January 30, 2025

M. Jean-François Durocher
Water Inspector – Provincial Officer
Ministry of the Environment, Conservation and Parks

Subject:

2024 - Performance Report for the Fournier Wastewater Facility

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M. Durocher,

The following document includes the 2024 Performance Report for the Fournier Wastewater Facility, covering the period from January 1st to December 31st, 2024, inclusive.

In this Performance Report a summary of the Fournier Wastewater Facility will be discussed.

- Volumes and daily flow rates of wastewater
- Results of raw sewage and final effluent parameters
- Summary of operation and environmental challenges
- Maintenance and calibration of monitoring equipment.

This document follows condition 7 of the Certificate of Approval No. 1128-5S6KLC approved on December 23rdrd, 2003.

Sincerely,

Sebastien Cadieux

(Prepared by)
Sebastien Cadieux,
Senior Water & Wastewater Operator/Compliance Officer

Nicholas Pigeon

(Reviewed & Approved)
Nicholas Pigeon,
Director of Water & Wastewater

2024 Annual Performance Report for the Fournier Wastewater Facility

a) A summary and interpretation of all raw sewage and effluent monitoring data and a comparison to effluent objectives outlined in Condition 5, including an overview of the success and adequacy of the works.

The volumes of the final effluent are estimated using the run times and theoretical pump rates. The average daily flow (ADF) of wastewater entering the Fournier Wastewater Facility was 67.9 m3/Day from January to December 2024.

The average treated effluent daily flow was 95.1 m3/day.

The Fournier Wastewater Treatment Facility did not encounter any major challenges during 2024 and satisfied the effluent limits for Carbonaceous BOD_5 and Total Suspended Solids.

Raw sewage analyses were performed quarterly for the Fournier Wastewater Facility.

1) Total Nitrogen (Kjeldahl) and ammonia

The treated final Effluent concentration of Ammonia averaged 5.91 mg/L in 2024.

2) Total Phosphorus

The treated final effluent concentration of Total Phosphorus averaged 3.70 mg/L in 2024. There is no effluent limit for total phosphorus at the Fournier Wastewater Treatment Facility.

3) Carbonaceous Biological Oxygen Demand (CBOD5)

The treated final effluent concentration of CBOD5 average 1.67 mg/L in 2024, which is below the effluent objective limit of 10 mg/L.

4) Suspended Solids

The average treated final effluent concentration for Total Suspended Solids was 9.42 mg/l in 2024, which is below the effluent objective limit of 10 mg/L.

5) E. Coli

The average treated final effluent concentration for E. Coli was 43767 CFU/100mL in 2024.

b) A summary and interpretation of all groundwater monitoring data and comparison to the established baseline background groundwater quality.

Groundwater monitoring is done according to Section 4.3 Tables 3 to 6 of Certificate of Approval No. 1128-5S6KLC. The Nation municipality, Environmental department is in charge for the sampling of the groundwater monitoring wells and the Engineering Firm EXP is following the program with a report that is submitted to the MECP.

c) A delineation of the septic effluent impacted groundwater plume and the documentation of the movement and anticipated arrival of the plume at monitoring wells MW99-4 and MW99-5

Groundwater monitoring is done according to Section 4.3 Tables 3 to 6 of Certificate of Approval No. 1128-5S6KLC. See EXP Engineering report.

d) A tabulation of the daily volumes of effluent disposed through the subsurface system during the reporting period.

The volumes of the final Effluent are estimated using the run times and theoretical pump rates of the Effluent pumps. See the Fournier Wastewater Facility – Analytical Survey 2024, Table at the end of this report.

e) A summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the works.

In addition to regular preventative maintenance, the following operational duties were performed.

- ***May***
  -Clean and flush Sanitary Collection system with Nation's Personnel and hydrovac
  - Cleaning of SPS #1 and # 2 with the Nation's Personnel and hydrovac.

- ***June,***
  - Annual Maintenance at Fournier Field
  - Removed 44 000 gallons of sludge with the Nation hydrovac

- ***November,***
  - Cleaning of SPS #1 and # 2 with the Nation's Personnel and hydrovac.

f) A description of any operating challenges encountered, and corrective actions taken.

There were no operating challenges encountered during the 2024 period.

Appendix I: FOURNIER WASTEWATER FACILITY - ANALYTICAL SURVEY – 2024.

APPENDIX I

Waste Water - Analytical survey

Fournier

2024		***Limit Objectives***	***Jan***	***Feb***	***Mar***	***Apr***	***May***	***Jun***	***Jul***	***Aug***	***Sep***	***Oct***	***Nov***	***Dec***	***total***
RAW SEWAGE															
Total Flow	m^3		2172	1907	1354	2533.3	2264.5	2127.6	2544.7	2743.7	1857.5	1711.3	1694.2	1950.0	24859.8
Daily Ave. Flow	m^3/d	97.6	70.1	65.8	43.7	84.4	73.0	70.9	82.1	88.5	61.9	55.2	56.5	62.9	67.9
Max Flow	m^3/d		89.4	79.8	104.5	94.4	83.4	84.5	93.1	110.0	81.6	61.6	58.7	73.3	110.0
Min. Flow	m^3/d		66.5	59.8	67.1	67.1	57.4	65.8	60.7	60.7	51.4	50.4	55.4	52.9	50.4
$CBOD_5$	*mg/l*			140			46			77			191		114
TSS	*mg/l*			108			104			165			1480		464
TKN	*mg/l*			90.9			36.2			54.7			264		111
Ptot	*mg/l*			8.99			4.11			6.71			16.3		9.0
EFFLUENT															
Total Flow	m^3		635.7	2857.9	3621.4	2946.8	3920.4	3458.1	3638.8	3593.0	2476.9	1810.9	2441.4	3281.3	34682.8
Daily Ave. Flow	m^3/d		20.5	102.1	116.8	98.2	126.5	115.3	117.4	115.9	82.6	58.4	81.4	105.8	95.1
CBOD5	mg/L	10.0	5	0	5	4	3	0	0	0	0	0	3	0	1.67
TSS	mg/L	10.0	7	4	18	6	7	0	11	6	0	30	11	13	9.42
Alkalinity	mg/L		236	304	309	286	309	261	234	258	231	211	189	188	251.33
Nitrite	mg/L		0.07	0.1	0.84	0.4	0.4	0	0.08	0	0.17	0	0	0	0.17
Nitrate	mg/L		17.2	3.24	3.85	7.44	4.58	14.6	15.9	19.9	18.4	23	29.2	31.4	15.73
Total Ammonia	mg/L		7.34	10.2	16	12.3	11.1	1.41	1	0.63	1.67	1.22	5.75	2.3	5.91
TKN	mg/L		8.9	12.3	20.5	17.1	13.1	2.6	2.3	1.9	2.8	2.4	8.9	4	8.07
Total Phosphorus	mg/L		3.33	3.68	4.05	3.55	3.34	2.62	2.38	2.91	3.77	4.95	5.26	4.61	3.70
E Coli.	cfu/100mL		80000	62000	88000	59000	145000	10000	7000	7000	300	2100	64000	800	43767