



September 14, 2023

Mr. Don Turner
Environmental Project Officer
Water Security Agency
Suite 300 – 2365 Albert Street
Regina, SK S4P 4K1

Dear Mr. Turner:

RE: Monthly Report: **August 2023**

In compliance with the City of Regina “Permit to Operate a Sewage Works” # 0050853-07-00 please find attached the monthly report for August 2023.

I trust this meets with your approval, should you have any questions please do not hesitate to contact me directly at (306) 580-1204 or Rui Li at (306) 535-5874.

Yours truly,

A handwritten signature in blue ink that reads "Vicki Campbell".

Vicki Campbell
Senior Manager, Capital, Growth & Operations
EPCOR Water Services

City of Regina - Wastewater Treatment Plant

August 2023															
Final Effluent Results															
Permit# 00050853-07-00															
Date	Flow to Creek	Total Coliform	<i>E. coli</i>	Enterococci	Dissolved Oxygen (Field Test)	Temp. (Field Test)	Chloride (Field Test)	Total Phosphorus	pH @15±1°C	Total Suspended Solids	CBOD	Ammonia Nitrogen	Unionized Ammonia @15±1°C	Total Kjeldahl Nitrogen	Total Nitrogen
	(ML)	(MPN /100mL)			(mg/L)	(°C)	(mg/L)	(mg P/L)	(SU)	(mg/L)	(mg/L)	(mg N/L)	(mg N/L)	(mg N/L)	(mg N/L)
01	59.07	236	1	1	6.27	20.1	220	0.48	7.12	11.4	3.9	2.97	< 0.030	5.3	9.3
02	58.89	345	5		6.47	20.3	214	0.47	7.05	11.4	4.1	2.90	< 0.030	5.3	9.5
03	59.99	248	5		6.38	20.3	213	0.43	7.12	11.8	3.8	2.83	< 0.030	5.5	9.7
04	58.97	291	4		6.31	20.4		0.47		7.4		3.11		5.2	8.9
05	56.37				6.65	20.4		0.29		5.1	2.7	2.26		4.5	9.4
06	55.48				6.82	20.4	219	0.28	7.05	5.1	2.4	2.10	< 0.030	4.4	9.3
07	55.52	365	3	4	6.74	20.2	223	0.65	7.18	10.8	2.7	3.36	< 0.030	5.5	10.0
08	59.00	921	2		6.44	20.2	222	0.40	7.02	8.4	3.2	3.26	< 0.030	5.7	9.8
09	63.04	197	4		6.39	19.8	201	0.54	7.14	13.2	3.3	5.01	< 0.030	7.7	12.0
10	78.61	387	28		5.40	19.3	201	0.49	7.05	8.2	2.8	3.74	< 0.030	6.4	12.0
11	64.00	150	3		6.81	19.4		0.31		6.0		1.47		3.5	9.8
12	59.32				6.02	19.7		0.31		5.6	2.8	1.35		3.5	10.3
13	59.74				6.91	19.8	206	0.33	7.08	5.5	2.7	1.75	< 0.030	3.7	9.9
14	61.45	194	2	1	6.70	19.9	210	0.42	7.08	8.4	2.7	1.87	< 0.030	4.3	10.6
15	57.11	276	5		6.62	20.0	209	0.47	7.14	10.9	3.1	0.91	< 0.030	3.1	9.0
16	59.67	305	< 10		6.77	19.9	226	0.45	7.04	10.0	2.8	< 0.30	< 0.030	2.9	9.2
17	59.74	437	4		6.76	20.1	229	0.38	7.14	11.0	3.3	2.80	< 0.030	5.6	10.7
18	56.79	326	9		6.54	20.2		0.40		6.0		2.45		4.8	10.5
19	64.99				6.76	19.8		0.23		4.9	< 2.0	2.36		4.7	11.1
20	56.95				7.27	19.7	227	0.22	7.01	4.3	2.4	2.74	< 0.030	4.9	11.7
21	64.49	201	3	2	6.66	19.4	226	0.23	7.06	5.3	< 2.0	1.52	< 0.030	3.6	10.6
22	69.52	308	2		6.58	19.5	218	0.27	7.07	6.4	2.3	0.82	< 0.030	3.0	9.7
23	38.76	345	3		7.02	20.8	229	0.30	7.07	6.6	2.8	< 0.30	< 0.030	2.2	7.8
24	63.68	186	1		7.05	19.9	231	0.27	7.00	5.8	2.3	< 0.30	< 0.030	1.9	9.3
25	62.64	201	2		7.06	19.8		0.25		4.4		0.36		2.2	8.6
26	61.05				6.89	19.8		0.23		3.9	2.5	0.45		2.2	8.4
27	63.61				6.97	20.1	239	0.23	6.94	4.2	2.1	0.49	< 0.030	2.3	8.0
28	64.81	166	1	1	6.83	20.2	233	0.23	7.07	4.7	2.2	0.67	< 0.030	2.5	7.9
29	64.43	228	2		6.88	20.4	230	0.24	7.03	4.6	2.4	< 0.30	< 0.030	2.4	8.2
30	64.65	387	8		6.75	20.3	226	0.24	6.95	5.6	2.1	1.14	< 0.030	3.1	9.0
31	61.41	115	4		6.53	20.2	226	0.23	6.98	5.3	< 2.0	0.53	< 0.030	2.2	8.6
Sum	1883.75														
Avg	60.77				6.65	20.0	221	0.35	7.06	7	3	2	< 0.030	4.0	10
Min	38.76				5.40	19.3	201	0.22	6.94	3.9	< 2.0	< 0.30	< 0.030	1.9	7.8
Max	78.61		28		7.27	20.8	239	0.65	7.18	13.2	4.1	5.01	< 0.030	7.7	12.0
Permit Limits			≤1,000					≤0.75		≤15	≤15	≤4	≤1.24		≤10

***E. coli* Geometric Mean = 3 MPN/100mL, Limit = 200 MPN/100mL**

Plant Notes:

From August 18th to 22nd, flow equalization was implemented to aid in nitrogen removal.
 On August 23rd, the flow was directed to the lagoon to facilitate planned maintenance of the grit channel.

WSA Notes:

Aug 1 & 3 - Total coliform and *E. coli* results qualified. Incubator temperature exceeded acceptance limits during incubation.
 Aug 5 & 6 - CBOD results qualified. Quality control standard exceeded acceptance limits.
 Aug 16 - Total coliform and *E. coli* were tested by an external accredited laboratory.

Creek Monthly Report to Water Security Agency

Tuesday, August 1, 2023

Permit# 00050853-07-00

Test Description	Riske's Crossing	Final Effluent	Sidmar Crossing	Wascana above the Qu'Appelle	Qu'Appelle above the Wascana	Lumsden
Dissolved Oxygen (Field Test)	6.90	6.27	3.70	8.42	6.39	8.27
pH (Field Test for Creek Samples)	8.62	7.12	6.85	8.24	7.84	8.04
Temperature (Field Test)	21.6	20.1	19.7	21.1	22.3	24.0
Total Suspended Solids	47.0	11.4	5.0	21.6	86.0	39.3
Carbonaceous Biochemical Oxygen Demand	6.8	3.9	2.0	<2.0	6.8	3.6
Total Phosphorus	0.83	0.48	0.29	0.25	0.32	0.27
Total Kjeldahl Nitrogen	2.2	5.3	3.6	1.3	1.6	1.4
Ammonia Nitrogen	<0.30	2.97	1.97	<0.30	<0.30	<0.30
Nitrate Nitrogen	<0.13	4.11	3.36	0.87	<0.13	0.57
Total Nitrogen	2.3	9.3	7.5	2.2	1.7	2.0
Phenol Alkalinity	17	0	0	0	0	0
Total Alkalinity	244	118	134	163	196	184
Carbonate	21	0	0	0	0	0
Bicarbonate	256	144	164	199	239	225
Chloride (Field Test)	89.3	220	196	194	32.5	153
Total Coliform	54,800	236	41,100	15,500	9,210	24,200
<i>E. coli</i>	53	1	210	129	166	77
Enterococci	137	1	81	63	77	51
Total Hardness*	326	302	316	313	235	311
Calcium*	68	65	69	68	48	67
Magnesium*	38	34	35	35	28	35
Potassium*	14	19	19	18	8.3	16
Sodium*	94	169	161	159	64	135
Sulfate*	180	260	260	240	140	220
Total Dissolved Solids*		845				
Conductivity at 25°C*		1440				
Mercury*		0.000002				
Aluminum*		0.098				
Antimony*		0.0010				
Arsenic*		0.0026				
Barium*		0.039				
Beryllium*		<0.0001				
Boron*		0.38				
Cadmium*		0.00002				
Chromium*		0.0008				
Cobalt*		0.0003				
Copper*		0.023				
Iron*		0.11				
Lead*		0.0007				
Manganese*		0.20				
Molybdenum*		0.0076				
Nickel*		0.0022				
Selenium*		0.0020				
Silver*		<0.00005				
Strontium*		0.40				
Thallium*		<0.0002				
Uranium*		0.0004				
Vanadium*		0.0011				
Zinc*		0.038				

Notes:

* Tests conducted by an external accredited laboratory.

Results are in mg/L except total coliforms, *E.coli*, enterococci (MPN/100mL), temperature (°C), conductivity (µS/cm) and pH (SU).

Final effluent nitrate-N result is from sample date 7 Aug 2023.

Total coliform and *E. coli* results qualified. Incubator temperature exceeded acceptance limits during incubation.

Primary Influent BOD Results (mg/L)

Aug 1 - 230; Aug 3 - 216; Aug 8 - 207; Aug 10 - 238; Aug 15 - 201; Aug 17 - 209; Aug 22 - 276; Aug 24 - 240; Aug 29 - 236; Aug 31 - 249