

**The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
August 2019 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 August 2019; 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.

AUGUST 2019 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	12.0 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	3.6 mg/L	25 mg/L	15 mg/L	22.8 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.16 mg/L	1.0 mg/L	0.9 mg/L	0.99 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	7.86 mg/L 6.09 mg/L					
Total Cl ₂ Residual		<0.01 mg/L (when in use)				
E-Coli		13.2 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 6.6 to 6.8; average pH was 6.7		
Temperature degrees C				Temperatures ranged from 15.5 to 16.5 C; average temperature of effluent was 15.9 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 August was 6347.5 m³/day. This represents 71% of the design average flow. Total treated flow for the month was 196772 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 objective levels as outlined in the Environmental Compliance Approval.

**The Town of Fort Frances accepted an additional 246 m³ of sewage from the New Gold mine site into the collection system in July, 191 m³ in August. Lab analyses have not been provided.

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
- Monthly inspection of spiral screen access hatch, removed wrapped debris
- Weekly manifold wash on the Fournier press
- Drained and inspected teacup, hosed snail
- Cleaned polymer injection check valve
- Wiped DO probes
- Installed spare DO probe cell 1
- Installed new EW pump
- Changed oil blowers 3 and 4
- Installed repaired Netzsch polymer pump so that the spare with leaking shaft seal could be shipped back to supplier

Pump Stations:

- Ran gensets
- Changed seal water strainers

PROCESS AND OPTIMIZATION ISSUES

The new progressive cavity polymer pump shaft seal developed a leak so it was shipped back to the manufacturer. This pump was returned with a new seal installed and was immediately placed into service as the spare pump had developed a shaft seal leak in the interim. We will request that the manufacturer replace this seal as well.

SLUDGE SUMMARY

Dennis Robinson Limited hauled a calculated total of 136.0 m³ (14 bins) of thickened digested sludge to the Town of Fort Frances landfill site. The hauled sludge averaged 18.0 % TS for the month but slump test results from the landfill have not been provided. The Fournier press ran for 127 hours in July.

COMPLAINTS

There were no complaints during the report period.

BYPASS/OVERFLOW REPORT(S)

There were no bypass events in the reporting period.

COMMENTS

Plant power consumption for the month was 492 (x 180 multiplier) kWh.

The Fournier press has been operated 979 hours in 2019.

Verifications of effluent out fall measuring device were completed.

The installation of the fine bubble aeration system by Honeywell and EDI was completed. Some minor adjustments to controls and programming will be made in the near future but the system is running quite nicely.

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)