

**Boulder County LID – Eldorado Springs Wastewater Plant**  
Operations Report  
July/August 2022

Prepared by Gabby Begeman, ORC Water Professionals

**WWTP**

- Please see the attached results for the samples and flows collected from the WWTF.
- Effluent pump #1 needs to be removed and replaced as it is not operational. A new pump has been ordered and will be installed when it comes in.
- The electrical panel needs to be gone through by an electrician. There are many burned wires, defunct terminal blocks and a general servicing is due. ORC performed some of this work as a preventative measure to keep the pumps working, however we request that a competent electrician put eyes on it.

**Collections system**

- I have yet to dig up the vaults and assess the valves within.

**Compliance**

- ORC facilitated a compliance inspection with the State where a number of issues were found. See the attachment. We will address most of these items except for the following which the Artesian's will need to complete.

**Major findings: near-term follow-up required**

- *New swimming pool grinder pump*
  - *As discussed onsite, we think this facility needs to go through the site approval process. For resolution, you will either need to go through the SA process - or, if applicable, provide confirmation that site approval isn't required (e.g., less than 2,000 gpd, actually owned by the swimming pool and not the LID, etc.)*

**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-Aug	22-Jul	22-Jun	22-May	22-Apr	22-Mar	22-Feb	22-Jan	21-Dec	21-Nov	21-Oct	21-Sep
<b>INFLUENT - MONTHLY</b>												
Average Influent/Effluent Flow (MGD)	0.020	0.019	0.020	0.019	0.019	0.016	0.019	0.020738	0.0169	0.017547	0.015314	0.01677
Maximum Influent/Effluent flow (MGD)	0.024	0.022	0.023	0.021	0.023	0.019	0.022	0.0234	0.0218	0.019627	0.02397	0.0171
Influent BOD (mg/L)	206	344	402	441	411	112	287	321	203	180	782	259
Influent BOD (#s/d)	34.34	50.05	56.81	69.03	59.64	15.88	52.66	50.87	27.33	25.48	122.09	34.93
Influent TSS (mg/L)	247	369	518	412	325	215	584	332	197	316	1305	494
Influent TKN (mg/L)	56.40	71.70	52.10	59.10	62.20	59.60	68.50	49.30	47.90	59.00	82.40	83.20
* Plant Capacity Hydraulic P (%)	63.35%	58.43%	61.73%	59.38%	59.38%	50.00%	58.67%	64.81%	52.81%	54.83%	47.86%	52.41%
* Plant Capacity Organic Q (%)	47.03%	68.56%	77.82%	94.57%	81.70%	21.75%	72.14%	69.68%	37.43%	34.91%	167.25%	47.85%
Day of sample Influent/Effluent Flow (MGD)	0.020	0.017	0.017	0.019	0.017	0.017	0.022	0.019	0.016	0.017	0.019	0.016
<b>EFFLUENT - MONTHLY</b>												
Ammonia Nitrogen (mg/L)	0.71	0.68	0.36	0.37	0.58	0.2	<0.03	0.17	0.71	0.03	0.56	0.05
Ammonia Nitrogen RA - See Tab	0.06	0.315	0.51	5.29	5.905	5.78875	0.235	0.295	0.8	0.185	1.205	1.74
TIN(mg/L) 10 max	3.71	2.98	0.57	0.84	5.42	10.38	11.45	8.64	13.46	11.52	12.32	24.5
TIN RA	9.026	9.287	9.358	9.524	9.632	9.887	9.509	9.142	8.991	8.692	8.662	8.375
NO2+NO3 (mg/L)	2.99	2.31	0.21	0.47	4.84	10.17	11.45	8.47	12.74	11.52	11.76	24.45
Ecoli (876 ml) Geomean Use actual on DMR	2	1	1	1	1	1	4	1	1	1	1	1
* Ecoli RA 127	73.33	73.38	73.38	73.38	274.92	274.92	274.92	274.79	274.83	274.83	274.83	274.83
pH (Minimum) 6.5	6.84	6.87	6.71	6.72	6.75	6.82	6.93	7.10	6.79	6.90	6.94	6.55
pH (Maximum) 9.0	7.28	7.57	7.31	7.54	7.70	7.71	8.15	7.57	7.26	7.11	7.72	7.88
Effluent TKN	2.60		1.10		2.20	2.00	0.10	1.00	0.10	0.10	0.60	
* Average #'s Nitrate	0.50	0.34	0.03	0.07	0.70	1.44	2.10	1.34	1.71	1.63	1.84	3.30
<b>EFFLUENT - 2X/YEAR</b>												
Effluent Arsenic (ug/L)		6.20						5.20				3.70
2YR Arsenic (ug/L)		5.28						4.83				4.53
Effluent Copper (ug/L)		17.50						11.40				24.70
2YR Copper (ug/L)		15.78						12.65				16.15
<b>EFFLUENT - QUARTERLY</b>												
Effluent BOD (mg/L) 30/45 mg/L	2	10	6	5	8	4	10	8	4	0	2	2
Highest BOD			8			10			4			8
Effluent TSS (mg/L) 30/45 mg/L	12	10	14	6	10	8	11	9	7	0	0	12
Highest TSS			14			11			7			21
* BOD % Removal	99.03%	97.09%	98.51%	98.87%	98.05%	96.43%	96.52%	97.51%	98.03%	100.00%	99.74%	99.23%
Lowest BOD %			98.05%			96.43%			98.03%			97.14%
* TSS % Removal	95.14%	97.29%	97.30%	98.54%	96.92%	96.28%	98.12%	97.29%	96.45%	100.00%	100.00%	97.57%
Lowest TSS %			96.92%			96.28%			96.45%			94.31%