



**William Edwin Ross Wastewater Treatment**

Annual Summation of Monthly Reports of Operation  
2022

Plant Design Flow	18
Annual Average Flow	8,978
Capacity Used	30%

PERCENT REMOVAL SUMMARY			
BOD5	24	S:S	41
Primary Treatment	97	Ammonia	Phosphorus
Secondary Treatment	95		
Tertiary Treatment	-3		
Overall Treatment	97		

Average	Maximum	Minimum	Totals	No. of Data	CHEMICALS USED				RAW SEWAGE				PRIMARY EFFLUENT				SECONDARY EFFLUENT					
					Chlorine - Lbs/day	Alum Gal./Day	SO2 Lbs/Day	Influent Flow Rate (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs/day	Susp. Solids - mg/l	Susp. Solids - lbs/day	Phosphorus - mg/l	Ammonia - mg/l	CBOD5 - mg/l	Susp. Solids - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Volume - MG
91.07	96.47	84.06	10.93	199	18743.2	227	20891.4	3.4	5.0	132	124	75	6904	110	3.9	#####	12885	5	6			
192	88	238	2831	11.4	514	47740.8	1080	100257	8.61	10.9	0	281	291	148	8.11	#####	19040	16.2	24			
0	0	0	0	0	6.6	41	3926.39	20	3194.57	1	0.894	0	14	2.2	19	4840	28	0	#####	5750	2	1
94	181	94	181	165	113	117	115	165	165	101	105	118	118	118	118	181	163	131	117	90	89	
Estimated Annual Totals (Average X 365)					6,841,268	7,625,574																

Average	Maximum	Minimum	Totals	No. of Data	FINAL EFFLUENT				BOD				Ammonia				Phosphorus				SLUDGE TO DIGESTER														
					Residual Chlorine - Final	Residual Chlorine - Contact Tank	E. Coli - colony/100 ml	pH	Dissolved Oxygen - mg/l	Oil & Grease (mg/l)	Effluent Flow Rate (MGD)	Effluent Flow Weekly Average	CBOD5 - mg/l	CBOD5 - mg/l Weekly Average	CBOD5 - lbs/day	CBOD5 - lbs/day Weekly Average	Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs/day	Susp. Solids - lbs/day Weekly Average	Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs/day	Ammonia - lbs/day Weekly Average	Phosphorus - mg/l	Phosphorus - mg/l Weekly Average	Phosphorus - lbs/day	Phosphorus - lbs/day Weekly Average	Primary Sludge Gal. x 1000	Waste Act. Sludge Gal. x 1000	Supernate %TS	Supernate %VS			
0.038	0	1595	875	14.67	10.8	8,978	5.0	402,473	4.1	370.1	0.8	6709	0.3395	26.32	15.71	17.39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0.001	0	1	7.21	0	5	34.3	14.32	10.1	8.98	874,053	859.9	45	21.83	3866	2089	1.73	0.3985	123.5	31.19	1.8	154.6	95.27	103.7	0	0	0	0	0	0	0	0	0	0	0	
78	0	74	181	181	2	181	181	2	181	45881.9	157.5	1	1.04	57.28	75.74	0.075	0.076	0.98	1.548	0.058	5.767	-23.37	3147	0	0	0	0	0	0	0	0	0	0	0	0
Estimated Annual Totals (Average X 365)					3,277	3,277	4,024,732	50	4,024,732	4.1	3,701	0.8	6,709	0.3395	26.32	15.71	17.39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Average	Maximum	Minimum	Totals	No. of Data	ANEROBIC ONLY				DIGESTER OPERATION																											
					pH	Gas Production Cubic Ft. x 1000	Temperature - F	Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000	Avg. Temp-C	Max. Temp-C																				
7.69	8.05	97	131.4	23.46	11.7	3.74	787	64.6	594	19.46	21.5	181	12936	0.547	36.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7.11	8.05	80.5	2208	17.7	23.46	11.7	3.74	787	64.6	594	19.46	21.5	181	12936	0.547	36.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0.05	0.05	2208	23	27	4	24	63	63	2581	387	27057	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Estimated Annual Totals (Average X 365)					151	151	151	151	23	27	4	24	63	63	2581	387	27057	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

**Notes:**

  = Ammonia mg/L 2022 @ 0.08

  = Phosphorus mg/L 2022 @ 0.33

After Phi equipment was put online, the plant no longer needed to add chemicals; therefore, saving \$200,000 annually