.4	0		
17							51	9.3	0		
18							50	9.1	8		
19	0.77	33	57	0.04	2	100	50	9.2	4		
20	0.76	31	70	0.03	1	100	50	9.6	2		
21	0.99	35	65	0.03	1	100	52	9.1	0		
22	1.24	43	60	0.04	1	100	50	9.4	2		
23	1.35	45	56	0.06	2	100	51	9.1	0		
24							53	9.0	6		
25							51	8.8	3		
26	0.58	30	71	0.07	4	99	57	8.5	2		
27	0.51	24	76	0.06	3	99	53	7.9	0		
28	0.53	25	77	0.04	2	100	53	9.9	1		
29	0.65	28	76	0.09	4	99	53	8.9	1		
30	0.99	41	68	0.11	5	99	53	8.3	2		
31							53	8.7	6		
TOTAL	18.35	738		1.10	46						
AVERAGE	0.83	34	66	0.05	2	100	53	8.9	2	1.01	

ADRIAN WWTP

THICKENER SLUDGE

ADRIAN, MICHIGAN

JANUARY 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	13.8	5.4	4.74	77
2	00S	00S	00S	00S	13.8	5.2	4.95	77
3	00S	00S	00S	00S	15.7	5.2	5.50	78
4	00S	00S	00S	00S	16.0	5.2	5.40	77
5	00S	00S	00S	00S	15.8	5.2	5.17	77
6	00S	00S	00S	00S	14.6	5.2	4.98	78
7	00S	00S	00S	00S	14.6	5.2	3.88	79
8	00S	00S	00S	00S	13.4	5.1	4.52	79
9	00S	00S	00S	00S	14.6	5.5	3.23	80
10	00S	00S	00S	00S	14.2	5.3	4.76	80
11	00S	00S	00S	00S	13.4	5.4	4.62	79
12	00S	00S	00S	00S	10.5	5.4	5.20	77
13	00S	00S	00S	00S	12.7	5.3	5.36	72
14	00S	00S	00S	00S	12.0	5.8	1.57	74
15	00S	00S	00S	00S	11.0	6.1	0.69	72
16	00S	00S	00S	00S	12.2	6.4	1.03	69
17	00S	00S	00S	00S	14.1	6.6	0.56	68
18	00S	00S	00S	00S	15.6	6.8	0.48	64
19	00S	00S	00S	00S	16.2	5.9	1.84	70
20	00S	00S	00S	00S	19.1	5.8	2.53	71
21	00S	00S	00S	00S	16.2	5.8	1.41	71
22	00S	00S	00S	00S	18.4	6.8	0.62	66
23	00S	00S	00S	00S	24.6	5.4	2.07	75
24	00S	00S	00S	00S	30.4	5.6	2.38	78
25	00S	00S	00S	00S	33.0	6.8	1.64	68
26	00S	00S	00S	00S	35.9	5.7	3.64	75
27	00S	00S	00S	00S	31.1	5.4	1.73	76
28	00S	00S	00S	00S	40.2	5.8	2.69	68
29	00S	00S	00S	00S	39.7	5.2	2.96	73
30	00S	00S	00S	00S	38.8	5.3	4.45	76
31	00S	00S	00S	00S	32.7	5.3	5.15	76
TOTAL	0.0	0.0	0.00	0	624.3	175.1	99.75	2300
AVERAGE	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	20.1	5.6	3.22	74

ADRIAN WWTP

PRIMARY SLUDGE

ADRIAN, MICHIGAN

JANUARY 2020

DAY	PRIMARIES #1 - #4			PRIMARIES #5 - #7		
	pH SU	SOLIDS %	VOL. SOLIDS %	pH SU	SOLIDS %	VOL. SOLIDS %
1	6.9	0.52	62	6.4	1.40	77
2						
3						
4						
5						
6						
7						
8	6.9	0.91	76	6.6	0.78	77
9						
10						
11						
12						
13						
14						
15	6.5	0.67	71	5.8	0.44	60
16						
17						
18						
19						
20						
21						
22	6.2	2.07	41	6.8	1.27	69
23						
24						
25						
26						
27						
28						
29	6.8	0.60	68	6.3	3.26	74
30						
31						
AVERAGE	6.7	0.95	64	6.4	1.43	71

ADRIAN WWTP

DIGESTED SLUDGE

ADRIAN, MICHIGAN

JANUARY 2020

DAY	#	FLOW KGAL.	pH SU	SOLIDS %	SOLIDS VOL. %
1					
2					
3	4	60.0	7.1	2.61	56
4					
5					
6					
7					
8					
9					
10	2	53.2	7.2	4.14	57
11					
12					
13					
14					
15	6	84.0	7.3	3.93	57
16	2	52.2	7.4	2.50	58
17	4	45.6	7.2	2.04	57
18					
19					
20					
20					
22					
23					
24					
25					
26					
27	4	84.0	7.5	1.89	58
28					
29					
30	6	98.4	7.4	3.43	56
31					
TOTAL		477.4		2.93	57

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

DISCHARGE NUMBER 001A

JANUARY 2020

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	≥ 5.0	cts/
DAY	MGD	mg/L	Lbs.	mg/L	Lbs.	mg/L	mg/L	Lbs.	S.U.	mg/L	100 mL
1	4.404	3.4	125	3	110	0.46	0.05	2	7.2	10.0	1
2	4.179	3.2	112	3	105	0.48	0.05	2	7.1	8.4	4
3	3.684	2.6	80	4	123				7.3	8.6	10
4	3.672	3.9	119	4	122				7.3	8.4	10
5	3.660	3.3	101	3	92	1.37	0.04	1	7.2	8.0	14
6	3.471	2.4	69	4	116	1.48	0.06	2	7.1	8.2	2
7	3.408	2.4	68	2	57	1.30	0.05	1	7.3	8.6	23
8	3.294	1.6	44	3	82	0.80	0.05	1	7.3	10.8	4
9	3.280	3.2	88	4	109	0.70	0.06	2	7.3	8.7	12
10	3.599	2.6	78	4	120				7.2	8.6	2
11	12.420	2.9	300	5	518				7.1	8.5	11
12	12.962	3.3	357	7	757	0.59	0.03	3	7.3	9.7	63
13	8.555	4.0	285	4	285	0.42	0.03	2	7.3	8.9	15
14	6.564	3.2	175	2	109	0.58	0.03	2	7.3	8.6	0
15	5.878	2.5	123	2	98	0.79	0.04	2	7.4	8.8	0
16	5.117	3.6	154	3	128	1.01	0.04	2	7.4	8.4	0
17	4.694	4.0	157	3	117				7.2	9.3	0
18	5.551	3.9	181	3	139				7.3	9.1	8
19	5.070	4.0	169	4	169	0.77	0.04	2	7.2	9.2	4
20	4.872	2.8	114	2	81	0.76	0.03	1	7.0	9.6	2
21	4.292	3.4	122	2	72	0.99	0.03	1	7.1	9.1	0
22	4.149	3.1	107	2	69	1.24	0.04	1	7.3	9.4	2
23	3.987	4.0	133	3	100	1.35	0.06	2	7.2	9.1	0
24	6.121	3.1	158	4	204				7.2	9.0	6
25	6.864	2.7	155	2	114				7.3	8.8	3
26	6.231	4.4	229	4	208	0.58	0.07	4	7.1	8.5	2
27	5.756	3.0	144	4	192	0.51	0.06	3	7.3	7.9	0
28	5.660	2.6	123	3	142	0.53	0.04	2	7.1	9.9	1
29	5.102	2.2	94	2	85	0.65	0.09	4	7.0	8.9	1
30	4.907	2.9	119	2	82	0.99	0.11	5	7.1	8.3	2
31	4.680	2.4	94	3	117				7.0	8.7	6
TOTAL	166.083	96.6	4374	100	4823	18.35	1.10	46			
MAX	12.962	4.4	357	7	757	1.48	0.11	5	7.4	10.8	
MIN	3.280	1.6	44	2	57	0.42	0.03	1	7.0	7.9	
AVE	5.358	3.1	141	3	156	0.83	0.05	2	7.2	8.9	2

PERMITTEE NAME:	Adrian WWTP	PERMIT NUMBER:	MI0022152
MAILING ADDRESS:	135 E. Maumee St.	DISTRICT	Jackson
	Adrian, MI 49221	COUNTY	Lenawee
FACILITY:	Adrian WWTP	MONITORING POINT:	001A
LOCATION:	1001 Oakwood Road	MONITORING PERIOD:	2020-01-01 To 2020-01-31
	Adrian, MI 49221		

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	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	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	40 mg/L	2300 lbs/day	(Report)mg/L	(Report) lbs/day	(Report)mg/L	(Report) 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 7-Day Average	Maximum 7-Day Average	Maximum Daily	Maximum Daily	Maximum Daily	Maximum 7-Day Average	Maximum Daily	Maximum Daily	Maximum Daily	Report Maximum Daily
1	4.404			3	110			3.4	125	0.05		2	0.46	17	
2	4.179			3	105			3.2	112	0.05		2	0.48	17	
3	3.684			4	123			2.6	80						
4	3.672			4	122			3.9	119						
5	3.660			3	92			3.3	101	0.04		1	1.37	42	
6	3.471			4	116			2.4	69	0.06		2	1.48	43	
7	3.408	3	103	2	57	3	96	2.4	68	0.05	1	1	1.30	37	
8	3.294	3	100	3	82	3	85	1.6	44	0.05	1	1	0.80	22	
9	3.280	3	100	4	109	3	81	3.2	88	0.06	1	2	0.70	19	
10	3.599	3	100	4	120	3	81	2.6	78		1				
11	12.420	4	156	5	518	3	107	2.9	300		1				
12	12.962	4	251	7	757	3	143	3.3	357	0.03	1	3	0.59	64	
13	8.555	4	276	4	285	3	174	4.0	285	0.03	1	2	0.42	30	
14	6.564	4	283	2	109	3	190	3.2	175	0.03	1	2	0.58	32	<2.0
15	5.878	4	285	2	98	3	201	2.5	123	0.04	2	2	0.79	39	
16	5.117	4	288	3	128	3	210	3.6	154	0.04	2	2	1.01	43	
17	4.694	4	288	3	117	3	221	4.0	157		2				
18	5.551	3	233	3	139	4	204	3.9	181		2				
19	5.070	3	149	4	169	4	178	4.0	169	0.04	1	2	0.77	33	
20	4.872	3	120	2	81	3	153	2.8	114	0.03	1	1	0.76	31	
21	4.292	3	115	2	72	3	145	3.4	122	0.03	1	1	0.99	35	
22	4.149	3	111	2	69	4	143	3.1	107	0.04	1	1	1.24	43	
23	3.987	3	107	3	100	4	140	4.0	133	0.06	1	2	1.35	45	
24	6.121	3	119	4	204	3	141	3.1	158		1				
25	6.864	3	116	2	114	3	137	2.7	155		1				
26	6.231	3	121	4	208	3	145	4.4	229	0.07	1	4	0.58	30	
27	5.756	3	137	4	192	3	150	3.0	144	0.06	2	3	0.51	24	
28	5.660	3	147	3	142	3	150	2.6	123	0.04	2	2	0.53	25	
29	5.102	3	149	2	85	3	148	2.2	94	0.09	2	4	0.65	28	
30	4.907	3	147	2	82	3	146	2.9	119	0.11	2	5	0.99	41	
31	4.680	3	134	3	117	3	137	2.4	94		2				

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	CBOD5 Minimum % Removal 80091	Total Suspended Solids Minimum % Removal 81011	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	Percent Removal (K)	Percent Removal (K)	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	(Report) %	(Report) %	6.5 SU	9.0 SU	5.0 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 % Removal	Minimum Daily % Removal	Minimum Daily	Maximum Daily	Minimum Daily
								<1	97.2	96.9	7.2	7.2	10.0
								4	97.6	97.4	7.1	7.1	8.4
								10	98.4	96.6	7.3	7.3	8.6
								10	97.5	96.9	7.3	7.3	8.4
								14	98.1	97.5	7.2	7.2	8.0
								2	98.5	96.8	7.1	7.1	8.2
							6	23	98.5	98.6	7.3	7.3	8.6
							7	4	99.0	98.1	7.3	7.3	10.8
							8	12	98.1	97.2	7.3	7.3	8.7
							7	2	98.3	97.4	7.2	7.2	8.6
							7	11	97.3	97.6	7.1	7.1	8.5
							8	63	87.3	87.9	7.3	7.3	9.7
							11	15	87.5	96.7	7.3	7.3	8.9
<0.11							5	<1	95.7	97.8	7.3	7.3	8.6
	1.01	0.000050	1.1	0.92	<0.20	<0.20	3	<1	97.3	97.8	7.4	7.4	8.8
							2	<1	96.0	96.9	7.4	7.4	8.4
							1	<1	96.0	97.0	7.2	7.2	9.3
							1	8	91.5	97.9	7.3	7.3	9.1
							1	4	95.8	95.2	7.2	7.2	9.2
							0	2	97.5	98.2	7.0	7.0	9.6
							0	<1	97.1	98.4	7.1	7.1	9.1
							1	2	97.6	98.5	7.3	7.3	9.4
							1	<1	96.6	97.9	7.2	7.2	9.1
							1	6	97.9	97.5	7.2	7.2	9.0
							1	3	96.4	97.8	7.3	7.3	8.8
							1	2	95.2	95.7	7.1	7.1	8.5
							1	<1	95.7	95.1	7.3	7.3	7.9
							1	<1	97.4	96.7	7.1	7.1	9.9
							1	<1	97.8	98.0	7.0	7.0	8.9
							1	2	97.9	98.3	7.1	7.1	8.3
							1	6	97.8	97.3	7.0	7.0	8.7

Michigan Department of Environmental Quality Discharge Monitoring Report (DMR)

PERMITTEE NAME: Adrian WWTP
 MAILING ADDRESS: 100 East Church St.
 Adrian, MI 49221
 FACILITY: Adrian WWTP
 LOCATION: 1001 Oakwood Road
 Adrian, MI 49221

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

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	5.358	12.962	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	156	288	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	141	221	lbs/day	*****	3.1	4	mg/l	0	Daily	24-HR Composite
	Permit Requirement	1500 Maximum Monthly Average	2300 Maximum 7-Day Average		*****	25 Maximum Monthly Average	40 Maximum 7-Day Average		Daily	24-HR Composite	
Ammonia Nitrogen (as N) PARAM CODE: 00610 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	2	2	lbs/day	*****	0.05	0.11	mg/l	0	Daily	24-HR Composite
	Permit Requirement	990 Maximum Monthly Average	(Report) Maximum 7-Day Average		*****	17 Maximum Monthly Average	(Report) Maximum Daily		Daily	24-HR Composite	
Total Phosphorus (as P) PARAM CODE: 00665 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	34	38	lbs/day	*****	0.83	1.48	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	0.000050	0.000050	lbs/day	*****	1.01	1.01	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 Agent		Telephone No	Date (YYYY-MM-DD)		
Ryan L. White WWTP Superintendent								517-264-4867	2020-02-17		

Michigan Department of Environmental Quality Discharge Monitoring Report (DMR)

PERMITTEE NAME: Adrian WWTP
 MAILING ADDRESS: 100 East Church St.
 Adrian, MI 49221
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 Adrian, MI 49221

PERMIT NUMBER: M10022152
 MONITORING GROUP: 001A

DISTRICT: Jackson
 COUNTY: Lenawee

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

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	*****	0.000012	lbs/day	*****	*****	0.32	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	*****	*****	*****	*****	2	11	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	*****	*****	*****	96.5	*****	87.5	%	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	*****	*****	*****	97.0	*****	87.9	%	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	*****	*****	*****	7.0	*****	7.4	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	*****	*****	*****	7.9	*****	*****	mg/l	0	5X Weekly	Grab
	Permit Requirement	*****	*****		5.0 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	2020-02-17		