

**The Corporation of the Town of Fort Frances  
Wastewater Treatment Plant  
(Sewage Plant)  
May 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 May 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 <sup>3</sup> /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.

## MAY 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 <sub>5</sub>	2.6 mg/L	25 mg/L	15 mg/L	20.8 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	5.0 mg/L	25 mg/L	15 mg/L	41.8 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.11 mg/L	1.0 mg/L	0.9 mg/L	0.91 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	9.52 mg/L 5.26 mg/L					
Total Cl <sub>2</sub> Residual		<0.01 mg/L (when in use)				
E-Coli		40.5 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 6.7 to 7.1; average pH was 6.9		
Temperature degrees C				Temperatures ranged from 7.0 to 9.0 C; average temperature of effluent was 7.9 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 May was 8244.3 m<sup>3</sup>/day. This represents 92% of the design average flow. Total treated flow for the month was 255574 m<sup>3</sup>.

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 231.9 m<sup>3</sup> of sewage from the New Gold mine site into the collection system. 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
- Replaced belts on blower 4
- Wiped DO probes
- Pumped out the digester valve chamber sump
- Replaced shear pin long collector 1 drive
- Repaired the hoist in the sludge/polymer area

### **Pump Stations:**

- Ran gensets
- Changed seal water strainers

## **PROCESS AND OPTIMIZATION ISSUES**

The new progressive cavity polymer pump and VFD have been installed and commissioned by Fournier. We are using the new pump and we are now ordering polymer in totes.

## **SLUDGE SUMMARY**

Dennis Robinson Limited hauled a calculated total of 135 m<sup>3</sup> (14 bins) of thickened digested sludge to the Town of Fort Frances landfill site. The hauled sludge averaged 19.6 % TS for the month but slump test results from the landfill have not been provided. The new polymer pump is in use and we are ordering polymer in totes.

The Fournier press ran for 141.6 hours in May.

## **COMPLAINTS**

There were no complaints during the report period.

### **BYPASS/OVERFLOW REPORT(S)**

There were no bypass events during the month.

### **COMMENTS**

Plant power consumption for the month was 547 (x 180 multiplier) kWh.  
The Fournier press has been operated for 642.6 hours in 2019.

### **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)