



February 15, 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: **January 2023**

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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 January 2023.

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

January 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	60.55				7.32	15.0	227	0.56	7.37	12.4	3.5	< 0.30	< 0.030	3.1	10.1
02	63.05	33	3	2	7.10	15.1	228	0.54	7.27	12.6	3.3	< 0.30	< 0.030	3.3	10.3
03	64.21	55	4		7.38	15.1	240	1.24	7.25	10.9	2.9	< 0.30	< 0.030	2.8	8.5
04	63.62	143	4		7.09	15.0	247	0.38	7.28	7.1	3.0	< 0.30	< 0.030	2.6	8.6
05	62.00	66	6		7.40	14.9	238	0.42	7.18	9.0	2.8	< 0.30	< 0.030	2.7	9.7
06	62.06	3,466	41		7.13	14.3		0.63		14.4		0.88		4.1	11.1
07	62.84				6.55	14.6		0.42		8.4		< 0.30		2.8	10.5
08	65.05				7.70	14.7	214	0.51	7.53	9.7	4.9	2.13	< 0.030	4.9	11.5
09	63.87	158	5		7.46	15.0	230	0.46	7.39	8.8	2.2	< 0.30	< 0.030	2.8	10.4
10	62.32	65	1		8.01	14.9	234	0.50	7.35	10.0	3.3	< 0.30	< 0.030	2.8	10.4
11	63.00	39	5	11	7.43	15.0	224	0.56	7.19	10.6	2.9	< 0.30	< 0.030	3.1	12.7
12	58.05	78	7		8.35	14.3	225	0.57	7.28	12.8	3.7	0.50	< 0.030	3.8	11.8
13	61.86	22	2		7.56	14.4		0.46		8.8		< 0.30		2.8	11.3
14	62.74				7.29	14.7		0.45		10.8		< 0.30		2.8	10.0
15	64.68					14.9	220	0.55	7.36	11.0	4.1	0.51	< 0.030	3.6	10.7
16	64.31	36	4		6.36	15.1	228	0.57	7.22	12.9	4.8	0.43	< 0.030	3.7	9.6
17	61.09	205	5	6	5.95	14.7	233	0.55	7.24	13.2	3.3	0.50	< 0.030	3.2	10.3
18	60.84	23	2		6.25	14.2	240	0.53	7.28	12.0	4.0	1.17	< 0.030	4.5	12.9
19	58.66	141	4		7.28	14.3	241	0.49	7.22	8.4	3.3	0.83	< 0.030	4.1	12.4
20	60.38	140	2		7.53	14.4		0.46		8.2		< 0.30		3.0	11.6
21	62.57					14.4		0.46		8.2		< 0.30		3.1	10.5
22	63.54					14.2	235	0.51	7.40	10.5	3.8	1.16	< 0.030	4.2	10.3
23	62.18	13	< 1	8	7.16	14.3	233	0.51	7.34	10.2	2.8	0.40	< 0.030	2.8	9.6
24	61.59	29	2		6.66	14.5	234	0.53	7.52	11.4	2.6	< 0.30	< 0.030	2.6	9.8
25	62.08	37	4		7.37	14.5	228	0.30	7.23	5.6	2.0	0.40	< 0.030	2.5	9.9
26	63.56	68	5	10	7.35	14.1	225	0.82	7.41	17.8	4.8	0.64	< 0.030	4.2	11.1
27	62.44	16	1		8.45	13.9		0.56		12.2		0.43		3.4	11.4
28	61.45				8.19	13.3		0.56		12.2		0.57		3.5	11.5
29	63.47					13.1	187	0.57	7.33	12.8	4.1	1.05	< 0.030	3.8	10.9
30	63.18	133	3	3	8.71	13.3	205	0.74	7.25	15.4	4.2	0.75	< 0.030	3.8	10.9
31	62.00	93	5		7.83	13.6	212	0.63	7.33	12.8	4.0	0.56	< 0.030	4.0	11.8
Sum	1933.24														
Avg	62.36				7.37	14.4	227	0.55	7.31	11	3	1	< 0.030	3.4	11
Min	58.05				5.95	13.1	187	0.30	7.18	5.6	2.0	< 0.30	< 0.030	2.5	8.5
Max	65.05		41		8.71	15.1	247	1.24	7.53	17.8	4.9	2.13	< 0.030	4.9	12.9
Permit Limits			≤1,000					≤0.75		≤15	≤15	≤10	≤1.24		≤14

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

**Plant Notes:**

Jan 12 - At approximately 10 a.m. there was a SaskPower outage. During a power outage, the Infrastructure Diversion chamber at Condie Road is to direct all flow to the lagoons. This did not happen automatically. Treated, but undisinfected final effluent entered Wascana creek for approximately 15 minutes as a result. This was reported to the Water Security Agency.

**WSA Notes:**

Jan 11 - CBOD result qualified. Blank exceeded acceptance criteria.  
 Jan 29 - CBOD result qualified. Quality control standard exceeded acceptance criteria.

## Creek Monthly Report to Water Security Agency

Wednesday, January 11, 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)	5.43	7.43	8.13	6.85	8.94	6.59
pH (Field Test for Creek Samples)	6.94	7.19	6.45	7.11	6.93	7.09
Temperature (Field Test)	1.1	15.0	5.9	1.5	1.6	0.9
Total Suspended Solids	384	10.6	26.2	11.3	13.3	29.0
Carbonaceous Biochemical Oxygen Demand	4.4	2.9	<2.0	<2.0	<2.0	3.3
Total Phosphorus	1.92	0.56	0.38	0.25	0.06	0.18
Total Kjeldahl Nitrogen	5.6	3.1	2.9	2.0	0.8	1.9
Ammonia Nitrogen	3.48	<0.30	0.50	0.49	<0.30	0.39
Nitrate Nitrogen	0.22	9.51	9.30	8.35	<0.13	3.38
Total Nitrogen	5.8	12.7	12.3	10.4	0.9	5.3
Phenol Alkalinity	0	0	0	0	0	0
Total Alkalinity	271	164	174	180	266	207
Carbonate	0	0	0	0	0	0
Bicarbonate	330	200	212	219	325	252
Chloride (Field Test)	159	224	227	209	33.0	127
Total Coliform	32,600	39	3,650	387	172	308
<i>E. coli</i>	19,200	5	1,370	71	7	44
Enterococci	2,910	11	548	43	6	16
Total Hardness*	361	355	372	352	341	344
Calcium*	79	83	85	80	74	77
Magnesium*	40	36	39	37	38	37
Potassium*	13	19	18	18	7.7	14
Sodium*	137	185	192	178	93	143
Sulfate*	180	270	270	250	210	230
Total Dissolved Solids*		985				
Conductivity at 25°C*		1600				
Phenolics*		0.010				
Mercury*		0.000003				
Aluminum*		0.036				
Antimony*		0.0009				
Arsenic*		0.0011				
Barium*		0.051				
Beryllium*		<0.0001				
Boron*		0.27				
Cadmium*		0.00001				
Chromium*		0.0005				
Cobalt*		0.0004				
Copper*		0.026				
Iron*		0.067				
Lead*		0.0012				
Manganese*		0.22				
Molybdenum*		0.018				
Nickel*		0.0022				
Selenium*		0.0056				
Silver*		<0.00005				
Strontium*		0.48				
Thallium*		<0.0002				
Uranium*		0.0003				
Vanadium*		0.0002				
Zinc*		0.053				

**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).

\*\*Sampled on 17 Jan 2023.

CBOD results qualified for Riske's crossing, Sidmar crossing, and Qu'Appelle above Wascana. Blank exceeded acceptance criteria.

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

Jan 3 - 230; Jan 5 - 240; Jan 10 - 242; Jan 12 - 240; Jan 17 - 244; Jan 19 - 250; Jan 24 - 240; Jan 26 - 305; Jan 31 - 237