

Boulder County LID – Eldorado Springs Wastewater Plant

Operations Report

April 2020

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WWTP

- Please see the attached results for the samples and flows collected from the WWTF. Seems like the stay at home orders are affecting the flows and loading of the plant.
- A new spare effluent valve has been ordered.
- Multiple alarms triggered additional response from ORC during April. We found failed equipment (floats) in the SAM tank stalling the process. New floats have been installed and a new electric box with proper watertight fittings has also been installed. See the before and after photos. We also found some wiring faulting on Feed Pump A preventing it from running. It has been fixed.
- New UV bulbs have been ordered and installed where one had burned out.
- The sludge was hauled at the beginning of April. This once again made the plant run from “100-0” overnight and has created a higher TIN for the month of April.
- The trees need to be trimmed 2 feet back on either side of the road prior to the gate.
- Data for the nutrient reduction program has been submitted for 2018 and 2019.

Collections System

- There are no “commercial grade” E-one pumps. There are two varieties of pump housings (the type we use is appropriate for our application) and various pumps with differing capacities.

Eldorado Springs WWTP (cells highlighted contain formulas)

Parameter	20-Apr	20-Mar	20-Feb	20-Jan	19-Dec	19-Nov	19-Oct	19-Sep	19-Aug	19-Jul	19-Jun	19-May
Average Influent/Effluent Flow (MGD)	0.02416	0.0194	0.0165	0.017	0.0175	0.0192	0.0208	0.0198	0.0192	0.0179	0.01685	0.015682
Maximum Influent/Effluent flow (MGD)	0.02939	0.0244	0.0194	0.0183	0.0184	0.026	0.0229	0.0267	0.0197	0.0226	0.0216	0.0207
Average Influent BOD (mg/L)	381	193	291	219	386	319	272	249	244	182	390	215
* Average Influent BOD (#s/d)	63.55	20.35	39.32	29.59	47.97	49.54	48.55	42.99	38.26	26.56	55.29	28.69
Average Influent TSS (mg/L)	460	150	256	200	366	290	353	235	88	156	232	158
* Plant Capacity Flow P (%)	75.50%	60.63%	51.56%	53.13%	54.69%	60.00%	65.00%	61.88%	60.00%	55.94%	52.66%	49.01%
* Plant Capacity Loading Q (%)	87.06%	27.88%	53.86%	40.53%	65.71%	67.86%	66.50%	58.89%	52.41%	36.38%	75.75%	39.30%
Day of sample Influent/Effluent Flow (MGD)	0.020	0.013	0.016	0.016	0.015	0.019	0.021	0.021	0.019	0.017	0.017	0.016
Average Effluent BOD (mg/L)	10	5	4	5	2	2	4	2	2	11	8	26
Average Effluent TSS (mg/L)	6	13	9	14	6	8	19	9	11	6	10	32
* BOD % Removal	97.38%	97.41%	98.63%	97.72%	99.48%	99.37%	98.53%	99.20%	99.18%	93.96%	97.95%	87.91%
* TSS % Removal	98.70%	91.33%	96.48%	93.00%	98.36%	97.24%	94.62%	96.17%	87.50%	96.15%	95.69%	79.75%
Average Effluent Ammonia Nitrogen (mg/L)	0.115	0.45	0.53	0.14	0.14	0.4	2.97	19.77	24.88	6.89	12.52	58.98
TIN Monthly Rolling Average	13.902	13.240	13.990	14.594	16.456	17.758	17.228	16.836	15.468	13.904	13.902	13.341
TIN(mg/L)	11.53	1.31	2.65	5.02	6.28	10.8	5.42	19.77	24.99	7.1	12.91	59.04
NO2+NO3 (mg/L)	11.415	0.86	2.12	4.88	6.14	9.98	2.45	0.19	0.11	0.21	0.39	0.07
Ecoli (#/100 ml)	1	1	1	2	1	1	1	1	1	49.2	1	285
* Ecoli Rolling Annual Average	28.77	28.77	28.77	31.60	31.52	31.52	31.52	31.52	31.52	31.52	27.75	27.75
pH (Minimum)	6.80	6.83	6.81	6.72	6.87	6.64	6.70	6.74	6.89	6.77	6.90	6.70
pH (Maximum)	7.49	7.89	7.06	7.06	7.00	7.12	7.25	7.14	7.31	7.47	7.22	7.68
Ave Influent TKN	86.50	68.30	69.40	71.10	78.00	62.30	49.80	54.00	93.90	92.20	82.10	81.10
Ave Effluent TKN	1.15	1.90	1.70	1.20	1.10	1.90	4.90	19.90	25.00	7.10	14.10	59.80

