

Boulder County LID – Eldorado Springs Wastewater Plant

Operations Report

January 2022

Prepared by Gabby Begeman, ORC Water Professionals

WWTP

- Please see the attached results for the samples and flows collected from the WWTF.
- The DO equipment is assisting in achieving a more consistent effluent, however proving increasingly difficult to meet the standard below 10. Fluidyne has been consulted to provide assistance.
- The dissolved oxygen readings have been tied into the Mission box data logging alarm panel to enable remote monitoring and charting of the dissolved oxygen.
- Effluent pump #2 will need to be removed, repaired or replaced. It would be beneficial to install the slide rail system to enable a more expedient approach to maintenance of the facilities pumps.
- During the Marshal Fires we attempted to run the generator to operate the facility and found it would trip when the large feed pump tried to run. The generator is unable to provide the power to run the facility.

Collections system

- The grinder panel at 52 Artesian has been replaced.
- The grinder at 147 Baldwin was replaced on January 13 for the first time ever for that residence.

ELDORADO SPRINGS WWTP

PERMIT# CO 0047651

Permitted Flow 0.032 (MGD)

Permitted Loading 73#/day

(cells highlighted contain formulas)

(to be completed by operator)

Parameter	22-Jan	21-Dec	21-Nov	21-Oct	21-Sep	21-Aug	21-Jul	21-Jun	21-May	21-Apr	21-Mar	21-Feb
INFLUENT - MONTHLY												
Average Influent/Effluent Flow (MGD)	0.020738	0.0169	0.017547	0.015314	0.01677	0.0178	0.0204	0.01618	0.0183	0.0148	0.018371	0.018914
Maximum Influent/Effluent flow (MGD)	0.0234	0.0218	0.019627	0.02397	0.0171	0.02	0.0182	0.01828	0.0216	0.020006	0.02275	0.021802
Influent BOD (mg/L)	321	203	180	782	259	220	280	185	214	354	528	394
Influent BOD (#s/d)	50.87	27.33	25.48	122.09	34.93	36.70	39.96	27.22	34.80	51.05	80.95	55.33
Influent TSS (mg/L)	332	197	316	1305	494	174	369	294	79	488	409	494
Influent TKN (mg/L)	49.30	47.90	59.00	82.40	83.20	64.30	84.80	28.30	44.80	68.60	97.20	84.80
* Plant Capacity Hydraulic P (%)	64.81%	52.81%	54.83%	47.86%	52.41%	55.63%	63.75%	50.56%	57.19%	46.25%	57.41%	59.11%
* Plant Capacity Organic Q (%)	69.68%	37.43%	34.91%	167.25%	47.85%	50.27%	54.73%	37.28%	47.68%	69.93%	110.90%	75.79%
Day of sample Influent/Effluent Flow (MGD)	0.019	0.016	0.017	0.019	0.016	0.020	0.017	0.018	0.020	0.017	0.018	0.017
EFFLUENT - MONTHLY												
Ammonia Nitrogen (mg/L)	0.17	0.71	0.03	0.56	0.05	0.12	0.63	0.66	10.21	22.65	0.19	0.44
Ammonia Nitrogen RA - See Tab	0.295	0.8	0.185	1.205	1.74	0.12	3.33	5.42	5.2	11.3825	0.32	0.485
TIN(mg/L) 10 max	8.64	13.46	11.52	12.32	24.5	20.78	1.76	1.22	11.07	23.11	2.26	7.33
TIN RA	11.876	11.757	10.937	10.680	10.895	9.237	8.336	8.579	8.858	8.221	7.256	7.177
NO2+NO3 (mg/L)	8.47	12.74	11.52	11.76	24.45	20.66	1.14	0.56	0.86	0.46	2.07	6.88
Ecoli (876 ml) Geomean Use actual on DMR	1	1	1	1	1	1	1	1	1	1733	1	1
* Ecoli RA 127	158.45	158.45	158.45	158.45	158.45	158.45	158.45	158.64	158.64	158.64	404.25	404.25
pH (Minimum) 6.5	7.10	6.79	6.90	6.94	6.55	6.80	7.10	6.97	6.95	7.20	6.94	6.81
pH (Maximum) 9.0	7.57	7.26	7.11	7.72	7.88	7.20	8.06	7.40	7.51	7.78	7.42	7.13
Effluent TKN	1.00	0.10	0.10	0.60			4.50	5.90	16.10	23.60	3.10	3.80
* Average #'s Nitrate	1.34	1.71	1.63	1.84	3.30	3.45	0.16	0.08	0.14	0.07	0.32	0.97
EFFLUENT - 2X/YEAR												
Effluent Arsenic (ug/L)	5.20				3.70							
2YR Arsenic (ug/L)	4.83				4.53							
Effluent Copper (ug/L)	11.40				24.70							
2YR Copper (ug/L)	12.65				16.15							
EFFLUENT - QUARTERLY												
Effluent BOD (mg/L) 30/45 mg/L	8	4	0	2	2	4	8	23	15	5	9	2
Highest BOD	8	4			8			23			9	
Effluent TSS (mg/L) 30/45 mg/L	9	7	0	0	12	9	21	26	30	16	21	5
Highest TSS	9	7			21			30			21	
* BOD % Removal	97.51%	98.03%	100.00%	99.74%	99.23%	98.18%	97.14%	87.57%	92.99%	98.59%	98.30%	99.49%
Lowest BOD %	97.51%	98.03%			97.14%			87.57%			98.07%	
* TSS % Removal	97.29%	96.45%	100.00%	100.00%	97.57%	94.83%	94.31%	91.16%	62.03%	96.72%	94.87%	98.99%
Lowest TSS %	96.45%	96.45%			94.31%			62.03%			94.87%	
NOTE												