

ADRIAN WWTP

INFLUENT SHEET

ADRIAN, MICHIGAN

AUGUST 2020

DAY	CHEMICAL ADDED FeCl ₃ Gals.	FLOW		BOD ₅	
		TOTAL MGD 50050	MAX RATE MGD 50051	mg/L 00310	Lbs. 85001
1	600	4.093	8.3	233	7954
2	590	5.254	13.6	214	9377
3	600	4.089	6.9	182	6207
4	580	4.329	7.0	178	6426
5	600	4.178	6.9	182	6342
6	490	3.920	7.0	191	6244
7	860	4.121	7.1	176	6049
8	430	3.938	7.0	196	6437
9	330	3.941	7.0	220	7231
10	320	4.339	7.5	241	8721
11	450	4.176	7.5	190	6617
12	510	3.990	6.4	186	6189
13	670	3.913	7.0	189	6168
14	640	5.317	16.4	248	10997
15	620	4.300	7.2	172	6168
16	630	4.117	6.4	198	6798
17	580	4.159	7.4	199	6903
18	560	4.136	7.0	188	6485
19	880	3.933	6.9	205	6724
20	510	3.912	6.7	199	6493
21	400	3.920	7.2	213	6964
22	360	3.766	6.6	208	6533
23	360	3.706	6.8	214	6614
24	350	4.251	7.4	202	7162
25	550	4.053	6.6	192	6490
26	850	4.048	6.8	200	6752
27	1030	4.063	5.2	192	6506
28	1450	3.941	5.3	230	7560
29	500	4.560	6.9	204	7758
30	1010	3.886	5.2	168	5445
31	290	3.699	6.3	177	5460
TOTAL	18600	128.048		6187	213774
AVERAGE	600	4.131		200	6896

ADRIAN WWTP

INFLUENT SHEET

ADRIAN, MICHIGAN

AUGUST 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	198	6759	182	7.1				
2	368	16125	258	7.0	4.3	188	17.3	758
3	130	4433	114	7.1	4.4	150	22.8	778
4	158	5704	136	7.2	4.3	155	23.8	859
5	158	5505	146	7.2	4.5	157	26.8	934
6	160	5231	144	7.2	4.3	141	28.4	928
7	158	5430	152	7.1				
8	162	5321	144	7.1				
9	162	5325	146	7.0	4.7	154	31.5	1035
10	238	8613	206	7.2	5.2	188	32.9	1191
11	198	6896	180	7.1	5.3	185	27.1	944
12	162	5391	138	7.1	4.8	160	31.4	1045
13	182	5939	166	7.3	4.8	157	31.9	1041
14	308	13658	240	7.3				
15	134	4806	120	7.2				
16	134	4601	124	7.2	4.1	141	26.6	913
17	176	6105	164	7.2	4.8	166	26.2	909
18	194	6692	178	7.2	4.6	159	27.0	931
19	166	5445	154	7.2	5.1	167	25.1	823
20	163	5318	152	7.2	4.9	160	27.0	881
21	166	5427	162	7.2				
22	152	4774	144	7.1				
23	162	5007	148	7.1	4.8	148	26.3	813
24	232	8225	214	7.1	4.8	170	25.5	904
25	184	6220	172	7.3	5.4	183	25.3	855
26	184	6212	166	7.2	5.5	186	25.8	871
27	176	5964	156	7.2	4.9	166	27.5	932
28	206	6771	198	7.2				
29	244	9279	198	7.1				
30	174	5639	150	7.2	4.6	149	25.1	813
31	204	6293	182	7.2	5.0	154	24.8	765
TOTAL		203108	5134		105.1	3584	586.1	19924
AVERAGE	187	6552	166	7.2	4.8	163	26.6	906

PRIMARY EFFLUENT SHEET

ADRIAN, MICHIGAN

AUGUST 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	2.496	1.846	66	2390	46	1666	44					51
2	3.234	2.350	60	2794	42	1956	34	2.1	98	10.7	498	48
3	2.510	1.818	60	2166	40	1444	32	2.0	72	13.8	498	50
4	2.706	1.949	60	2329	36	1398	28	2.1	82	15.8	613	52
5	2.595	1.878	62	2313	32	1194	26	1.9	71	17.8	664	55
6	2.401	1.754	71	2460	32	1109	30	2.2	76	20.3	703	56
7	2.550	1.861	38	1398	28	1030	28					57
8	2.409	1.770	76	2649	50	1743	36					57
9	2.397	1.774	92	3200	50	1739	42	2.3	80	21.7	755	55
10	2.644	1.958	111	4260	62	2380	48	2.9	111	21.9	841	50
11	2.561	1.896	83	3085	50	1859	44	3.2	119	18.1	673	50
12	2.419	1.801	78	2745	38	1337	32	2.4	84	23.3	820	60
13	2.362	1.759	64	2200	44	1512	42	1.7	58	20.9	718	56
14	3.219	2.401	66	3093	34	1594	32					55
15	2.630	1.900	63	2380	24	907	18					55
16	2.528	1.809	81	2930	40	1447	40	1.6	58	20.0	723	53
17	2.571	1.862	70	2588	34	1257	32	1.7	63	17.7	654	53
18	2.553	1.859	68	2502	26	957	26	1.6	59	18.4	677	65
19	2.402	1.753	62	2148	24	832	24	1.5	52	16.2	561	58
20	2.376	1.752	68	2341	32	1102	32	1.9	65	18.7	644	58
21	2.384	1.763	78	2698	36	1245	36					58
22	2.287	1.688	74	2453	32	1061	32					58
23	2.239	1.666	74	2410	40	1303	36	3.1	101	15.0	489	57
24	2.600	1.917	80	3014	42	1582	38	3.0	113	14.4	542	57
25	2.439	1.821	72	2558	34	1208	32	2.6	92	13.7	487	55
26	2.422	1.823	70	2478	36	1275	30	1.8	64	16.0	566	54
27	2.444	1.829	65	2316	28	998	22	1.2	43	16.9	602	55
28	2.345	1.752	60	2050	26	888	24					51
29	2.719	2.006	63	2483	32	1261	30					48
30	2.323	1.720	57	1922	42	1416	32	1.0	34	19.3	651	50
31	2.154	1.616	68	2138	40	1258	34	2.0	63	19.5	613	50
TOTAL	77.919	57.351	2160	78493	1152	41954	1016	45.8	1658	390.1	13994	
AVERAGE	2.514	1.850	70	2532	37	1353	33	2.1	75	17.7	636	54

ADRIAN WWTP

EAST ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

AUGUST 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	10.4	11.9	0.17	2.7	8.6	1270	922	8	1.59	1960	1430	2.695	108	63
2	144	8.0	9.4	0.21	2.7	8.7	1180	868	9	1.31	2020	1490	2.692	83	62
3	144	10.3	11.1	0.20	2.8	8.8	1030	716	8	1.29	2300	1652	2.693	107	63
4	144	9.6	12.1	0.20	2.9	8.8	1090	763	9	1.21	1660	1176	2.692	99	61
5	144	10.0	14.1	0.20	2.9	9.1	1090	765	8	1.36	1700	1220	2.693	104	63
6	144	10.8	16.5	0.18	2.9	9.1	1180	859	8	1.48	1840	1322	2.691	112	64
7	144	10.1	17.3	0.11	2.9	9.0	1150	832	8	1.44	1780	1284	2.691	106	63
8	144	10.7	7.6	0.27	2.9	9.1	850	639	8	1.06	2440	1834	2.693	112	63
9	144	10.8	10.2	0.25	2.8	8.9	1130	823	8	1.41	2300	1692	2.696	112	63
10	144	9.8	7.8	0.31	2.8	8.2	1180	875	8	1.48	1660	1230	2.693	102	63
11	144	10.1	9.6	0.23	2.9	8.3	1140	842	8	1.43	2760	2046	2.693	105	63
12	144	10.7	15.0	0.18	2.9	8.9	1280	984	8	1.60	2940	2260	2.692	111	63
13	144	10.9	11.7	0.17	2.9	8.9	1130	836	8	1.41	2420	1808	2.692	114	62
14	144	8.0	11.6	0.22	2.9	8.8	1180	889	8	1.48	1980	1456	2.692	84	62
15	144	9.8	22.4	0.15	2.9	8.9	1310	1017	8	1.64	3740	2878	2.692	102	62
16	144	10.2	14.8	0.18	2.9	8.7	1390	1073	8	1.74	2800	2168	2.695	107	63
17	144	10.1	14.0	0.20	2.5	6.2	1140	841	8	1.43	2240	1656	2.690	105	62
18	144	10.1	17.5	0.20	2.8	8.6	1080	802	9	1.20	2100	1532	2.692	105	62
19	144	10.8	21.5	0.16	2.9	8.8	1150	847	8	1.44	2120	1550	2.690	112	63
20	144	10.9	15.3	0.19	2.9	9.0	1080	804	8	1.35	2140	1576	2.690	113	63
21	144	10.8	14.7	0.20	2.8	8.9	1170	859	8	1.46	2020	1504	2.696	113	64
22	144	11.3	18.3	0.17	2.9	8.8	1240	930	8	1.55	2040	1546	2.694	118	63
23	144	11.5	14.2	0.17	2.9	8.8	1180	884	8	1.48	2000	1524	2.690	120	63
24	144	9.9	12.3	0.21	2.9	8.6	1250	939	8	1.56	2100	1586	2.691	104	62
25	144	10.6	15.8	0.17	2.8	8.2	1220	935	8	1.53	1920	1476	2.692	110	63
26	144	10.7	14.3	0.18	2.9	9.0	1160	876	9	1.29	1840	1402	2.692	111	63
27	144	10.6	15.4	0.21	2.9	9.0	980	698	8	1.23	1780	1346	2.692	110	63
28	144	11.0	19.4	0.16	2.9	9.0	1100	798	8	1.38	1880	1404	2.682	114	64
29	144	9.5	13.5	0.20	3.0	8.9	1090	809	8	1.36	2180	1628	2.693	99	62
30	144	11.1	12.4	0.15	3.1	9.4	1120	827	8	1.40	2000	1478	2.690	116	63
31	144	12.0	13.3	0.18	3.1	9.2	1060	769	8	1.33	1800	1334	2.691	125	62
AVERAGE	144	10.4	14.0	0.19	2.9	8.7	1148	849	8	1.42	2144	1596	2.692	108	63

ADRIAN WWTP

WEST #1 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

AUGUST 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	11.9	10.2	0.19	1.0	9.6	950	693	9	1.06	1300	954	1.188	129	0
2	61	9.3	8.8	0.22	1.0	9.6	950	696	10	0.95	1420	1056	1.198	102	0
3	61	12.0	11.3	0.19	1.0	9.8	900	629	9	1.00	1820	1326	1.197	132	0
4	61	11.2	13.0	0.20	1.1	9.7	1000	639	10	1.00	1500	998	1.200	123	0
5	61	11.7	16.1	0.17	1.4	9.5	1060	744	11	0.96	1540	1090	1.915	204	0
6	61	12.5	28.3	0.11	1.7	9.4	1740	1228	15	1.16	2500	1744	2.396	273	13
7	61	11.8	30.8	0.06	1.7	9.6	1760	1246	15	1.17	2400	1706	2.397	258	19
8	61	12.4	18.0	0.12	1.7	9.6	1750	1278	15	1.17	2660	1932	2.399	271	19
9	61	12.3	16.2	0.16	1.6	9.1	1570	1122	15	1.05	2560	1842	2.400	271	19
10	61	11.2	11.7	0.21	1.6	9.1	1550	1115	14	1.11	2360	1718	2.397	245	19
11	61	11.6	14.6	0.16	1.6	8.8	1520	1101	12	1.27	2920	2138	2.399	253	20
12	61	12.2	22.3	0.12	1.7	9.4	1670	1269	14	1.19	2640	2016	2.398	266	20
13	61	12.5	16.3	0.12	1.7	9.4	1380	994	13	1.06	2340	1684	2.399	273	20
14	61	9.1	15.3	0.17	1.6	9.3	1370	1001	13	1.05	2720	1986	2.399	200	20
15	61	11.5	29.8	0.12	1.6	8.8	1490	1137	13	1.15	2940	2248	2.399	253	20
16	61	12.1	18.7	0.14	1.6	9.2	1480	1132	13	1.14	2460	1886	2.399	265	19
17	61	11.8	18.3	0.15	1.1	7.7	1270	931	12	1.06	2440	1764	0.642	69	19
18	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
19	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
20	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
21	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
22	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
23	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
24	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
25	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	21
26	61	12.0	8.3	0.31	0.9	9.7	600	452	7	0.86	840	654	1.196	131	8
27	61	12.0	10.7	0.30	0.8	9.6	600	439	6	1.00	860	634	1.192	130	0
28	61	12.5	11.6	0.27	0.8	9.6	580	420	6	0.97	940	714	1.184	135	0
29	61	10.9	9.8	0.26	0.8	9.4	690	528	6	1.15	1340	1054	1.195	119	0
30	61	12.7	9.7	0.18	0.8	10.1	770	583	6	1.28	1100	848	1.190	138	0
31	61	13.6	11.0	0.19	0.8	9.8	780	633	6	1.30	1200	806	1.189	147	0
AVERAGE	61	11.8	15.7	0.18	1.3	9.4	1193	870	11	1.09	1948	1426	1.777	191	13

ADRIAN WWTP

WEST #2 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

AUGUST 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	11.9	9.9	0.20	0.9	9.7	920	667	9	1.02	1260	908	1.200	130	0
2	61	9.3	8.2	0.24	0.9	9.6	890	647	10	0.89	1340	986	1.198	102	0
3	61	12.0	11.3	0.19	1.0	9.8	900	635	10	0.90	1820	1316	1.193	131	0
4	61	11.2	13.0	0.21	1.0	9.7	1000	608	10	1.00	1560	1056	1.191	122	0
5	61	11.7	15.0	0.19	0.7	9.2	990	686	10	0.99	1580	1128	0.468	50	0
6	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	13
7	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	19
8	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	19
9	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	19
10	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	19
11	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
12	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
13	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
14	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
15	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	20
16	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	19
17	61	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	oos	19
18	61	11.8	24.4	0.15	1.9	9.8	1290	930	10	1.29	1660	1200	2.263	243	20
19	61	12.5	25.2	0.14	1.9	9.9	1160	837	10	1.16	1660	1190	2.399	274	20
20	61	12.5	17.6	0.17	1.9	9.9	1080	784	9	1.20	1660	1208	2.399	274	20
21	61	12.4	16.8	0.17	1.8	9.8	1170	874	9	1.30	1520	1120	2.399	272	20
22	61	13.0	17.9	0.17	1.8	9.8	1060	793	9	1.18	3240	2888	2.400	284	20
23	61	13.1	13.1	0.19	1.7	9.8	960	719	9	1.07	1440	1102	2.400	288	19
24	61	11.4	11.3	0.22	1.7	9.3	1000	756	9	1.11	1260	960	2.382	249	20
25	61	12.0	14.0	0.20	1.3	9.7	950	732	6	1.58	1320	1020	1.361	149	21
26	61	12.0	8.2	0.31	1.0	9.8	590	445	7	0.84	1000	760	1.202	132	10
27	61	12.0	10.5	0.30	1.0	9.8	590	438	7	0.84	960	704	1.193	130	0
28	61	12.5	13.2	0.23	1.0	9.6	660	491	6	1.10	1100	836	1.186	135	0
29	61	10.9	10.0	0.26	1.0	9.5	700	526	6	1.17	1220	920	1.195	119	0
30	61	12.7	9.1	0.20	1.0	9.7	720	534	6	1.20	1120	836	1.199	139	0
31	61	13.6	12.1	0.17	1.0	9.9	860	704	7	1.23	1240	820	1.198	148	0
AVERAGE	61	12.0	13.7	0.21	1.3	9.7	921	674	8	1.11	1472	1103	1.601	178	13

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

AUGUST 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	3.023	1.4	35	99	2	50	99	2	7.0
2	4.078	1.7	58	99	3	102	99	2	7.0
3	3.212	2.3	62	99	2	54	98	2	7.0
4	3.082	1.5	39	99	2	51	99	1	7.0
5	3.280	1.2	33	99	2	55	99	1	7.5
6	2.928	1.2	29	99	2	49	99	2	7.1
7	2.816	1.4	33	99	2	47	99	2	7.0
8	2.729	0.6	14	100	2	46	99	2	6.9
9	2.715	0.3	7	100	2	45	99	2	7.0
10	3.149	0.0	0	100	2	53	99	2	6.9
11	2.872	0.5	12	100	2	48	99	2	6.8
12	2.750	0.2	5	100	2	46	99	2	6.9
13	2.768	0.8	18	100	3	69	98	2	6.9
14	3.738	1.0	31	100	2	62	99	2	6.9
15	3.160	1.0	26	99	3	79	98	3	7.0
16	2.958	1.0	25	99	2	49	99	2	7.0
17	2.843	1.2	28	99	2	47	99	2	7.0
18	2.905	0.2	5	100	2	48	99	2	7.0
19	2.807	0.6	14	100	1	23	99	1	7.0
20	2.754	0.8	18	100	2	46	99	2	7.0
21	2.781	0.7	16	100	3	70	98	3	7.1
22	2.636	1.2	26	99	3	66	98	3	7.1
23	2.661	1.2	27	99	3	67	98	3	7.1
24	2.927	1.3	32	99	4	98	98	3	7.1
25	2.450	1.8	37	99	6	123	97	6	7.1
26	2.849	1.6	38	99	3	71	98	2	7.1
27	2.873	1.9	46	99	1	24	99	1	7.1
28	2.870	3.6	86	98	1	24	100	1	7.0
29	3.487	3.0	87	99	1	29	100	1	7.0
30	2.695	3.0	67	98	2	45	99	1	7.0
31	3.040	3.0	76	98	1	25	100	1	6.8
TOTAL	91.836	41.2	1030		70	1711			
AVERAGE	2.962	1.3	33	99.3	2	55	98.7	2	7.0

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

AUGUST 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							71	7.5	6		
2	0.87	30	80	0.04	1	100	71	7.6	4		
3	0.86	23	80	0.04	1	100	71	7.4	1		
4	0.90	23	79	0.05	1	100	71	7.7	2		
5	0.86	24	81	0.04	1	100	70	8.0	6		
6	0.80	20	81	0.04	1	100	70	7.6	7		
7							71	8.1	4		
8							72	7.9	1		
9	0.80	18	83	0.05	1	100	71	7.7	1		
10	1.00	26	81	0.06	2	100	72	7.8	0		
11	1.37	33	74	0.05	1	100	73	7.5	12		
12	1.30	30	73	0.05	1	100	72	7.3	3		
13	1.23	28	74	0.05	1	100	71	7.1	16		
14							73	7.5	5		
15							72	7.3	8		
16	0.64	16	84	0.05	1	100	72	7.4	50		
17	0.60	14	88	0.05	1	100	71	7.4	11		
18	0.57	14	88	0.04	1	100	71	7.9	1	<2.0	<0.048
19	0.70	16	86	0.04	1	100	71	7.7	1		
20	0.77	18	84	0.05	1	100	70	7.9	2		
21							72	7.7	8		
22							72	7.5	5		
23	1.33	30	72	0.05	1	100	73	7.7	13		
24	1.53	37	68	0.06	1	100	72	8.0	25		
25	1.64	34	70	0.05	1	100	74	7.6	5		
26	1.08	26	80	0.04	1	100	73	7.6	1		
27	0.95	23	81	0.04	1	100	74	7.5	5		
28							74	7.4	9		
29							70	7.9	11		
30	0.36	8	92	0.03	1	100	71	7.7	2		
31	0.32	8	94	0.03	1	100	71	7.7	29		
TOTAL	20.48	497		1.00	24						
AVERAGE	0.93	23	81	0.05	1	100	72	7.6	4		

ADRIAN WWTP

THICKENER SLUDGE

ADRIAN, MICHIGAN

AUGUST 2020

DAY	THICKENER #1				THICKENER #2			
	FLOW KGAL	pH SU	SOLIDS %	VOL. SOLIDS %	FLOW KGAL	pH SU	SOLIDS %	VOL. SOLIDS %
1	oos	oos	oos	oos	20.8	5.3	2.64	72
2	oos	oos	oos	oos	21.9	5.1	2.83	73
3	oos	oos	oos	oos	20.7	5.3	1.45	69
4	oos	oos	oos	oos	16.8	5.1	3.35	71
5	oos	oos	oos	oos	20.7	4.9	3.03	71
6	oos	oos	oos	oos	18.1	5.8	2.25	72
7	oos	oos	oos	oos	22.1	5.6	2.48	73
8	oos	oos	oos	oos	21.6	5.6	2.88	72
9	oos	oos	oos	oos	22.0	5.2	3.46	73
10	oos	oos	oos	oos	19.6	5.6	2.86	73
11	oos	oos	oos	oos	20.2	6.0	1.89	74
12	oos	oos	oos	oos	21.1	5.4	2.65	74
13	oos	oos	oos	oos	20.8	5.1	3.23	74
14	oos	oos	oos	oos	20.5	5.1	3.45	74
15	oos	oos	oos	oos	20.5	5.1	3.67	72
16	oos	oos	oos	oos	21.2	5.0	3.87	66
17	oos	oos	oos	oos	20.1	5.1	3.50	67
18	oos	oos	oos	oos	19.5	5.2	3.30	70
19	oos	oos	oos	oos	17.8	5.3	3.02	71
20	oos	oos	oos	oos	19.9	5.2	2.69	72
21	oos	oos	oos	oos	18.6	5.1	4.01	73
22	oos	oos	oos	oos	17.4	5.0	3.37	74
23	oos	oos	oos	oos	18.4	5.2	3.03	76
24	oos	oos	oos	oos	13.4	5.3	2.25	78
25	oos	oos	oos	oos	7.4	5.3	1.27	76
26	8.0	5.2	3.75	78	8.9	5.3	2.40	77
27	8.7	5.1	3.45	76	8.5	5.3	2.44	75
28	14.6	5.2	2.81	74	8.4	5.6	2.28	74
29	19.9	5.6	3.11	73	7.9	6.2	0.63	67
30	19.3	5.4	3.07	71	oos	oos	oos	oos
31	19.2	5.5	2.35	73	oos	oos	oos	oos
TOTAL	89.7				514.8			
AVERAGE	15.0	5.3	3.09	74	17.8	5.3	2.76	73

ADRIAN WWTP

PRIMARY SLUDGE

ADRIAN, MICHIGAN

AUGUST 2020

DAY	PRIMARIES #1 - #4			PRIMARIES #5 - #7		
	pH SU	SOLIDS %	VOL. SOLIDS %	pH SU	SOLIDS %	VOL. SOLIDS %
1						
2						
3						
4						
5	6.3	0.70	66	6.1	1.63	69
6						
7						
8						
9						
10						
11						
12	6.2	1.29	75	6.8	1.96	64
13						
14						
15						
16						
17						
18						
19	6.4	2.09	76	6.6	1.22	75
20						
21						
22						
23						
24						
25						
26	6.8	1.62	75	6.3	0.52	69
27						
28						
29						
30						
31						
AVERAGE	6.4	1.43	73	6.5	1.33	69

ADRIAN WWTP

DIGESTED SLUDGE

ADRIAN, MICHIGAN

AUGUST 2020

CELL SLUDGE

DAY	#	FLOW	pH	SOLIDS	SOLIDS	#	pH	SOLIDS	SOLIDS
		KGAL.	SU	%	VOL.		SU	%	VOL.
1									
2									
3	4	69.6	7.3	3.10	56				
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27						1	7.2	4.65	56
28						1	7.8	5.84	56
29									
30									
31									
TOTAL		69.6							

CITY OF ADRIAN
 135 E. Maumee ST.
 ADRIAN, MICHIGAN
 AUGUST 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	3.023	1.4	35	2	50				7.0	7.5	6
2	4.078	1.7	58	3	102	0.87	0.04	1	7.0	7.6	4
3	3.212	2.3	62	2	54	0.86	0.04	1	7.0	7.4	1
4	3.082	1.5	39	2	51	0.90	0.05	1	7.0	7.7	2
5	3.280	1.2	33	2	55	0.86	0.04	1	7.5	8.0	6
6	2.928	1.2	29	2	49	0.80	0.04	1	7.1	7.6	7
7	2.816	1.4	33	2	47				7.0	8.1	4
8	2.729	0.6	14	2	46				6.9	7.9	1
9	2.715	0.3	7	2	45	0.80	0.05	1	7.0	7.7	1
10	3.149	0.0	0	2	53	1.00	0.06	2	6.9	7.8	0
11	2.872	0.5	12	2	48	1.37	0.05	1	6.8	7.5	12
12	2.750	0.2	5	2	46	1.30	0.05	1	6.9	7.3	3
13	2.768	0.8	18	3	69	1.23	0.05	1	6.9	7.1	16
14	3.738	1.0	31	2	62				6.9	7.5	5
15	3.160	1.0	26	3	79				7.0	7.3	8
16	2.958	1.0	25	2	49	0.64	0.05	1	7.0	7.4	50
17	2.843	1.2	28	2	47	0.60	0.05	1	7.0	7.4	11
18	2.905	0.2	5	2	48	0.57	0.04	1	7.0	7.9	1
19	2.807	0.6	14	1	23	0.70	0.04	1	7.0	7.7	1
20	2.754	0.8	18	2	46	0.77	0.05	1	7.0	7.9	2
21	2.781	0.7	16	3	70				7.1	7.7	8
22	2.636	1.2	26	3	66				7.1	7.5	5
23	2.661	1.2	27	3	67	1.33	0.05	1	7.1	7.7	13
24	2.927	1.3	32	4	98	1.53	0.06	1	7.1	8.0	25
25	2.450	1.8	37	6	123	1.64	0.05	1	7.1	7.6	5
26	2.849	1.6	38	3	71	1.08	0.04	1	7.1	7.6	1
27	2.873	1.9	46	1	24	0.95	0.04	1	7.1	7.5	5
28	2.870	3.6	86	1	24				7.0	7.4	9
29	3.487	3.0	87	1	29				7.0	7.9	11
30	2.695	3.0	67	2	45	0.36	0.03	1	7.0	7.7	2
31	3.040	3.0	76	1	25	0.32	0.03	1	6.8	7.7	29
TOTAL	91.836	41.2	1030	70	1711	20.48	1.00	24			
MAX	4.078	3.6	87	6	123	1.64	0.06	2	7.5	8.1	
MIN	2.450	0.0	0	1	23	0.32	0.03	1	6.8	7.1	
AVE	2.962	1.3	33	2	55	0.93	0.05	1	7.0	7.6	4

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
DISTRICT: Jackson
COUNTY: Lenawee
MONITORING POINT: 001A
MONITORING PERIOD: 2020-08-01 To 2020-08-31

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	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
Stat Base	Maximum Daily	Maximum 7-Day Average	Maximum 7-Day Average	Maximum Daily	Maximum Daily	Maximum Daily	Maximum Day Average 7	Maximum Daily	Maximum Daily	Maximum 7-Day Average	Maximum Daily	Maximum Daily	Maximum Daily	Maximum Daily
1	3.023			2	50	1.4		35						
2	4.078			3	102	1.7		58	0.04		1	0.87	30	
3	3.212			2	54	2.3		62	0.04		1	0.86	23	
4	3.082			2	51	1.5		39	0.05		1	0.90	23	
5	3.280			2	55	1.2		33	0.04		1	0.86	24	
6	2.928			2	49	1.2		29	0.04		1	0.80	20	
7	2.816	2	58	2	47	1.4	41	33		1				
8	2.729	2	58	2	46	0.6	38	14		1				
9	2.715	2	49	2	45	0.3	31	7	0.05	1	1	0.80	18	
10	3.149	2	49	2	53	<1	22	<26	0.06	1	2	1.00	26	
11	2.872	2	49	2	48	0.5	18	12	0.05	1	1	1.37	33	
12	2.750	2	48	2	46	0.2	14	5	0.05	1	1	1.30	30	
13	2.768	2	50	3	69	0.8	13	18	0.05	1	1	1.23	28	
14	3.738	2	53	2	62	1.0	12	31		1				
15	3.160	2	57	3	79	1.0	14	26		1				
16	2.958	2	58	2	49	1.0	17	25	0.05	1	1	0.64	16	
17	2.843	2	57	2	47	1.2	21	28	0.05	1	1	0.60	14	
18	2.905	2	57	2	48	0.2	20	5	0.04	1	1	0.57	14	<2.0
19	2.807	2	54	1	23	0.6	21	14	0.04	1	1	0.70	16	
20	2.754	2	51	2	46	0.8	21	18	0.05	1	1	0.77	18	
21	2.781	2	52	3	70	0.7	19	16		1				
22	2.636	2	50	3	66	1.2	19	26		1				
23	2.661	2	52	3	67	1.2	19	27	0.05	1	1	1.33	30	
24	2.927	3	60	4	98	1.3	20	32	0.06	1	1	1.53	37	
25	2.450	3	70	6	123	1.8	24	37	0.05	1	1	1.64	34	
26	2.849	3	77	3	71	1.6	28	38	0.04	1	1	1.08	26	
27	2.873	3	74	1	24	1.9	32	46	0.04	1	1	0.95	23	
28	2.870	3	67	1	24	3.6	42	86		1				
29	3.487	3	62	1	29	3.0	50	87		1				
30	2.695	3	59	2	45	3.0	56	67	0.03	1	1	0.36	8	
31	3.040	2	49	1	25	3.0	62	76	0.03	1	1	0.32	8	

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)
(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	Max 7-Day Geometric Mean	Maximum Daily	Minimum Daily	Maximum Daily	Minimum Daily
	*G	*G	*G	*G	*G	*G		6	7.0	7.0	7.5
								4	7.0	7.0	7.6
								<1	7.0	7.0	7.4
								2	7.0	7.0	7.7
								6	7.5	7.5	8.0
								7	7.1	7.1	7.6
							4	4	7.0	7.0	8.1
							3	<1	6.9	6.9	7.9
							2	<1	7.0	7.0	7.7
							2	<1	6.9	6.9	7.8
							2	12	6.8	6.8	7.5
							2	3	6.9	6.9	7.3
							2	16	6.9	6.9	7.1
							2	5	6.9	6.9	7.5
							3	8	7.0	7.0	7.3
							5	50	7.0	7.0	7.4
							10	11	7.0	7.0	7.4
<0.048							7	<1	7.0	7.0	7.9
							6	<1	7.0	7.0	7.7
							5	2	7.0	7.0	7.9
							5	8	7.1	7.1	7.7
							5	5	7.1	7.1	7.5
							4	13	7.1	7.1	7.7
							4	25	7.1	7.1	8.0
							5	5	7.1	7.1	7.6
							5	<1	7.1	7.1	7.6
							6	5	7.1	7.1	7.5
							6	9	7.0	7.0	7.4
							7	11	7.0	7.0	7.9
							5	2	7.0	7.0	7.7
							5	29	6.8	6.8	7.7

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: 2020-08-01 To: 2020-08-31

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	2.962	4.078	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	55	77	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	33	62	lbs/day	*****	1.3	3.6	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	0.06	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	23	37	lbs/day	*****	0.93	1.64	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	(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	2020-9-11		

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: 2020-08-01 To: 2020-08-31

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	*****	0.000027	lbs/day	*****	*****	0.78	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	*****	*****	*****	*****	4	10	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	*****	7.5	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	*****	*****	*****	7.1	*****	*****	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	2020-9-11		