January 30, 2026

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

Subject:

2025 - Performance Report for the St-Albert Wastewater Facility

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Dear Mr. Durocher,

Please find attached the **2025 Annual Performance Report for the St-Albert Wastewater Facility**, submitted in accordance with **Condition 10 of the Amended Environmental Compliance Approval (ECA) No. 0098-A6XKFP**, approved February 19, 2016.

This report summarizes the operation and performance of the St-Albert Wastewater Facility for the 2025 reporting year and includes, but is not limited to, the following:

- Volumes and daily flow rates of wastewater;
- Analytical results for raw sewage and treated effluent;
- A summary of operational performance and environmental considerations;
- Maintenance, calibration, and monitoring activities.

Should you require any additional information or clarification, please do not hesitate to contact the undersigned.

Respectfully submitted,

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

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

2025 Annual Performance Report
St-Albert Wastewater Facility

a) Summary and Interpretation of Monitoring Data and Comparison to Effluent Limits (Condition 6)

The **average daily flow (ADF)** of wastewater entering the St-Albert Wastewater Facility during 2025 was **362 m³/day**, representing approximately **50%** of the rated average daily design capacity of **720 m³/day**. The maximum daily flow recorded was **732 m³/day** in April, while the minimum daily flow was **179 m³/day** in October.

During the Spring discharge period, a total of **209,291 m³** of treated effluent was discharged over **41 days**.

Overall, the wastewater treatment works operated effectively throughout 2025, with no major operational deficiencies identified.

Monitoring and Analytical Parameters

1.Total Kjeldahl Nitrogen (TKN)
Raw sewage TKN concentrations ranged from **18.2 mg/L** (May) to **129 mg/L** (September), with an annual average concentration of **45.6 mg/L**.

2. Total Ammonia
The average treated effluent concentration of total ammonia was **0.66 mg/L**.

The total ammonia loading during the 2025 discharge period was **137 kg**, which is below the ECA loading limit of **2,628 kg/month**.

3. Total Phosphorus
Raw sewage total phosphorus concentrations ranged from **2.31 mg/L** (May) to **12.6 mg/L** (September), with an annual average concentration of **4.8 mg/L**.

The treated effluent total phosphorus concentration averaged **0.32 mg/L**, which is below the effluent limit **of 1.0 mg/L**.

The total phosphorus loading during the discharge period was **67 kg**, below the ECA loading limit of **131 kg/month**.

4. Biochemical Oxygen Demand (BOD_5)
Raw sewage BOD_5 concentrations ranged from **39 mg/L** (July) to **202 mg/L** (November), with an annual average of **122.8 mg/L**.

5. Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)
The average treated effluent $CBOD_5$ concentration was **3.9 mg/L**, well below the effluent limit of **30 mg/L**.

The total $CBOD_5$ loading during the 2025 discharge period was **811 kg**, below the ECA loading limit of **3,942 kg/month**.

6. Total Suspended Solids (TSS)
Raw sewage TSS concentrations ranged from **20 mg/L** (July) to **240 mg/L** (November), with an annual average of **113.8 mg/L**.

The total TSS loading during the discharge period was **2,721 kg**, below the ECA loading limit of **3,942 kg/month**.

7. Hydrogen Sulphide (H_2S)
The treated effluent concentration of hydrogen sulphide averaged **0 mg/L** during discharge.

The total H_2S loading was **0 kg**, which is below the applicable ECA limits of **42 kg** (March) and **117 kg** (April).

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b) Operating Problems and Corrective Actions

No operating problems or non-compliance events were encountered during the 2025 reporting period. Accordingly, no corrective actions were required.

c) Summary of Maintenance Activities

In addition to routine preventative maintenance, the following activities were completed:

- **March:** Cleaning of the sanitary pump station with Nation personnel.
- **May:** Cleaning and flushing of the sanitary collection system using a hydrovac truck; completion of annual maintenance activities.
- **September:** Cleaning of the sanitary pump station and siphon with Nation personnel.

d) Effluent Quality Assurance and Control Measures

Routine monitoring and recording of raw sewage and treated effluent were conducted during all discharge events in 2025. Analytical results are provided in Appendix I – Analytical Survey 2025.

e) A summary of the calibration and the maintenance carried out on all effluent monitoring equipment.

- ***October,***
  - Annual Calibration of the Flow meters.

f) Efforts Made to Meet Effluent Limits (Condition 6)

Effluent limits and corresponding waste loadings are summarized, with detailed analytical results provided in Appendix II.

To ensure continued compliance:

- A flow-based dosage of aluminum sulfate (282 mg/L) was applied at the lagoon.
- Prior to discharge, the aeration blower for Cell “D” was activated to assist with ice thawing and off-gassing of sulphide, thereby improving effluent quality.

All effluent limits specified under Condition 6 of the ECA were met during the reporting period.

g) Sludge Generation, Anticipated Volumes, and Disposal Locations

No hauled waste was received at the St-Albert lagoon during 2025.

Estimated sludge generation for the reporting period is summarized below:

Parameters	*Alum. (mg/L)*	*TSS (mg/L)*	*Flow (m3)*	*Total KG*	*Net Sludge*
2025	282	113.8	132293		Tons/yr
KG	9700	15059		24759	16

These estimates were calculated using average monthly analytical results and total influent volume (see **Appendix II**). Aluminum sulfate-related solids were estimated as aluminum hydroxide using a standard conversion factor of **26%** to calculate the sludge. A conservative net accumulation factor of **65%** was applied to the total sludge to account for biological degradation within the lagoon system.

An estimated **16 tonnes** of sludge were generated in 2025.

Anticipated sludge volumes for the next reporting period are expected to remain similar, subject to influent volumes.

h) Complaints

No complaints were received during the 2025 reporting period.

i) By-Passes, Spills, or Abnormal Discharges

No by-pass, spill, or abnormal discharge events occurred during 2025.

j) Notices of Modification – Schedule "A", Section 1

No Notices of Modification were submitted during the reporting period.

k) Modifications – Schedule "A", Section 3

No modifications were completed during 2025.

l) Other Information Required by the Water Supervisor

None.

Appendix I: Analytical Survey

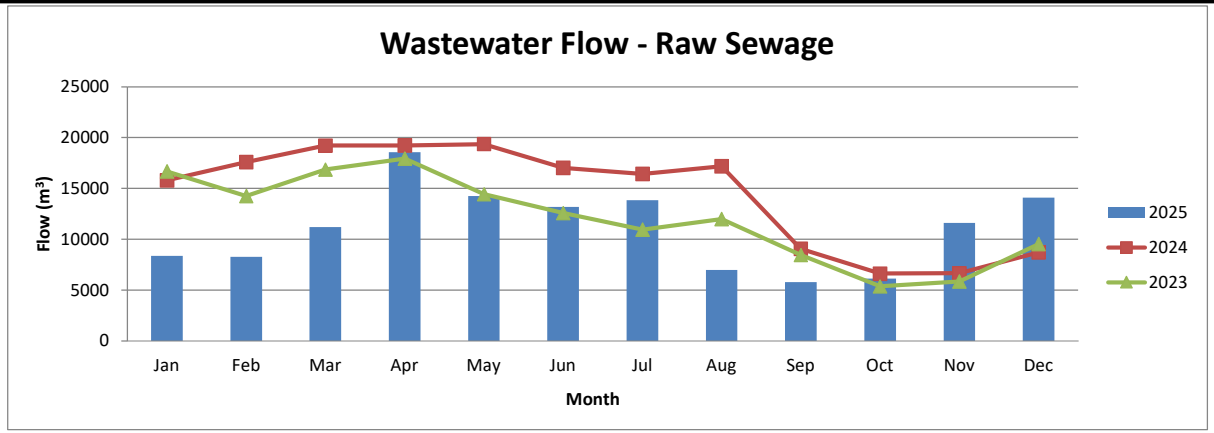
Appendix II: Annual discharge Effluent concentration and loadings

APPENDIX I

Waste Water - Analytical survey

St-Albert

2025		*Limit*	*Limit*	*Jan*	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*	*Total*
RAW SEWAGE		*C of A*	*Federal*													
Total Flow	m^3			8341	8294	11209	18556	14252	13184	13839	6997	5791	6135	11598	14097	132293
Daily Ave. Flow	m^3/d	720		269	296	362	619	460	439	446	226	193	198	387	455	362
Max Flow	m^3/d			381	411	438	732	507	474	513	312	201	266	540	469	732
Min Flow	m^3/d			220	196	219	507	428	417	312	194	183	179	259	410	179
BOD_5	*mg/l*			76	87	125	93	119	52	39	157	199	172	202	153	122.8
TSS	*mg/l*			50	86	60	125	145	104	20	86	230	115	240	105	113.8
pH	*pH units*			7.64	7.91	7.69	7.58	2.31	7.99	8.04	7.56	7.11	8.13	8.2	8.01	7.3
TKN	*mg/l*			35.3	39.6	33.8	19.2	18.2	23.7	22.5	35.1	129	95.1	70.3	25.9	45.6
Ptot	*mg/l*			3.17	3.47	3.1	2.52	2.31	3.45	3.01	3.36	12.6	8.97	7.6	4.4	4.8
EFFLUENT																
Total Flow	m^3					89291	120000									209291
Daily Ave. Flow	m^3/d					8929	4000									6464.6
$CBOD_5$	*mg/l*	30.0				3.8	4									3.90
TSS	*mg/l*	30.0				7.75	18.25									13.00
Ptot	*mg/l*	1.0				0.38	0.26									0.32
H2S	*mg/l*	March (0.32) April (0.89)				0.01	0									0.01
Unionized Ammonia	*mg/l*					0.02	0.08									0.05
Ammonia	*mg/l*	20.0				0.38	0.93									0.66



APPENDIX II

THE NATION - ST-ALBERT LAGOON DISCHARGE - 2025

Effluent Samples	Date	CBOD5 mg/l	TSS mg/l	TP mg/l	T Ammonia mg/l	H2S
Pre	*3/05/25*	*0.00*	*8.00*	*0.91*	*0.43*	*0*
Opening	*3/21/25*	*0.00*	*0.00*	*0.34*	*0.05*	*0*
1	*3/24/25*	*4.00*	*8.00*	*0.37*	*0.10*	*0.02*
2	*3/25/25*	*4.00*	*10.00*	*0.38*	*0.32*	*0*
3	*3/28/25*	*7.00*	*13.00*	*0.42*	*1.06*	*0*
4	*4/01/25*	*7.00*	*18.00*	*0.36*	*1.93*	*0*
5	*4/08/25*	*4.00*	*14.00*	*0.28*	*1.06*	*0*
6	*4/15/25*	*5.00*	*22.00*	*0.25*	*0.64*	*0*
Closing	*4/30/25*	*0.00*	*19.00*	*0.16*	*0.07*	*0*
Discharge average		**3.9**	**13.00**	**0.32**	**0.65**	**0.00**
March		**3.8**	**7.75**	**0.38**	**0.38**	**0.01**
April		**4.00**	**18.25**	**0.26**	**0.93**	**0.00**
Loading						
Volume (m3)	***March***	**89291**	**89291**	**89291**	**89291**	**89291**
Load (Kg)		**346**	**1161**	**29**	**58**	**0**
Volume (m3)	***April***	**120000**	**120000**	**120000**	**120000**	**120000**
Load (Kg)		**465**	**1560**	**38**	**78**	**0**
TOTAL		**811**	**2721**	**67**	**137**	**0**
Limits						
Average (mg/l)		*30*	*30*	*1*	*20*	*(0.32mg/L in March) (0.89mg/L in April)*
March load (Kg/Month)		3942	3942	131	2628	42
April load (Kg/Month)		3942	3942	131	2628	117

UP STREAM Samples	Date	CDBO5	TSS	TP	T Ammonia	pH
		mg/l	mg/l	mg/l	mg/l	
1 (open)	*3/21/25*	0	35	0.18	0.06	8.07
2 (close)	*4/30/25*	0	37	0.11	0.09	8.28
Average		0	36	0.145	0.075	8.175

DOWN STREAM Samples	Date	CDBO5	TSS	TP	T Ammonia	pH
		mg/l	mg/l	mg/l	mg/l	
1 (open)	*3/21/25*	0	38	0.17	0.06	8.07
2 (close)	*4/30/25*	0	37	0.09	0.09	8.28
Average		0	37.5	0.13	0.075	8.175