

ADRIAN WWTP

INFLUENT SHEET

ADRIAN, MICHIGAN

JULY 2020

DAY	CHEMICAL ADDED FeCl ₃ Gals.	FLOW		BOD ₅	
		TOTAL MGD 50050	MAX RATE MGD 50051	mg/L 00310	Lbs. 85001
1	300	4.076	6.8	219	7445
2	250	4.230	7.2	181	6385
3	270	4.067	7.1	196	6648
4	250	3.956	7.2	206	6797
5	240	3.976	7.1	192	6367
6	300	3.985	6.5	242	8043
7	370	4.025	7.0	197	6613
8	400	4.021	6.2	200	6707
9	360	3.937	6.3	190	6239
10	540	5.455	17.4	230	10464
11	610	3.965	6.9	160	5291
12	640	3.871	6.2	171	5521
13	640	3.864	6.4	188	6058
14	650	3.940	6.4	204	6703
15	590	3.412	7.2	226	6431
16	340	5.116	12.9	186	7936
17	290	3.937	6.4	170	5582
18	290	3.928	6.5	204	6683
19	260	3.996	6.8	185	6165
20	400	4.059	7.1	203	6872
21	700	3.999	5.1	180	6003
22	800	3.978	7.3	191	6337
23	760	3.975	7.0	204	6763
24	760	3.860	7.2	202	6503
25	710	3.867	6.7	188	6063
26	690	3.921	7.0	180	5886
27	590	4.057	6.1	226	7647
28	620	4.100	7.1	182	6223
29	590	4.115	6.8	172	5903
30	580	4.005	6.5	188	6280
31	590	3.885	6.8	200	6480
TOTAL	15380	125.578		6063	205037
AVERAGE	496	4.051		196	6614

ADRIAN WWTP

INFLUENT SHEET

ADRIAN, MICHIGAN

JULY 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	148	5031	136	7.2	4.3	146	25.1	853
2	136	4798	134	7.2	4.0	141	21.5	758
3	124	4206	120	7.2				
4	142	4685	138	7.1				
5	154	5107	140	7.4	4.4	146	22.1	733
6	192	6381	170	7.2	5.0	166	24.6	818
7	166	5572	154	7.3	4.5	151	24.8	832
8	156	5231	138	7.2	4.8	161	27.1	909
9	160	5254	146	7.2	4.7	154	26.5	870
10	304	13830	232	7.4				
11	112	3704	108	7.0				
12	162	5230	150	7.1	4.3	139	26.8	865
13	150	4834	134	7.2	4.5	145	26.4	851
14	156	5126	138	7.0	4.4	145	24.1	792
15	180	5122	160	7.1	4.5	128	23.3	663
16	216	9216	186	7.0	4.0	171	17.4	742
17	156	5122	148	7.3				
18	158	5176	150	7.1				
19	154	5132	142	7.2	4.3	143	22.0	733
20	159	5382	149	7.3	4.2	142	21.9	741
21	140	4669	132	7.2	4.3	143	22.3	744
22	168	5574	148	7.1	4.1	136	21.8	723
23	194	6431	150	7.1	4.5	149	27.7	918
24	188	6052	154	7.2				
25	168	5418	156	7.1				
26	152	4971	136	7.3	4.4	144	25.4	831
27	222	7511	192	7.2	4.6	156	27.6	934
28	168	5745	146	7.3	4.7	161	23.5	804
29	188	6452	174	7.0	4.3	148	22.1	758
30	162	5411	142	7.1	4.6	154	26.4	882
31	166	5379	162	7.2				
TOTAL		177753	4665		97.4	3268	530.4	17755
AVERAGE	168	5734	150	7.2	4.4	149	24.1	807

PRIMARY EFFLUENT SHEET

ADRIAN, MICHIGAN

JULY 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	2.484	1.772	91	3230	46	1633	38	1.8	64	17.4	618	59
2	2.619	1.876	66	2474	40	1500	40	1.8	67	16.6	622	60
3	2.505	1.798	72	2584	16	574	16					63
4	2.431	1.757	75	2620	44	1537	44					63
5	2.436	1.748	62	2163	40	1396	36	2.3	80	16.4	572	61
6	2.437	1.736	82	2854	42	1462	36	2.9	101	18.5	644	61
7	2.473	1.763	81	2862	44	1554	44	2.8	99	18.5	654	61
8	2.450	1.765	64	2250	34	1195	32	2.4	84	18.6	654	64
9	2.426	1.721	62	2144	40	1383	38	2.4	83	20.9	723	61
10	3.284	2.406	62	2942	52	2468	52					60
11	2.441	1.721	56	1944	44	1527	42					60
12	2.390	1.684	55	1869	30	1019	28	1.5	51	17.5	595	58
13	2.390	1.697	50	1704	44	1500	32	1.4	48	18.2	620	57
14	2.394	1.706	55	1881	40	1368	32	1.4	48	15.9	544	58
15	2.106	1.510	48	1448	36	1086	32	1.4	42	15.0	452	50
16	3.126	2.267	49	2204	44	1979	42	1.9	85	12.1	544	49
17	2.412	1.733	52	1798	44	1521	40					54
18	2.402	1.738	80	2762	70	2417	66					52
19	2.424	1.765	74	2585	52	1817	46	3.0	105	14.0	489	47
20	2.485	1.800	69	2466	38	1358	38	2.9	104	14.0	500	50
21	2.456	1.774	52	1834	24	847	24	1.9	67	14.1	497	52
22	2.428	1.760	54	1886	28	978	28	1.6	56	14.2	496	52
23	2.440	1.764	54	1893	36	1262	34	2.1	74	16.7	586	55
24	2.350	1.717	58	1967	34	1153	32					52
25	2.354	1.731	60	2044	40	1363	36					45
26	2.381	1.751	60	2068	36	1241	34	1.6	55	18.8	648	38
27	2.448	1.803	76	2694	44	1560	40	2.2	78	21.2	752	41
28	2.513	1.854	60	2185	36	1311	28	2.1	76	17.4	634	49
29	2.519	1.863	55	2010	38	1389	34	1.8	66	15.4	563	51
30	2.451	1.814	53	1885	28	996	28	1.8	64	14.5	516	52
31	2.369	1.751	78	2680	58	1993	58					52
TOTAL	76.824	55.545		69931		44385			1597		12922	
AVERAGE	2.478	1.792	63	2256	40	1432	37	2.0	73	16.6	587	54

ADRIAN WWTP

EAST ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

JULY 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	10.4	9.8	0.27	2.9	9.1	1040	778	13	0.80	1660	1244	2.692	108	58
2	144	9.9	12.1	0.18	2.9	9.1	1180	907	13	0.91	2080	1590	2.692	103	55
3	144	10.3	31.7	0.18	2.8	8.9	1180	919	13	0.91	2040	1616	2.690	107	56
4	144	10.6	12.4	0.18	2.9	8.8	1230	958	13	0.95	1840	1446	2.695	111	55
5	144	10.6	13.9	0.14	2.9	9.0	1260	983	13	0.97	2040	1642	2.694	111	55
6	144	10.6	14.4	0.17	2.9	8.7	1370	1118	14	0.98	2080	1692	2.694	111	54
7	144	10.5	12.8	0.19	2.7	8.4	1290	998	15	0.86	1920	1482	2.694	109	55
8	144	10.6	18.6	0.13	2.6	8.4	1440	1141	15	0.96	2240	1760	2.693	110	55
9	144	10.7	13.2	0.16	2.6	8.3	1190	897	14	0.85	1980	1534	2.694	111	55
10	144	7.9	8.1	0.19	2.6	8.3	1280	984	14	0.91	2020	1576	2.693	82	55
11	144	10.6	14.0	0.12	2.7	8.6	1400	1089	14	1.00	2520	1948	2.696	110	55
12	144	10.8	19.8	0.12	2.7	8.8	1320	1003	14	0.94	1920	1458	2.697	113	56
13	144	10.8	13.8	0.11	2.7	8.9	1350	1045	14	0.96	2240	1716	2.695	113	56
14	144	10.8	14.5	0.13	2.7	9.0	1290	976	13	0.99	2580	1960	2.695	113	55
15	144	12.3	18.5	0.10	2.7	8.9	1300	985	13	1.00	2560	1926	2.697	128	56
16	144	8.3	9.3	0.16	2.7	8.6	1190	877	12	0.99	2000	1472	2.693	86	56
17	144	10.7	12.6	0.12	2.7	8.9	1240	934	12	1.03	2600	1946	2.698	112	61
18	144	10.8	7.5	0.21	2.6	8.6	1170	867	12	0.98	3040	2330	2.694	112	63
19	144	10.7	11.7	0.16	2.6	8.4	1370	1070	11	1.25	2640	2094	2.692	111	63
20	144	10.4	13.3	0.18	2.7	8.4	1170	867	12	0.98	2320	1726	2.693	108	64
21	144	10.5	19.9	0.15	2.7	8.8	1090	789	11	0.99	2000	1532	2.691	110	63
22	144	10.6	18.4	0.14	2.7	8.9	1160	878	10	1.16	1860	1412	2.692	111	63
23	144	10.6	16.2	0.12	2.7	9.0	1320	1002	10	1.32	2020	1492	2.694	110	63
24	144	11.0	14.2	0.16	2.7	8.9	1050	768	10	1.05	2020	1458	2.694	115	63
25	144	11.0	14.3	0.14	2.7	8.9	1250	946	9	1.39	2160	1638	2.695	114	63
26	144	10.9	14.1	0.16	2.6	8.8	1120	831	9	1.24	1720	1280	2.693	113	63
27	144	10.6	10.6	0.22	2.6	8.4	1060	787	9	1.18	2020	1518	2.693	110	64
28	144	10.3	13.3	0.17	2.6	8.8	1120	825	9	1.24	1660	1166	2.695	107	63
29	144	10.3	12.5	0.16	2.6	8.9	1110	809	8	1.39	1700	1236	2.695	107	63
30	144	10.5	19.1	0.13	2.6	8.9	1220	935	9	1.36	2080	1660	2.693	110	62
31	144	10.9	8.2	0.22	2.7	8.9	1050	765	9	1.17	1980	1428	2.692	114	63
AVERAGE	144	10.5	14.3	0.16	2.7	8.8	1220	927	12	1.05	2114	1612	2.694	109	59

ADRIAN WWTP

WEST #1 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

JULY 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	12.4	8.8	0.29	1.0	9.8	790	599	14	0.56	1240	960	1.195	135	10
2	61	11.7	10.1	0.22	1.0	9.8	830	612	14	0.59	1920	1470	1.195	127	9
3	61	12.2	30.8	0.19	1.0	9.6	970	744	15	0.65	1460	1118	1.197	133	20
4	61	12.5	11.2	0.20	1.0	9.7	950	726	15	0.63	1220	956	1.198	136	21
5	61	12.5	11.6	0.18	1.0	9.8	890	674	15	0.59	1280	974	1.200	137	21
6	61	12.6	11.6	0.22	1.0	9.6	930	704	16	0.58	1380	1086	1.199	138	24
7	61	12.4	10.8	0.22	0.9	9.5	920	699	15	0.61	1520	1182	1.196	136	22
8	61	12.4	14.3	0.17	0.9	9.5	940	717	15	0.63	1660	1302	1.197	136	20
9	61	12.7	12.1	0.17	0.9	9.5	910	678	13	0.70	1400	1094	1.197	139	20
10	61	9.1	7.1	0.22	1.0	9.3	980	749	13	0.75	1440	1116	1.197	100	20
11	61	12.7	12.9	0.13	0.9	9.5	1070	819	14	0.76	1800	1406	1.199	139	20
12	61	13.0	20.1	0.11	1.0	9.7	1110	889	14	0.79	1700	1362	1.200	143	21
13	61	12.9	11.9	0.13	1.0	9.7	970	723	13	0.75	1420	1066	1.250	147	25
14	61	12.8	13.0	0.14	1.0	9.8	970	716	14	0.69	1520	1122	1.214	142	26
15	61	14.5	15.4	0.12	1.0	9.7	920	666	13	0.71	1380	1022	1.165	154	26
16	61	9.7	8.1	0.19	1.0	9.6	890	627	13	0.68	1940	1444	1.196	106	26
17	61	12.6	9.7	0.18	1.0	9.8	810	555	11	0.74	1360	972	1.194	138	24
18	61	12.6	6.8	0.23	1.0	9.6	910	667	11	0.83	1600	1166	1.197	138	24
19	61	12.4	8.9	0.22	1.0	9.4	900	660	11	0.82	1400	1064	1.196	136	24
20	61	12.2	11.6	0.21	1.0	9.5	870	636	11	0.79	1540	1142	1.196	133	24
21	61	12.3	22.7	0.13	1.0	9.6	1060	783	11	0.96	1280	962	1.195	135	23
22	61	12.4	17.6	0.15	1.0	9.8	950	706	10	0.95	1260	960	1.195	136	23
23	61	12.4	14.4	0.14	1.0	9.7	1000	727	12	0.83	1200	900	1.199	136	22
24	61	12.8	15.6	0.15	1.0	9.8	1000	722	11	0.91	1740	1268	1.200	140	22
25	61	12.7	11.2	0.19	1.0	9.9	850	613	11	0.77	1420	1012	1.200	139	22
26	61	12.5	12.2	0.19	1.0	9.8	840	593	10	0.84	1440	1048	1.200	137	22
27	61	12.1	9.9	0.24	1.0	9.6	860	626	10	0.86	1340	934	1.200	133	22
28	61	11.8	11.5	0.21	1.0	9.8	840	591	10	0.84	1200	856	1.198	129	20
29	61	11.8	11.7	0.17	1.0	9.8	910	647	9	1.01	1260	944	1.200	129	19
30	61	12.1	18.5	0.13	1.0	9.8	1030	801	9	1.14	1660	1322	1.199	132	19
31	61	12.5	6.6	0.29	1.0	9.8	740	516	9	0.82	1300	914	1.197	137	8
AVERAGE	61	12.3	12.9	0.19	1.0	9.7	923	683	12	0.77	1461	1101	1.199	135	21

ADRIAN WWTP

WEST #2 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

JULY 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	12.4	11.4	0.23	0.9	9.7	1020	767	15	0.68	1680	1274	1.205	136	25
2	61	11.7	11.6	0.19	0.9	9.8	950	712	16	0.59	1500	1136	1.204	128	24
3	61	12.2	31.1	0.19	0.9	9.7	980	745	15	0.65	1480	1136	1.204	134	24
4	61	12.5	12.9	0.17	0.9	9.7	1090	841	15	0.73	1440	1098	1.205	137	23
5	61	12.5	12.4	0.17	0.9	9.9	950	718	15	0.63	1280	986	1.205	138	22
6	61	12.6	12.5	0.23	0.9	9.6	1000	673	16	0.63	1540	1186	1.206	139	22
7	61	12.4	11.8	0.21	0.9	9.4	1000	751	14	0.71	1440	1094	1.202	136	23
8	61	12.4	18.7	0.13	0.9	9.5	1230	960	15	0.82	1580	1196	1.203	136	23
9	61	12.7	13.3	0.15	0.8	9.5	1000	777	15	0.67	1640	1270	1.203	140	21
10	61	9.1	7.1	0.22	0.9	9.2	980	740	13	0.75	1600	1226	1.201	100	23
11	61	12.7	12.5	0.13	0.9	9.5	1040	783	14	0.74	1780	1364	1.202	140	21
12	61	13.0	18.6	0.13	0.9	9.7	1030	771	14	0.74	1640	1280	1.203	143	22
13	61	12.9	12.2	0.13	0.9	9.7	1000	740	14	0.71	1560	1176	1.200	141	24
14	61	12.8	14.6	0.13	0.9	9.8	1090	810	15	0.73	1500	1108	1.198	140	26
15	61	14.5	15.9	0.11	0.9	9.8	950	691	14	0.68	1440	1078	1.199	159	27
16	61	9.7	9.1	0.17	0.9	9.6	990	716	12	0.83	2060	1520	1.198	106	27
17	61	12.6	10.1	0.16	0.9	9.8	840	600	11	0.76	1300	904	1.200	138	26
18	61	12.6	7.0	0.22	0.9	9.7	930	698	11	0.85	1620	1208	1.201	138	25
19	61	12.4	9.0	0.21	0.9	9.4	910	681	11	0.83	1380	1050	1.200	136	25
20	61	12.2	12.0	0.20	0.9	9.5	900	669	10	0.90	1660	1258	1.199	133	24
21	61	12.3	17.1	0.17	0.9	9.7	800	605	7	1.14	1300	978	1.268	143	25
22	61	12.4	13.0	0.20	0.9	9.7	700	526	10	0.70	1220	908	1.178	134	25
23	61	12.4	14.8	0.14	0.9	9.7	1030	751	12	0.86	2120	1630	1.199	136	24
24	61	12.8	14.4	0.17	0.9	9.7	920	641	11	0.84	1720	1258	1.199	140	24
25	61	12.7	11.9	0.17	0.9	9.7	900	654	11	0.82	1360	958	1.199	139	24
26	61	12.5	11.4	0.21	0.9	9.7	790	560	9	0.88	1260	882	1.199	137	24
27	61	12.1	9.0	0.26	0.9	9.4	780	575	10	0.78	1660	1250	1.198	133	24
28	61	11.8	10.5	0.22	0.9	9.7	770	546	10	0.77	1280	898	1.198	129	22
29	61	11.8	10.1	0.20	0.9	9.8	780	552	9	0.87	1400	1030	1.197	129	21
30	61	12.1	19.0	0.13	0.9	9.8	1060	834	9	1.18	1480	1154	1.198	132	21
31	61	12.5	5.7	0.35	0.9	9.8	630	424	9	0.70	1180	834	1.200	137	9
AVERAGE	61	12.3	12.9	0.18	0.9	9.7	937	694	12	0.78	1519	1140	1.202	135	23

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

JULY 2020

DAY	FLOW		CBOD ₅		SUSPENDED SOLIDS			V.S.S.	pH	MERCURY	
	MGD 50050	mg/L 80082	Lbs. 80082	% Rem 80091	mg/L 00530	Lbs. 00530	% Rem 81011	mg/L 00535	SU 00400	ng/L 71900	Lbs. 71900
1	3.092	3.6	93	98	2	52	99	2	7.1		
2	2.954	3.3	81	98	2	49	99	2	7.2		
3	2.880	2.8	67	99	2	48	98	2	7.1		
4	2.696	2.1	47	99	2	45	99	1	7.1		
5	2.738	2.0	46	99	2	46	99	2	7.1		
6	3.025	1.8	45	99	2	50	99	2	7.1		
7	2.937	2.2	54	99	2	49	99	2	7.2		
8	3.035	2.2	56	99	1	25	99	1	7.1		
9	2.938	3.0	74	98	1	25	99	1	7.0		
10	4.493	2.0	75	99	2	75	99	2	7.1		
11	3.017	4.4	111	97	1	25	99	1	6.9		
12	2.906	4.7	114	97	1	24	99	1	6.9		
13	3.347	3.9	109	98	2	56	99	1	7.1		
14	3.174	4.5	119	98	2	53	99	1	6.9		
15	2.891	4.3	104	98	1	24	99	1	7.0	0.68	0.000016
16	4.023	3.6	121	98	2	67	99	2	7.0		
17	2.756	4.5	103	97	2	46	99	2	7.1		
18	2.554	3.7	79	98	2	43	99	2	7.3		
19	2.933	4.0	98	98	2	49	99	2	7.1		
20	3.190	4.6	122	98	2	53	99	2	7.1		
21	3.324	3.8	105	98	2	55	99	2	7.0		
22	3.005	3.8	95	98	2	50	99	2	6.9		
23	2.772	3.3	76	98	2	46	99	2	7.0		
24	2.407	2.2	44	99	2	40	99	2	6.9		
25	2.670	1.5	33	99	1	22	99	1	7.1		
26	2.871	1.4	34	99	2	48	99	2	7.1		
27	3.135	1.4	37	99	2	52	99	2	7.0		
28	2.856	1.4	33	99	2	48	99	2	6.8		
29	2.898	1.2	29	99	2	48	99	2	7.0		
30	2.833	1.4	33	99	2	47	99	2	7.0		
31	2.737	1.3	30	99	2	46	99	2	7.1		
TOTAL	93.087	89.9	2267		56	1407		53			
AVERAGE	3.003	2.9	73	98.5	2	45	98.9	2	7.0	0.68	0.000016

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

JULY 2020

DAY	TOTAL PHOSPHORUS			AMMONIA-N			TEMP °F	D.O. mg/L 00300	FECAL COLIFORM cts/100 mL 74055	ug/L 01257	AvCN Lbs. 01257
	mg/L 00665	Lbs. 00665	% Rem 81012	mg/L 00610	Lbs. 00610	% Rem					
1	0.36	9	92	0.04	1	100	70	7.4	2		
2	0.58	14	86	0.08	2	100	71	7.5	1		
3							72	7.3	1		
4							70	7.2	5		
5	1.13	26	74	0.04	1	100	69	7.4	2		
6	1.28	32	74	0.06	2	100	72	7.0	6		
7	1.40	34	69	0.05	1	100	70	7.1	6		
8	1.35	34	72	0.05	1	100	71	7.3	6		
9	1.53	37	67	0.03	1	100	71	7.3	5		
10							71	7.3	42		
11							70	7.3	20		
12	0.93	23	78	0.00	0	100	69	7.3	1		
13	0.72	20	84	0.00	0	100	70	7.7	6		
14	0.65	17	85	0.03	1	100	71	7.6	7	<2.0	<0.052
15	0.60	14	87	0.03	1	100	70	7.5	19		
16	0.77	26	81	0.04	1	100	70	7.8	36		
17							70	7.7	7		
18							71	7.1	17		
19	1.47	36	66	0.05	1	100	72	7.3	5		
20	1.52	40	64	0.06	2	100	71	7.4	12		
21	1.30	36	70	0.05	1	100	71	7.9	9		
22	0.96	24	77	0.04	1	100	71	7.6	8		
23	0.72	17	84	0.06	1	100	71	7.5	3		
24							71	7.6	5		
25							73	7.7	2		
26	0.64	15	85	0.05	1	100	74	7.5	2		
27	0.68	18	85	0.06	2	100	73	7.4	4		
28	0.82	20	83	0.07	2	100	71	7.6	3		
29	0.84	20	80	0.06	1	100	72	7.7	1		
30	0.80	19	83	0.05	1	100	73	7.7	1		
31							71	7.5	1		
TOTAL	21.05	533		1.00	25						
AVERAGE	0.96	24	78	0.05	1	100	71	7.5	5		

ADRIAN WWTP

THICKENER SLUDGE

ADRIAN, MICHIGAN

JULY 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	20.3	5.1	3.33	71.0
2	00S	00S	00S	00S	21.0	4.9	3.80	71.0
3	00S	00S	00S	00S	21.2	5.0	2.44	72.0
4	00S	00S	00S	00S	22.1	5.0	3.50	74.0
5	00S	00S	00S	00S	21.3	5.0	3.14	74.0
6	00S	00S	00S	00S	20.5	5.0	2.85	75.0
7	00S	00S	00S	00S	19.3	4.8	2.76	76.0
8	00S	00S	00S	00S	20.2	4.9	2.85	77
9	00S	00S	00S	00S	21.0	5.0	2.89	78
10	00S	00S	00S	00S	20.0	5.0	2.25	77
11	00S	00S	00S	00S	19.9	5.4	2.54	74
12	00S	00S	00S	00S	19.1	5.2	2.16	72
13	00S	00S	00S	00S	20.3	5.4	2.76	72
14	00S	00S	00S	00S	17.7	5.6	2.26	73
15	00S	00S	00S	00S	18.9	5.4	2.39	72
16	00S	00S	00S	00S	19.5	5.8	2.12	73
17	00S	00S	00S	00S	17.5	5.4	2.55	74
18	00S	00S	00S	00S	18.0	5.4	2.49	74
19	00S	00S	00S	00S	18.9	5.4	2.69	75
20	00S	00S	00S	00S	18.7	5.1	2.71	75
21	00S	00S	00S	00S	17.1	5.0	2.39	75
22	00S	00S	00S	00S	18.0	5.0	2.36	76
23	00S	00S	00S	00S	7.9	5.1	2.00	75
24	00S	00S	00S	00S	11.0	5.0	2.92	74
25	00S	00S	00S	00S	19.3	5.1	2.56	71
26	00S	00S	00S	00S	18.7	5.0	3.19	70
27	00S	00S	00S	00S	19.0	5.0	3.37	71
28	00S	00S	00S	00S	18.3	5.0	2.84	71
29	00S	00S	00S	00S	18.6	5.6	2.63	70
30	00S	00S	00S	00S	19.2	5.0	2.65	71
31	00S	00S	00S	00S	21.5	4.9	2.83	72
TOTAL	0.0	0.0	0.00	0	584.0	159.5	84.22	2275
AVERAGE	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	18.8	5.1	2.72	73

ADRIAN WWTP

PRIMARY SLUDGE

ADRIAN, MICHIGAN

JULY 2020

DAY	PRIMARIES #1 - #4			PRIMARIES #5 - #7		
	pH SU	SOLIDS %	VOL. SOLIDS %	pH SU	SOLIDS %	VOL. SOLIDS %
1	6.8	1.52	76	6.6	1.65	77
2						
3						
4						
5						
6						
7						
8	6.6	0.52	67	6.3	0.66	69
9						
10						
11						
12						
13						
14						
15	7.0	1.83	67	6.8	0.26	57
16						
17						
18						
19						
20						
21						
22	6.8	0.69	70	6.9	0.29	58
23						
24						
25						
26						
27						
28						
29	6.6	0.23	52	5.8	1.84	71
30						
31						
AVERAGE	6.8	0.96	66	6.5	0.94	66

ADRIAN WWTP

DIGESTED SLUDGE

ADRIAN, MICHIGAN

JULY 2020

CELL SLUDGE

DAY	DIGESTED SLUDGE					CELL SLUDGE			
	#	FLOW KGAL.	pH SU	SOLIDS %	SOLIDS VOL. %	#	pH SU	SOLIDS %	SOLIDS VOL. %
1									
2									
3									
4									
5									
6	4	84.0	7.0	4.33	57				
7									
8									
9									
10									
11									
12									
13	2	91.8	7.1	4.35	58				
14	6	62.4	7.6	3.65	57	2	7.1	4.14	59
15	4	31.2	7.3	4.59	44	2	6.9	5.37	56
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27	4	62.4	7.1	3.92	56	1/2	7.3	4.81	56
28	2	28.8	*	*	*	1/2	7.1	5.60	56
29	6	57.6	*	*	*	1/2	7.5	4.37	56
30						1/2	6.8	5.16	55
31						1/2	7.0	5.29	56
TOTAL		418.2							

* no dish set up

ADRIAN WWTP

EFFLUENT SHEET
ADRIAN, MICHIGAN

DISCHARGE NUMBER 001A

JULY 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	3.092	3.6	93	2	52	0.36	0.04	1	7.1	7.4	2
2	2.954	3.3	81	2	49	0.58	0.08	2	7.2	7.5	1
3	2.880	2.8	67	2	48				7.1	7.3	1
4	2.696	2.1	47	2	45				7.1	7.2	5
5	2.738	2.0	46	2	46	1.13	0.04	1	7.1	7.4	2
6	3.025	1.8	45	2	50	1.28	0.06	2	7.1	7.0	6
7	2.937	2.2	54	2	49	1.40	0.05	1	7.2	7.1	6
8	3.035	2.2	56	1	25	1.35	0.05	1	7.1	7.3	6
9	2.938	3.0	74	1	25	1.53	0.03	1	7.0	7.3	5
10	4.493	2.0	75	2	75				7.1	7.3	42
11	3.017	4.4	111	1	25				6.9	7.3	20
12	2.906	4.7	114	1	24	0.93	0.00	0	6.9	7.3	1
13	3.347	3.9	109	2	56	0.72	0.00	0	7.1	7.7	6
14	3.174	4.5	119	2	53	0.65	0.03	1	6.9	7.6	7
15	2.891	4.3	104	1	24	0.60	0.03	1	7.0	7.5	19
16	4.023	3.6	121	2	67	0.77	0.04	1	7.0	7.8	36
17	2.756	4.5	103	2	46				7.1	7.7	7
18	2.554	3.7	79	2	43				7.3	7.1	17
19	2.933	4.0	98	2	49	1.47	0.05	1	7.1	7.3	5
20	3.190	4.6	122	2	53	1.52	0.06	2	7.1	7.4	12
21	3.324	3.8	105	2	55	1.30	0.05	1	7.0	7.9	9
22	3.005	3.8	95	2	50	0.96	0.04	1	6.9	7.6	8
23	2.772	3.3	76	2	46	0.72	0.06	1	7.0	7.5	3
24	2.407	2.2	44	2	40				6.9	7.6	5
25	2.670	1.5	33	1	22				7.1	7.7	2
26	2.871	1.4	34	2	48	0.64	0.05	1	7.1	7.5	2
27	3.135	1.4	37	2	52	0.68	0.06	2	7.0	7.4	4
28	2.856	1.4	33	2	48	0.82	0.07	2	6.8	7.6	3
29	2.898	1.2	29	2	48	0.84	0.06	1	7.0	7.7	1
30	2.833	1.4	33	2	47	0.80	0.05	1	7.0	7.7	1
31	2.737	1.3	30	2	46				7.1	7.5	1
TOTAL	93.087	89.9	2267	56	1407	21.05	1.00	25			
MAX	4.493	4.7	122	2	75	1.53	0.08	2	7.3	7.9	
MIN	2.407	1.2	29	1	22	0.36	0.00	0	6.8	7.0	
AVE	3.003	2.9	73	2	45	0.96	0.05	1	7.0	7.5	5

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:	2020-07-01 To 2020-07-31
	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	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	Available Cyanide 01257	Total Mercury 71900
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)	Final Effluent (1)	Final Effluent (1)
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	(Report) ug/L	(Report) lbs/day	(Report) ng/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	Maximum Daily	Maximum Daily	Maximum Daily
1	3.092			2	52	3.6		93	0.04		1	0.36	9			
2	2.954			2	49	3.3		81	0.08		2	0.58	14			
3	2.880			2	48	2.8		67								
4	2.696			2	45	2.1		47								
5	2.738			2	46	2.0		46	0.04		1	1.13	26			
6	3.025			2	50	1.8		45	0.06		2	1.28	32			
7	2.937	2	48	2	49	2.2	62	54	0.05	1	1	1.40	34			
8	3.035	2	45	1	25	2.2	57	56	0.05	1	1	1.35	34			
9	2.938	2	41	1	25	3.0	56	74	0.03	1	1	1.53	37			
10	4.493	2	45	2	75	2.0	57	75		1						
11	3.017	2	42	1	25	4.4	66	111		1						
12	2.906	1	39	1	24	4.7	75	114	<0.03	1	<1	0.93	23			
13	3.347	1	40	2	56	3.9	85	109	<0.03	0	<1	0.72	20			
14	3.174	1	40	2	53	4.5	94	119	0.03	0	1	0.65	17	<2.0	<0.052	
15	2.891	1	40	1	24	4.3	101	104	0.03	0	1	0.60	14			0.68
16	4.023	2	46	2	67	3.6	107	121	0.04	0	1	0.77	26			
17	2.756	2	42	2	46	4.5	112	103		0						
18	2.554	2	45	2	43	3.7	107	79		0						
19	2.933	2	48	2	49	4.0	105	98	0.05	1	1	1.47	36			
20	3.190	2	48	2	53	4.6	107	122	0.06	1	2	1.52	40			
21	3.324	2	48	2	55	3.8	105	105	0.05	1	1	1.30	36			
22	3.005	2	52	2	50	3.8	103	95	0.04	1	1	0.96	24			
23	2.772	2	49	2	46	3.3	97	76	0.06	1	1	0.72	17			
24	2.407	2	48	2	40	2.2	89	44		1						
25	2.670	2	45	1	22	1.5	82	33		1						
26	2.871	2	45	2	48	1.4	73	34	0.05	1	1	0.64	15			
27	3.135	2	45	2	52	1.4	61	37	0.06	1	2	0.68	18			
28	2.856	2	44	2	48	1.4	50	33	0.07	1	2	0.82	20			
29	2.898	2	44	2	48	1.2	41	29	0.06	1	1	0.84	20			
30	2.833	2	44	2	47	1.4	35	33	0.05	1	1	0.80	19			
31	2.737	2	44	2	46	1.3	33	30		1						

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)	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) 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	Max 7-Day Geometric Mean	Maximum Daily	Minimum Daily	Maximum Daily	Minimum Daily	
						2	7.1	7.1	7.4	
						<1	7.2	7.2	7.5	
						<1	7.1	7.1	7.3	
						5	7.1	7.1	7.2	
						2	7.1	7.1	7.4	
						6	7.1	7.1	7.0	
						3	6	7.2	7.2	7.1
						3	6	7.1	7.1	7.3
						4	5	7.0	7.0	7.3
						6	42	7.1	7.1	7.3
						8	20	6.9	6.9	7.3
						7	<1	6.9	6.9	7.3
						7	6	7.1	7.1	7.7
						7	7	6.9	6.9	7.6
0.000016	0.68	0.54	<0.20	<0.20		9	19	7.0	7.0	7.5
						11	36	7.0	7.0	7.8
						9	7	7.1	7.1	7.7
						9	17	7.3	7.3	7.1
						11	5	7.1	7.1	7.3
						12	12	7.1	7.1	7.4
						12	9	7.0	7.0	7.9
						11	8	6.9	6.9	7.6
						8	3	7.0	7.0	7.5
						7	5	6.9	6.9	7.6
						5	2	7.1	7.1	7.7
						5	2	7.1	7.1	7.5
						4	4	7.0	7.0	7.4
						3	3	6.8	6.8	7.6
						3	<1	7.0	7.0	7.7
						2	<1	7.0	7.0	7.7
						2	<1	7.1	7.1	7.5

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 GROUP: 001A

DISTRICT: Jackson
 COUNTY: Lenawee

Monitoring Period: 2020-07-01 To: 2020-07-31

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				
Flow PARAM CODE: 50050 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	3.003	4.493	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	45	52	lbs/day	*****	2	2	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	73	112	lbs/day	*****	2.9	4.7	mg/l	0	Daily	24-HR Composite
	Permit Requirement	230 Maximum Monthly Average	580 Maximum 7-Day Average		*****	4.0 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	1	1	lbs/day	*****	0.05	0.08	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	24	40	lbs/day	*****	0.96	1.53	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	0.000016	0.000016	lbs/day	*****	0.68	0.68	ng/l	0	Quarterly	Grab
	Permit Requirement	(report) Maximum Monthly Average	(Report) Maximum Daily		*****	(report) 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	2020-08-13		

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 GROUP: 001A

DISTRICT: Jackson
 COUNTY: Lenawee

Monitoring Period: 2020-07-01 To: 2020-07-31

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	*****	0.000026	lbs/day	*****	*****	0.72	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	*****	*****	*****	*****	5	12	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	*****	*****	*****	6.8	*****	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	*****	*****	*****	7.0	*****	*****	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	2020-08-13		