



November 15, 2022

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

Dear Mr. Turner:

RE: Monthly Report: **October 2022**

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In compliance with the City of Regina “Permit to Operate a Sewage Works” # 0050853-07-00 please find attached the monthly report for October 2022.

I trust this meets with your approval, should you have any questions please do not hesitate to contact me directly at (306) 519-9054 or Justin Allan at (306) 551-3180.

Yours truly,

A handwritten signature in blue ink, appearing to read "J. Zimmer", with a long horizontal flourish extending to the right.

Joe Zimmer, P. Eng.  
Manager, Regina Operations  
EPCOR Water Services

# City of Regina - Wastewater Treatment Plant

October 2022

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	62.99				7.60	19.7		0.47		10.6		0.95		3.2	9.0
02	64.98				8.47	19.4	202	0.52	7.52	11.2	3.4	1.61	< 0.030	4.4	9.3
03	65.40	196	10	22	7.02	19.6	205	0.51	7.38	10.4	3.9	1.09	< 0.030	3.9	9.2
04	63.66	199	11		8.83	19.6	205	0.44	7.55	9.2	4.1	0.73	< 0.030	3.3	9.2
05	63.52	387	36		7.15	19.3	201	0.45	7.40	9.8	3.6	1.44	< 0.030	4.2	11.1
06	63.37	194	6		7.32	18.9	198	0.64	7.34	11.7	4.8	1.70	< 0.030	4.5	11.2
07	65.19	41	< 10		7.12	18.9		0.46		9.4		2.47		5.3	12.2
08	63.96				9.16	19.1		0.45		8.8		1.46		4.2	10.9
09	63.08				8.92	19.2	195	0.44	7.47	7.6	< 2.0	0.80	< 0.030	3.2	8.8
10	58.70	461	4		8.92	19.0	191	0.48	7.51	8.2	3.5	3.28	< 0.030	5.9	10.6
11	64.99	228	12	12	6.81	18.5	198	0.63	7.36	11.4	4.0	4.10	< 0.030	7.2	12.2
12	63.83	178	7		7.06	17.9	205	0.73	7.40	14.2	3.9	5.49	0.037	8.7	13.6
13	64.19	291	8		7.20	17.8	195	0.69	7.38	13.6	4.5	6.17	0.040	9.6	15.1
14	57.27	52	< 10		9.00	18.3		0.38		7.5		3.90		6.2	11.8
15	53.29				8.71	17.5		0.25		6.3		4.86		7.6	13.1
16	53.94				8.72	17.5	192	0.25	7.52	4.7	< 2.0	3.35	0.030	5.8	11.2
17	52.74	48	< 1		9.43	17.2	195	0.43	7.42	10.4	3.3	0.85	< 0.030	3.3	8.9
18	55.51	40	< 1	1	7.23	17.2	204	0.30	7.34	6.6	2.8	< 0.30	< 0.030	2.0	7.0
19	57.29	50	< 1		7.36	17.7	194	0.27	7.46	5.4	2.6	< 0.30	< 0.030	2.0	8.0
20	58.20	55	5	< 1	9.36	17.7	200	0.27	7.33	5.2	2.3	< 0.30	< 0.030	2.2	9.1
21	55.16	231	< 10		6.82	17.6		0.25		3.8		2.46		4.1	11.6
22	47.83				7.62	17.8		0.22		3.4		< 0.30		1.5	10.3
23	49.33				8.01	17.0	190	0.23	7.37	3.6	< 2.0	< 0.30	< 0.030	1.7	9.2
24	49.07	152	1	1	7.87	16.6	185	0.55	7.41	3.9	< 2.0	< 0.30	< 0.030	1.6	7.4
25	46.55	186	29		9.18	16.9	195	0.19	7.48	2.8	< 2.0	< 0.30	< 0.030	1.4	5.7
26	50.86	146	2		7.69	17.0	193	0.21	7.40	3.6	< 2.0	< 0.30	< 0.030	1.9	8.4
27	53.01	56	1		6.99	16.9	196	0.24	7.48	3.4	< 2.0	0.68	< 0.030	2.1	9.5
28	51.60	50	4		7.52	17.2		0.25		4.0		0.52		2.0	9.7
29	54.35				7.61	17.3		0.27		4.5		0.84		2.7	11.9
30	52.64				7.87	17.2	196	0.26	7.34	4.1	2.0	< 0.30	< 0.030	1.6	10.1
31	51.61	44	4		7.55	17.4	196	0.26	7.23	4.3	< 2.0	< 0.30	< 0.030	1.8	8.0
Sum	1778.11														
Avg	57.36				7.94	18.0	197	0.39	7.41	7	3	2	0.031	3.8	10
Min	46.55				6.81	16.6	185	0.19	7.23	2.8	< 2.0	< 0.30	< 0.030	1.4	5.7
Max	65.40		36		9.43	19.7	205	0.73	7.55	14.2	4.8	6.17	0.040	9.6	15.1
Permit Limits			≤1,000					≤0.75		≤15	≤15	≤4	≤1.24		≤10

**E. coli Geometric Mean = 5 MPN/100mL, Limit = 200 MPN/100mL**

**Plant Notes:**

Oct 10 - The valve chamber diverted flow into the lagoons during a Saskpower outage for storage and treatment at a later date.

Oct 14-31 - Flow was capped and equalized with the lagoon storage to reduce the overall loading on the treatment plant and assist in meeting the total nitrogen permit for the month.

**WSA Notes:**

Oct 23 - CBOD result qualified.

# Creek Monthly Report to Water Security Agency

Tuesday, October 18, 2022

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)	11.6	7.23	6.39	12.1	11.9	11.6
pH (Field Test for Creek Samples)	5.67	7.34	6.53	7.51	7.44	7.26
Temperature (Field Test)	1.2	17.2	8.5	5.1	6.7	6.6
Total Suspended Solids	25.6	6.6	7.4	7.8	19.4	13.0
Carbonaceous Biochemical Oxygen Demand	5.7	2.8	<2.0	<2.0	2.4	<2.0
Total Phosphorus	0.20	0.30	0.30	0.13	0.10	0.12
Total Kjeldahl Nitrogen	1.2	2.0	2.4	2.7	0.8	2.0
Ammonia Nitrogen	<0.30	<0.30	0.84	1.28	<0.30	0.72
Nitrate Nitrogen*	<0.01	5.2	4.8	0.02	0.01	2.7
Total Nitrogen	1.3	7.0	7.2	8.2	0.9	4.8
Phenol Alkalinity	5	0	0	0	5	0
Total Alkalinity	188	141	152	167	170	173
Carbonate	6	0	0	0	5	0
Bicarbonate	218	172	185	204	205	210
Chloride (Field Test)	71.7	204	181	192	20.6	117
Total Coliform	649	40	8,660	1,550	225	1,300
<i>E. coli</i>	155	<1	178	210	30	25
Enterococci	289	1	48	25	37	26
Total Hardness*	304	294	309	357	208	297
Calcium*	64	65	68	79	42	63
Magnesium*	35	32	34	39	25	34
Potassium*	10	19	16	18	5.8	12
Sodium*	77	159	147	163	55	116
Sulfate*	180	210	230	280	120	210
Total Dissolved Solids*		823				
Conductivity at 25°C*		1370				
Phenolics*		0.010				
Mercury*		<0.000001				
Aluminum*		0.089				
Antimony*		0.0010				
Arsenic*		0.0008				
Barium*		0.020				
Beryllium*		<0.0001				
Boron*		0.25				
Cadmium*		0.00001				
Chromium*		<0.0005				
Cobalt*		0.0003				
Copper*		0.028				
Iron*		0.071				
Lead*		0.0012				
Manganese*		0.17				
Molybdenum*		0.012				
Nickel*		0.0020				
Selenium*		0.0020				
Silver*		<0.00005				
Strontium*		0.38				
Thallium*		<0.0002				
Uranium*		0.0002				
Vanadium*		0.0004				
Zinc*		0.044				

**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).

**Primary Influent BOD Results (mg/L)**

Oct 4 - 242; Oct 6 - 236; Oct 11 - 224; Oct 13 - 239; Oct 18 - 210; Oct 20 - 229; Oct 25 - 206; Oct 26 - 243