

**The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
July 2022 Monthly Operations Report**

INTRODUCTION

In accordance with the Agreement between the Ontario Clean Water Agency (Operating Authority) and the Town of Fort Frances, the Fort Frances Sewage Treatment Plant is required to prepare a monthly report. This document covers the reporting month of July 2022; the facility performance report summarizes important information regarding the quality of the effluent, wastewater, analytical test results, maintenance operations, and relevant activities of the WWTP.

DESCRIPTION OF WORKS

Capacity of Works	9000 m ³ /day (average flow)
Service Area	Town of Fort Frances and Couchiching Reserve
Service Population	9000
Effluent Receiver	Rainy River
Major Process	Secondary treatment facility complete with a phosphorus removal system; ultra violet disinfection; aerobic sludge stabilization and dewatering

The Fort Frances Sewage Treatment Plant operates under *Environmental Compliance Approval Number 6786-A44PWG*. The ECA outlines the terms and conditions, and the report captures these terms and conditions in the following sections.

LABORATORY

ALS Laboratory Group – Thunder Bay is contracted to conduct the required analytical tests of the influent (raw) and effluent samples; weekly requirement.

JULY 2022 EFFLUENT QUALITY

<i>Parameters</i>	<i>Monthly Actual Concentration mg/L</i>	<i>Compliance Criteria Concentration mg/L</i>	<i>Performance Objective Concentration mg/L</i>	<i>Monthly Actual Loading, kg/d</i>	<i>Compliance Criteria Loading kg/d</i>	<i>Performance Objective Loading kg/d</i>
CBOD ₅	2.0 mg/L	25 mg/L	15 mg/L	21.8 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	3.9 mg/L	25 mg/L	15 mg/L	40.6 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.20 mg/L	1.0 mg/L	0.9 mg/L	2.14 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	6.82 mg/L 4.76 mg/L					
Total Cl ₂ Residual		<0.01 mg/L (when in use)				
E-Coli		31.5 count/100 ml (geometric mean)		200 count/100ml (geometric mean)		E-coli not to exceed 150 organisms/100ml (monthly geometric mean density)
pH				pH range 7.3 to 7.7; average pH was 7.5		
Temperature degrees C				Temperatures ranged from 12.5 to 15.0 C; average temperature of effluent was 13.5 C		

Compliance criteria are mandatory requirements of the ECA and performance objectives are a goal to be achieved using best reasonable efforts.

WASTEWATER LIQUID PROCESS

The average daily flow for July was 10496.0 m³/day. This represents 187% of the design average flow. Total treated flow for the month was 325376 m³. There was one Manhole 8 overflow event on July 12 that totaled 582.9 m³. The Fort Frances WWTP met all effluent compliance criteria for the parameters listed above and additionally was well within the recommended more stringent monthly performance objectives as outlined in the Environmental Compliance Approval.

MAINTENANCE

The operators performed the routine operations and maintenance at the treatment plant and pumping stations. The activities are highlighted as follows and a summary will be included:

Treatment Plant:

- Alternated lead/lag pumps
- Adjusted fluidizing water to head cell and grit snail as needed
- Greased all blowers
- Regular cleaning of head works EW basket strainer
- Greased Grit Snail and lubricated drive chain. Hosed Snail
- Monthly inspection of spiral screen access hatch, removed wrapped debris
- Weekly manifold wash and restrictor cleaning on the Fournier press
- Inspected teacup
- Greased flocculator seal bearing
- Replaced a broken shear pin longitudinal collector number 2
- Flushed digester level sensor
- Changed oil in blowers 3 and 5

Pump Stations:

- Ran gensets
- Changed seal water strainers
- Assisted the TOFF crew to lift the Atlas pump suction piping

PROCESS AND OPTIMIZATION ISSUES

Blower 3 is providing air to the two digesters. Blowers 1 and 2 are providing air to their respective aeration cells. Blower 4 has been sent for repair and a new replacement has been ordered as well.

SLUDGE SUMMARY

Dennis Robinson Limited hauled a calculated total of 79.6 m³ (7 bins) of thickened digested sludge to the Town of Fort Frances landfill site. The hauled sludge averaged 21.5 % TS for the month but slump test results from the landfill site have not been provided. The Fournier press ran for 83.8 hours in the past month.

COMPLAINTS

There were no complaints during the report period.

BYPASS/OVERFLOW REPORT(S)

There was a manhole 8 overflow event on July 12 and a UV bypass event on July 12-13.

COMMENTS

Plant power consumption for the month was 554 (x 180 multiplier) kWh.

The Fournier press has been operated 761.6 hours in 2022.

There was 1 Manhole 8 overflow event on July 12 that totaled 582.9 m³. There was also 1 UV bypass event that began on July 12 and ended on July 13.

July 1, 2 and 3 daily peak flow and total flow numbers were estimates.

The new plant generator and walkways were set on the cement pad July 7 and then fastened in place.

REPORTS

ALS – Environmental Analytical Reports (on-file at plant)

Fort Frances WPCP Equipment Run Time Report (on-file at plant)

Bypass Report (on-file at plant as per occurrence)

Incident Report (on-file at plant as per occurrence)