

ADRIAN WWTP

## INFLUENT SHEET

ADRIAN, MICHIGAN

FEBRUARY 2020

DAY	CHEMICALS ADDED FeCl <sub>3</sub> Gals.	FLOW		BOD <sub>5</sub>	
		TOTAL	MAX RATE	mg/L	Lbs.
		MGD	MGD	00310	85001
		50050	50051		
1	330	5.846	12.1	140	6826
2	360	6.134	13.4	139	7111
3	320	5.934	7.8	129	6384
4	560	5.751	6.6	122	5852
5	210	5.657	6.7	141	6652
6	280	5.361	8.6	148	6617
7	260	5.391	7.8	160	7194
8	270	5.250	8.4	164	7181
9	290	5.035	7.1	150	6299
10	280	5.831	8.6	157	7635
11	260	5.702	9.5	161	7656
12	250	5.291	8.4	132	5825
13	270	5.479	8.0	120	5483
14	410	4.993	5.6	140	5830
15	360	4.923	5.8	148	6077
16	380	5.097	6.1	162	6886
17	390	5.124	8.7	211	9017
18	370	5.120	8.5	164	7003
19	370	5.164	8.1	178	7666
20	350	4.822	7.5	176	7078
21	360	4.677	6.5	167	6514
22	320	4.766	8.3	180	7155
23	1050	4.747	6.6	186	7364
24	580	5.044	8.8	195	8203
25	120	4.967	6.9	154	6379
26	0	5.172	8.7	158	6815
27	50	5.021	8.1	159	6658
28	500	4.841	8.0	165	6662
29	450	4.728	7.4	185	7295
TOTAL	10000	151.868		4591	199316
AVERAGE	345	5.237		158	6873

ADRIAN WWTP

## INFLUENT SHEET

ADRIAN, MICHIGAN

FEBRUARY 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	152	7411	138	7.2				
2	132	6753	106	7.2	3.3	169	19.9	1018
3	150	7423	134	7.3	3.1	153	19.0	940
4	118	5660	112	7.3	3.3	158	18.8	902
5	122	5756	112	7.2	3.3	156	19.1	901
6	136	6081	124	7.4	3.5	156	21.1	943
7	138	6205	132	7.4				
8	136	5955	124	7.4				
9	150	6299	140	7.4	3.8	160	18.3	768
10	202	9823	180	7.4	3.5	170	16.1	783
11	190	9035	170	7.3	3.4	162	16.5	785
12	164	7237	144	7.4	3.2	141	16.3	719
13	128	5849	120	7.4	3.1	142	15.5	708
14	136	5663	128	7.5				
15	140	5748	130	7.4				
16	142	6036	136	7.4	3.7	157	19.5	829
17	198	8461	170	7.4	4.0	171	22.3	953
18	178	7601	152	7.4	3.7	158	21.5	918
19	172	7408	154	7.5	4.1	177	22.0	947
20	152	6113	131	7.5	3.9	157	23.2	933
21	158	6163	130	7.5				
22	144	5724	138	6.8				
23	128	5068	120	7.2	4.2	166	22.5	891
24	176	7404	148	7.2	4.3	181	23.7	997
25	160	6628	134	7.4	3.9	162	23.0	953
26	158	6815	140	7.3	3.7	160	22.5	971
27	136	5695	116	7.3	3.6	151	21.7	909
28	144	5814	140	7.4				
29	145	5718	127	7.2				
TOTAL		191544			72.6	3206	402.5	17768
AVERAGE	151	6605	136	7.3	3.6	160	20.1	888

## PRIMARY EFFLUENT SHEET

ADRIAN, MICHIGAN

FEBRUARY 2020

DAY	FLOW		BOD <sub>5</sub>		SUS. SOLIDS		VSS	T. PHOSPHORUS		AMMONIA-N		PRIMARY SLUDGE Kgal
	MGD		mg/L	Lbs.	mg/L	Lbs.	mg/L	mg/L	Lbs.	mg/L	Lbs.	
	1-4	5-7	00310	85001	00530	85002	00535	00665	85004	00610	81019	
1	3.488	2.657	56	2870	36	1845	28					64
2	3.651	2.797	67	3603	40	2151	26	1.7	91	15.6	839	64
3	3.526	2.699	56	2907	42	2180	42	1.8	93	14.4	748	64
4	3.442	2.610	44	2221	30	1514	26	1.3	66	15.3	772	59
5	3.388	2.579	72	3583	28	1393	26	2.1	105	15.3	761	56
6	3.174	2.449	67	3142	28	1313	28	2.0	94	16.3	764	59
7	3.222	2.435	72	3397	32	1510	30					60
8	3.166	2.388	75	3474	24	1112	22					59
9	3.010	2.250	62	2720	22	965	20	1.8	79	14.0	614	57
10	3.483	2.649	76	3887	44	2250	42	1.9	97	12.4	634	60
11	3.424	2.590	70	3511	26	1304	24	1.8	90	12.2	612	58
12	3.151	2.417	66	3065	32	1486	24	1.8	84	12.3	571	55
13	3.298	2.499	64	3094	30	1450	28	1.7	82	11.6	561	55
14	2.925	2.320	66	2887	40	1750	38					55
15	2.911	2.262	72	3106	44	1898	24					55
16	3.051	2.327	80	3588	40	1794	36	1.8	81	14.9	668	55
17	3.045	2.364	86	3880	30	1353	28	1.8	81	16.3	735	54
18	3.071	2.327	70	3151	34	1531	32	1.7	77	15.7	707	56
19	3.138	2.396	91	4200	34	1569	34	1.9	88	15.3	706	61
20	2.878	2.251	74	3165	32	1369	30	1.7	73	15.4	659	65
21	2.773	2.156	72	2960	26	1069	16					66
22	2.870	2.180	101	4254	28	1179	26					65
23	2.844	2.155	67	2793	14	584	14	1.2	50	15.5	646	65
24	3.048	2.303	72	3213	28	1250	26	1.2	54	15.7	701	65
25	2.991	2.239	84	3664	50	2181	44	2.2	96	15.6	680	63
26	3.131	2.341	79	3605	42	1917	40	2.6	119	14.9	680	64
27	3.005	2.318	92	4084	40	1776	38	2.7	120	14.5	644	70
28	2.891	2.232	54	2307	24	1025	18					71
29	2.821	2.162	62	2577	22	914	18					70
TOTAL	90.816	69.352		94909		43633			1718		13703	
AVERAGE	3.132	2.391	71	3273	32	1505	29	1.8	86	14.7	685	61

ADRIAN WWTP

EAST ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

FEBRUARY 2020

DAY	MIXED LIQUOR										RETURN ACTIVATED SLUDGE				
	AERATION VOLUME KCF	DETENTION TIME HOURS	SLUDGE AGE DAYS	ORGANIC LOADING F-M	AIR SUPPLIED MIL CU. FT.	D.O.	S.S. mg/L	V.S.S. mg/L	SETTLED %	SDI %	S.S. mg/L	V.S.S. mg/L	RETURN MGD	RETURN %	WASTE SLUDGE Kgal.
	80993	81001	80990	80992	81000	00300	70323	70323	81004	81007	81006	70325		81014	80991
1	144	7.4	11.9	0.16	3.4	8.6	1390	1127	14	0.99	2720	2174	2.689	77	72
2	144	7.1	10.6	0.19	3.3	8.3	1440	1178	15	0.96	3120	2564	2.691	74	77
3	144	7.3	9.6	0.17	3.4	9.1	1320	1068	15	0.88	2620	2090	2.671	76	71
4	144	7.5	13.7	0.13	3.6	8.9	1310	1059	14	0.94	2720	2192	2.677	78	73
5	144	7.6	14.8	0.22	3.7	9.4	1300	1047	14	0.93	2520	2046	2.678	79	76
6	144	8.1	15.8	0.19	3.7	9.5	1300	1054	14	0.93	2400	1938	2.678	84	74
7	144	8.0	12.8	0.22	3.6	9.5	1230	989	14	0.88	2740	2194	2.677	83	74
8	144	8.2	18.9	0.20	3.7	10.0	1330	1078	14	0.95	2440	1990	2.676	85	75
9	144	8.6	21.0	0.16	3.7	10.5	1290	1051	14	0.92	2240	1836	2.677	89	73
10	144	7.4	8.4	0.26	3.6	9.6	1190	949	14	0.85	2040	1628	2.678	77	79
11	144	7.5	16.0	0.21	3.6	10.4	1320	1066	14	0.94	2400	1936	2.680	78	80
12	144	8.2	13.2	0.20	3.7	10.4	1240	972	14	0.89	2860	2330	2.679	85	77
13	144	7.8	13.2	0.20	3.7	10.2	1210	963	13	0.93	2460	1988	2.675	81	82
14	144	8.8	11.3	0.18	4.0	10.5	1230	993	13	0.95	2300	1868	2.675	91	81
15	144	8.9	10.3	0.19	3.9	10.4	1230	1002	12	1.03	2140	1732	2.677	92	87
16	144	8.5	11.2	0.22	3.7	10.2	1270	1041	11	1.15	2240	1826	2.675	88	86
17	144	8.5	14.7	0.24	3.7	9.7	1250	1022	12	1.04	2080	1682	2.675	88	87
18	144	8.4	12.9	0.19	3.6	9.4	1250	1026	11	1.14	2960	2422	2.674	87	87
19	144	8.2	12.4	0.27	3.8	9.3	1230	997	11	1.12	1880	1536	2.671	85	96
20	144	9.0	14.4	0.20	3.9	9.7	1230	994	11	1.12	1960	1580	2.674	93	90
21	144	9.3	17.2	0.20	3.8	9.8	1150	927	11	1.05	1840	1492	2.678	97	87
22	144	9.0	16.2	0.27	3.7	10.0	1210	980	12	1.01	1860	1524	2.678	93	93
23	144	9.1	32.5	0.18	3.6	9.9	1200	973	11	1.09	2180	1774	2.677	94	89
24	144	8.5	15.3	0.20	3.5	9.7	1210	994	11	1.10	1800	1486	2.672	88	97
25	144	8.6	7.8	0.27	3.6	9.4	1080	869	11	0.98	2040	1648	2.673	89	92
26	144	8.3	9.5	0.24	3.7	9.7	1160	943	11	1.05	2000	1600	2.674	85	101
27	144	8.6	10.0	0.28	3.8	9.7	1120	903	11	1.02	2040	1668	2.674	89	97
28	144	8.9	18.8	0.15	3.8	10.2	1210	993	11	1.10	2000	1624	2.633	91	89
29	144	9.2	21.3	0.16	3.8	10.4	1230	1019	11	1.12	2480	2068	2.671	95	86
AVERAGE	144	8.3	14.3	0.21	3.7	9.7	1246	1010	13	1.00	2313	1877	2.675	86	84

ADRIAN WWTP

WEST #1 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

FEBRUARY 2020

DAY	AERATION VOLUME		DETENTION TIME	SLUDGE AGE	ORGANIC LOADING	AIR SUPPLIED	D.O.	S.S.	MIXED LIQUOR			RETURN ACTIVATED SLUDGE			WASTE SLUDGE	
	KCF	HOURS	HOURS	DAYS	F-M	MIL CU. FT.	00300	mg/L	V.S.S.	SETTLED %	SDI %	S.S.	V.S.S.	RETURN MGD	RETURN %	Kgal.
	80993	81001	81001	80990	80992	81000		70323	70323	81004	81007	81006	70325		81014	80991
1	61	8.2	10.6	0.18	0.6	9.2	1110	883	14	0.79	2400	1906	1.192	90	24	
2	61	7.8	9.1	0.23	0.6	9.1	1110	887	14	0.79	2160	1732	1.191	85	24	
3	61	8.1	9.0	0.19	0.6	9.7	1120	882	15	0.75	2740	2194	1.195	89	20	
4	61	8.4	12.7	0.15	0.7	9.6	1090	853	15	0.73	2380	1900	1.193	91	18	
5	61	8.5	16.8	0.19	0.7	10.1	1330	1066	15	0.89	2420	1932	1.194	93	18	
6	61	8.9	15.3	0.20	0.7	10.2	1150	914	16	0.72	2380	1902	1.195	98	18	
7	61	9.0	14.8	0.19	0.7	10.0	1260	1007	17	0.74	2180	1736	1.195	98	18	
8	61	9.2	19.7	0.20	0.7	10.4	1240	996	17	0.73	2180	1742	1.194	100	18	
9	61	9.7	21.4	0.16	0.7	10.9	1160	942	19	0.61	4040	3254	1.194	106	18	
10	61	8.3	8.8	0.25	0.7	9.9	1120	894	15	0.75	2200	1770	1.193	90	15	
11	61	8.5	18.4	0.18	0.7	10.3	1360	1075	16	0.85	1680	1334	1.192	92	18	
12	61	9.1	13.2	0.20	0.7	11.1	1120	892	17	0.66	2160	1736	1.194	99	18	
13	61	8.8	13.3	0.20	0.7	10.3	1090	868	16	0.68	2060	1668	1.194	96	18	
14	61	9.4	10.7	0.19	0.7	10.8	1090	872	17	0.64	1980	1590	1.196	103	18	
15	61	9.7	10.5	0.19	0.7	10.6	1140	924	15	0.76	1960	1598	1.196	106	18	
16	61	9.4	11.3	0.22	0.7	10.5	1150	935	15	0.77	2260	1820	1.195	103	18	
17	61	9.3	13.9	0.26	0.7	10.2	1080	865	17	0.64	2000	1618	1.195	101	18	
18	61	9.4	13.4	0.19	0.7	10.0	1160	945	17	0.68	2500	2032	1.197	103	18	
19	61	9.1	12.7	0.26	0.7	10.2	1130	904	15	0.75	1820	1470	1.194	100	18	
20	61	9.7	14.8	0.19	0.7	10.4	1170	939	17	0.69	1900	1538	1.194	106	18	
21	61	10.2	19.2	0.18	0.7	10.8	1180	947	18	0.66	2020	1616	1.194	111	18	
22	61	10.0	18.2	0.25	0.7	10.9	1220	983	18	0.68	2100	1714	1.194	110	18	
23	61	10.2	36.6	0.16	0.7	10.8	1210	973	19	0.64	1940	1580	1.195	111	18	
24	61	9.5	17.4	0.18	0.7	10.3	1230	1001	19	0.65	2040	1652	1.194	104	19	
25	61	9.8	9.7	0.21	0.7	10.0	1190	960	19	0.63	1980	1600	1.193	107	18	
26	61	9.4	11.0	0.21	0.7	10.3	1190	959	18	0.66	2120	1720	1.194	102	19	
27	61	9.4	12.1	0.23	0.7	10.4	1230	996	18	0.68	2740	2232	1.194	103	19	
28	61	9.8	21.3	0.13	0.7	10.6	1250	1013	22	0.57	2120	1730	1.194	107	19	
29	61	10.1	24.7	0.14	0.7	10.8	1290	1053	20	0.65	2340	1922	1.194	110	20	
AVERAGE	61	9.2	15.2	0.20	0.7	10.3	1178	946	17	0.70	2234	1801	1.194	100	19	

ADRIAN WWTP

WEST #2 ACTIVATED SLUDGE SHEET

ADRIAN, MICHIGAN

FEBRUARY 2020

DAY	AERATION	DETENTION	SLUDGE	ORGANIC	AIR	D.O.	S.S.	MIXED LIQUOR			RETURN ACTIVATED SLUDGE				WASTE
	VOLUME KCF 80993	TIME HOURS 81001	AGE DAYS 80990	LOADING F-M 80992	SUPPLIED MIL CU. FT. 81000	00300	70323	V.S.S. mg/L 70323	SETTLED % 81004	SDI % 81007	S.S. mg/L 81006	V.S.S. mg/L 70325	RETURN MGD	RETURN % 81014	SLUDGE Kgal. 80991
1	61	8.2	13.1	0.15	0.8	10.0	1370	1083	16	0.86	2780	2198	1.208	91	29
2	61	7.8	11.3	0.19	0.7	9.9	1390	1102	16	0.87	2540	2040	1.202	86	29
3	61	8.1	10.8	0.16	0.8	10.5	1340	1056	18	0.74	2960	2352	1.165	86	28
4	61	8.4	13.4	0.14	0.8	10.3	1150	900	18	0.64	3000	2388	1.150	88	27
5	61	8.5	17.8	0.18	0.8	10.8	1410	1123	18	0.78	2600	2052	1.143	89	27
6	61	8.9	19.6	0.15	0.8	10.5	1470	1162	18	0.82	2620	2074	1.135	93	27
7	61	9.0	15.3	0.19	0.8	10.6	1310	1032	20	0.66	2760	2192	1.124	92	27
8	61	9.2	21.0	0.19	0.8	11.3	1320	1042	17	0.78	2780	2216	1.140	95	27
9	61	9.7	23.2	0.15	0.8	11.4	1260	1010	21	0.60	2440	1926	1.129	100	27
10	61	8.3	10.3	0.21	0.8	10.8	1310	1046	19	0.69	2420	1936	1.000	76	20
11	61	8.5	16.4	0.20	0.8	10.8	1210	981	19	0.64	2440	1952	1.199	93	23
12	61	9.1	16.5	0.16	0.8	11.2	1400	1124	21	0.67	2560	2050	1.198	99	23
13	61	8.8	16.6	0.16	0.8	10.6	1360	1086	20	0.68	2520	2040	1.196	96	24
14	61	9.4	13.6	0.15	0.9	11.4	1380	1104	19	0.73	2600	2090	1.200	103	26
15	61	9.7	12.7	0.16	0.8	11.3	1380	1106	18	0.77	2460	1976	1.197	106	26
16	61	9.4	14.7	0.17	0.8	11.1	1500	1218	19	0.79	2160	1782	1.199	103	25
17	61	9.3	17.5	0.20	0.8	11.0	1360	1096	20	0.68	2340	1878	1.198	101	25
18	61	9.4	16.6	0.15	0.8	10.7	1440	1156	19	0.76	3120	2512	1.199	103	26
19	61	9.1	15.9	0.21	0.8	11.1	1420	1145	18	0.79	2500	2016	1.196	100	28
20	61	9.7	18.1	0.16	0.8	11.1	1430	1154	20	0.72	2240	1840	1.200	107	29
21	61	10.2	23.0	0.15	0.8	11.3	1410	1136	19	0.74	2380	1914	1.198	111	30
22	61	10.0	20.9	0.21	0.8	11.4	1400	1130	19	0.74	2080	1686	1.199	110	30
23	61	10.2	41.1	0.14	0.8	11.3	1360	1095	19	0.72	2500	2016	1.197	111	30
24	61	9.5	19.1	0.17	0.8	10.8	1350	1093	19	0.71	2360	1906	1.198	104	30
25	61	9.8	10.8	0.19	0.8	10.4	1320	1065	19	0.69	2520	2026	1.200	107	30
26	61	9.4	12.3	0.19	0.8	10.9	1330	1084	19	0.70	2400	1962	1.197	102	30
27	61	9.4	12.3	0.23	0.8	11.0	1250	1014	20	0.63	2340	1910	1.196	103	30
28	61	9.8	22.3	0.12	0.8	11.2	1310	1062	22	0.60	2360	1926	1.196	107	30
29	61	10.1	25.5	0.13	0.8	11.3	1330	1092	21	0.63	2220	1820	1.197	111	30
AVERAGE	61	9.2	17.3	0.17	0.8	10.9	1354	1086	19	0.72	2517	2023	1.178	99	27

## ADRIAN WWTP

## EFFLUENT SHEET

## ADRIAN, MICHIGAN

FEBRUARY 2020

DAY	FLOW		CBOD <sub>5</sub>		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	4.488	2.1	79	98.5	3	112	98.0	2	7.4		
2	4.666	0.9	35	99.4	3	117	97.7	2	7.3		
3	4.575	3.4	130	97.4	2	76	98.7	2	6.9		
4	4.303	3.0	108	97.5	2	72	98.3	2	7.0		
5	4.176	2.0	70	98.6	2	70	98.4	2	7.0		
6	4.035	1.7	57	98.9	2	67	98.5	2	7.1		
7	4.061	0.8	27	99.5	3	102	97.8	2	7.1		
8	3.787	1.0	32	99.4	2	63	98.5	2	7.2		
9	3.793	1.4	44	99.1	1	32	99.3	1	7.3		
10	4.468	1.6	60	99.0	2	75	99.0	2	7.2		
11	4.243	1.6	57	99.0	2	71	98.9	2	7.2	<2.0	<0.071
12	4.043	1.8	61	98.6	2	67	98.8	1	7.2		
13	4.069	1.6	54	98.7	2	68	98.4	2	7.2		
14	6.057	2.0	101	98.6	3	152	97.8	3	7.3		
15	6.418	1.4	75	99.1	2	107	98.6	2	7.2		
16	3.733	1.7	53	99.0	2	62	98.6	2	7.2		
17	3.829	2.4	77	98.9	3	96	98.5	2	7.1		
18	3.835	1.8	58	98.9	2	64	98.9	2	7.0		
19	3.668	0.7	21	99.6	3	92	98.3	3	7.1		
20	3.562	1.4	42	99.2	2	59	98.7	2	7.0		
21	3.568	0.0	0	100.0	2	60	98.7	2	7.1		
22	3.481	0.0	0	100.0	3	87	97.9	3	7.1		
23	3.517	0.9	26	99.5	2	59	98.4	2	7.1		
24	3.684	2.1	65	98.9	3	92	98.3	2	6.9		
25	3.681	0.6	18	99.6	3	92	98.1	3	6.9		
26	3.828	0.1	3	99.9	2	64	98.7	2	6.8		
27	3.724	0.0	0	100.0	2	62	98.5	2	6.8		
28	3.560	1.4	42	99.2	3	89	97.9	3	7.1		
29	3.507	0.3	9	99.8	2	58	98.6	2	7.2		
TOTAL	118.359	39.7	1401		67	2286					
AVERAGE	4.081	1.4	48	99.1	2	79	98.4	2	7.1		

ADRIAN WWTP

EFFLUENT SHEET

ADRIAN, MICHIGAN

FEBRUARY 2020

DAY	TOTAL PHOSPHORUS			AMMONIA-N			TEMP °F	D.O. mg/L 00300	FECAL COLIFORM cts/100 mL 74055
	mg/L 00665	Lbs. 00665	% Rem 81012	mg/L 00610	Lbs. 00610	% Rem			
1							52	7.9	19
2	1.01	39	69	0.17	7	99	52	8.5	10
3	0.88	34	72	0.07	3	100	52	8.6	4
4	0.92	33	72	0.11	4	99	52	8.4	5
5	0.98	34	70	0.10	3	99	51	9.5	2
6	1.09	37	69	0.07	2	100	51	8.8	4
7							51	9.0	7
8							53	9.2	0
9	0.90	28	76	0.05	2	100	53	9.2	0
10	0.95	35	73	0.05	2	100	52	9.6	3
11	0.96	34	72	0.05	2	100	52	9.3	2
12	1.01	34	68	0.06	2	100	53	9.4	0
13	1.04	35	66	0.05	2	100	52	9.5	2
14							50	9.7	0
15							50	9.7	0
16	0.85	26	77	0.06	2	100	50	9.1	1
17	0.82	26	80	0.06	2	100	52	9.3	1
18	0.78	25	79	0.07	2	100	51	8.6	5
19	0.83	25	80	0.08	2	100	50	9.7	2
20	0.84	25	78	0.05	1	100	50	9.7	2
21							50	9.5	1
22							53	9.0	1
23	0.88	26	79	0.05	1	100	54	8.9	0
24	0.46	14	89	0.06	2	100	51	9.0	0
25	0.56	17	86	0.07	2	100	52	8.4	1
26	1.02	33	72	0.07	2	100	51	9.2	3
27	1.42	44	61	0.06	2	100	50	9.0	1
28							50	9.2	0
29							51	9.3	1
TOTAL	18.20	606		1.41	48				
AVERAGE	0.91	30	74	0.07	2	100	51	9.1	1

ADRIAN WWTP

THICKENER SLUDGE

ADRIAN, MICHIGAN

FEBRUARY 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	22.2	5.2	4.81	76
2	00S	00S	00S	00S	37.3	5.3	5.10	76
3	00S	00S	00S	00S	40.1	5.3	3.99	78
4	00S	00S	00S	00S	38.8	5.5	4.77	79
5	00S	00S	00S	00S	40.4	5.6	3.97	79
6	00S	00S	00S	00S	32.6	5.7	4.11	78
7	00S	00S	00S	00S	23.8	6.1	3.81	79
8	00S	00S	00S	00S	20.0	6.1	3.53	80
9	00S	00S	00S	00S	20.3	6.2	3.59	80
10	00S	00S	00S	00S	19.4	6.1	3.46	79
11	00S	00S	00S	00S	18.5	6.1	3.59	79
12	00S	00S	00S	00S	17.5	6.2	4.01	81
13	00S	00S	00S	00S	15.4	6.1	4.08	80
14	00S	00S	00S	00S	18.2	6.2	3.45	80
15	00S	00S	00S	00S	19.0	6.2	3.44	81
16	00S	00S	00S	00S	18.8	6.2	3.63	80
17	00S	00S	00S	00S	16.4	6.2	3.64	80
18	00S	00S	00S	00S	15.0	6.1	4.56	80
19	00S	00S	00S	00S	14.1	6.2	3.92	80
20	00S	00S	00S	00S	13.6	5.6	3.96	80
21	00S	00S	00S	00S	13.7	5.8	3.85	80
22	00S	00S	00S	00S	12.9	5.6	3.67	79
23	00S	00S	00S	00S	13.4	5.9	4.09	79
24	00S	00S	00S	00S	13.8	5.8	4.15	78
25	00S	00S	00S	00S	14.0	5.4	4.15	76
26	00S	00S	00S	00S	14.2	5.4	4.25	77
27	00S	00S	00S	00S	14.0	5.7	4.78	77
28	00S	00S	00S	00S	13.4	5.6	5.13	79
29	00S	00S	00S	00S	14.8	5.5	5.02	80
TOTAL	0.0				585.6			
AVERAGE	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	20.2	5.8	4.09	79

ADRIAN WWTP

PRIMARY SLUDGE

ADRIAN, MICHIGAN

FEBRUARY 2020

DAY	PRIMARIES #1-#4			PRIMARIES #5-#7		
	pH SU	SOLIDS %	VOL. SOLIDS %	pH SU	SOLIDS %	VOL. SOLIDS %
1						
2						
3						
4						
5	7.0	0.93	76	7.0	0.26	61
6						
7						
8						
9						
10						
11						
12	7.0	0.98	77	6.8	0.17	43
13						
14						
15						
16						
17						
18						
19	6.3	1.51	73	5.6	2.40	78
20						
21						
22						
23						
24						
25						
26	6.9	0.57	73	6.6	1.28	71
27						
28						
29						
AVERAGE	6.8	1.00	75	6.5	1.03	63

## ADRIAN WWTP

## DIGESTED SLUDGE

ADRIAN, MICHIGAN

FEBRUARY 2020

DAY	#	FLOW KGAL.	pH SU	SOLIDS %	SOLIDS VOL. %
1					
2					
3	2	81.0	7.4	2.83	59
4	4	50.4	7.1	2.10	58
5					
6					
7	4	76.8	7.3	4.28	43
8	6	79.2	7.4	2.23	58
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21	6	69.6	7.2	2.95	59
22					
23					
24					
25	4	33.6	7.3	2.33	58
26	4	40.8	7.4	1.34	58
27					
28					
29					
TOTAL		431.4			

CITY OF ADRIAN  
 100 E. CHURCH ST.  
 ADRIAN, MICHIGAN  
 FEBRUARY 2020

DISCHARGE MONITORING REPORT DAILY MONITORING

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

DISCHARGE NUMBER  
 001A

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	4.488	2.1	79	3	112				7.4	7.9	19
2	4.666	0.9	35	3	117	1.01	0.17	7	7.3	8.5	10
3	4.575	3.4	130	2	76	0.88	0.07	3	6.9	8.6	4
4	4.303	3.0	108	2	72	0.92	0.11	4	7.0	8.4	5
5	4.176	2.0	70	2	70	0.98	0.10	3	7.0	9.5	2
6	4.035	1.7	57	2	67	1.09	0.07	2	7.1	8.8	4
7	4.061	0.8	27	3	102				7.1	9.0	7
8	3.787	1.0	32	2	63				7.2	9.2	0
9	3.793	1.4	44	1	32	0.90	0.05	2	7.3	9.2	0
10	4.468	1.6	60	2	75	0.95	0.05	2	7.2	9.6	3
11	4.243	1.6	57	2	71	0.96	0.05	2	7.2	9.3	2
12	4.043	1.8	61	2	67	1.01	0.06	2	7.2	9.4	0
13	4.069	1.6	54	2	68	1.04	0.05	2	7.2	9.5	2
14	6.057	2.0	101	3	152				7.3	9.7	0
15	6.418	1.4	75	2	107				7.2	9.7	0
16	3.733	1.7	53	2	62	0.85	0.06	2	7.2	9.1	1
17	3.829	2.4	77	3	96	0.82	0.06	2	7.1	9.3	1
18	3.835	1.8	58	2	64	0.78	0.07	2	7.0	8.6	5
19	3.668	0.7	21	3	92	0.83	0.08	2	7.1	9.7	2
20	3.562	1.4	42	2	59	0.84	0.05	1	7.0	9.7	2
21	3.568	0	0	2	60				7.1	9.5	1
22	3.481	0	0	3	87				7.1	9.0	1
23	3.517	0.9	26	2	59	0.88	0.05	1	7.1	8.9	0
24	3.684	2.1	65	3	92	0.46	0.06	2	6.9	9.0	0
25	3.681	0.6	18	3	92	0.56	0.07	2	6.9	8.4	1
26	3.828	0.1	3	2	64	1.02	0.07	2	6.8	9.2	3
27	3.724	0	0	2	62	1.42	0.06	2	6.8	9.0	1
28	3.560	1.4	42	3	89				7.1	9.2	0
29	3.507	0.3	9	2	58				7.2	9.3	1
TOTAL	118.359	39.7	1401	67	2286	18.20	1.41	48			
MAX	6.418	3.4	130	3	152	1.42	0.17	7	7.4	9.7	
MIN	3.481	0.0	0	1	32	0.46	0.05	1	6.8	7.9	
AVE	4.081	1.4	48	2	79	0.91	0.07	2	7.1	9.1	1

**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:** MI0022152  
**DISTRICT:** Jackson  
**COUNTY:** Lenawee  
**MONITORING POINT:** 001A  
**MONITORING PERIOD:** 2020-02-01 To 2020-02-28

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
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)
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
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
1	4.488			3	112			2.1	79					
2	4.666			3	117			0.9	35	0.17		7	1.01	39
3	4.575			2	76			3.4	130	0.07		3	0.88	34
4	4.303			2	72			3.0	108	0.11		4	0.92	33
5	4.176			2	70			2.0	70	0.10		3	0.98	34
6	4.035			2	67			1.7	57	0.07		2	1.09	37
7	4.061	2	88	3	102	2	72	0.8	27		3			
8	3.787	2	81	2	63	2	65	1.0	32		3			
9	3.793	2	69	1	32	2	67	1.4	44	0.05	2	2	0.90	28
10	4.468	2	69	2	75	2	57	1.6	60	0.05	2	2	0.95	35
11	4.243	2	68	2	71	1	49	1.6	57	0.05	2	2	0.96	34
12	4.043	2	68	2	67	1	48	1.8	61	0.06	1	2	1.01	34
13	4.069	2	68	2	68	1	48	1.6	54	0.05	1	2	1.04	35
14	6.057	2	75	3	152	2	58	2.0	101		1			
15	6.418	2	82	2	107	2	64	1.4	75		1			
16	3.733	2	86	2	62	2	66	1.7	53	0.06	1	2	0.85	26
17	3.829	2	89	3	96	2	68	2.4	77	0.06	1	2	0.82	26
18	3.835	2	88	2	64	2	68	1.8	58	0.07	1	2	0.78	25
19	3.668	2	91	3	92	2	63	0.7	21	0.08	1	2	0.83	25
20	3.562	2	90	2	59	2	61	1.4	42	0.05	1	1	0.84	25
21	3.568	2	77	2	60	1	46	<1	0		1			
22	3.481	2	74	3	87	1	36	<1	0		1			
23	3.517	2	74	2	59	1	32	0.9	26	0.05	1	1	0.88	26
24	3.684	2	73	3	92	1	30	2.1	65	0.06	1	2	0.46	14
25	3.681	3	77	3	92	1	25	0.6	18	0.07	1	2	0.56	17
26	3.828	2	73	2	64	1	22	0.1	3	0.07	1	2	1.02	33
27	3.724	2	74	2	62	1	16	<1	0	0.06	1	2	1.42	44
28	3.560	3	78	3	89	1	22	1.4	42		1			
29	3.507	2	74	2	58	1	23	0.3	9		1			

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	CBOD5 Minimum % Removal 80091	Total Suspended Solids Minimum % Removal 82044	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	Percent Removal (K)	Percent Removal (K)	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	(Report) %	(Report) %	6.5 SU	9.0 SU	5.0 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 % Removal	Minimum Daily % Removal	Minimum Daily	Maximum Daily	Minimum Daily
		*G	*G	*G	*G	*G	*G		19	99	98	7.4	7.4	7.9
									10	99	98	7.3	7.3	8.5
									4	97	99	6.9	6.9	8.6
									5	98	98	7.0	7.0	8.4
									2	99	98	7.0	7.0	9.5
									4	99	99	7.1	7.1	8.8
								6	7	100	98	7.1	7.1	9.0
								3	<1	99	99	7.2	7.2	9.2
								1	<1	99	99	7.3	7.3	9.2
								1	3	99	99	7.2	7.2	9.6
<2.0	<0.071							1	2	99	99	7.2	7.2	9.3
								1	<1	99	99	7.2	7.2	9.4
								1	2	99	98	7.2	7.2	9.5
								0	<1	99	98	7.3	7.3	9.7
								0	<1	99	99	7.2	7.2	9.7
								1	<1	99	99	7.2	7.2	9.1
								0	<1	99	98	7.1	7.1	9.3
								1	5	99	99	7.0	7.0	8.6
								1	2	100	98	7.1	7.1	9.7
								1	2	99	99	7.0	7.0	9.7
								1	<1	100	99	7.1	7.1	9.5
								2	<1	100	98	7.1	7.1	9.0
								1	<1	100	98	7.1	7.1	8.9
								1	<1	99	98	6.9	6.9	9.0
								1	<1	100	98	6.9	6.9	8.4
								1	3	100	99	6.8	6.8	9.2
								1	<1	100	99	6.8	6.8	9.0
								0	<1	99	98	7.1	7.1	9.2
								0	<1	100	99	7.2	7.2	9.3

**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: 2020-02-01 To: 2020-02-29

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	4.081	6.418	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	79	91	lbs/day	*****	2	3	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	48	72	lbs/day	*****	1.4	2	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	3	lbs/day	*****	0.07	0.17	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	30	44	lbs/day	*****	0.91	1.42	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	2020-03-11		

**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 GROUP: 001A

DISTRICT: Jackson  
 COUNTY: Lenawee

Monitoring Period: 2020-02-01 To: 2020-02-29

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	*****	0.000015	lbs/day	*****	*****	0.39	ng/l	0	Monthly	Calculation
	Permit Requirement	*****	0.00012 12-Month Rolling Average		*****	*****	2.0 12-Month Rolling Average				Monthly
Fecal Coliform PARAM CODE: 74055 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	*****	*****	*****	*****	1	6	cts/100 ml	0	Daily	Grab
	Permit Requirement	*****	*****		*****	200 Max Monthly Geometric Mean	400 Maximum 7-Day Geometric Mean				Daily
CBOD5 Minimum % Removal PARAM CODE: 80091 Mon. Site No.: 001A Stage Code: K	Sample Measurement	*****	*****	*****	99.1	*****	97.4	%	0	Monthly	Calculation
	Permit Requirement	*****	*****		85 Minimum Monthly % Removal	*****	Report Minimum Daily % Removal				Monthly
Total Suspended Solids Minimum % Removal PARAM CODE: 81011 Mon. Site No.: 001A Stage Code: K	Sample Measurement	*****	*****	*****	98.4	*****	97.7	%	0	Monthly	Calculation
	Permit Requirement	*****	*****		85 Minimum Monthly % Removal	*****	Report Minimum Daily % Removal				Monthly
pH PARAM CODE: 00400 Mon. Site No.: 001A Stage Code: 1	Sample Measurement	*****	*****	*****	6.8	*****	7.4	S.U.	0	5X Weekly	Grab
	Permit Requirement	*****	*****		6.5 Minimum Daily	*****	9.0 Maximum Daily				5X Weekly
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
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	2020-03-11		

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