

**The Corporation of the Town of Fort Frances  
Wastewater Treatment Plant  
(Sewage Plant)  
August 2018 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 2018; 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.

## AUGUST 2018 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>	2.0 mg/L	25 mg/L	15 mg/L	10.6 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	3.0 mg/L	25 mg/L	15 mg/L	15.6 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.16 mg/L	1.0 mg/L	0.9 mg/L	0.81 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	9.06 mg/L 7.38 mg/L					
Total Cl <sub>2</sub> Residual		<0.01 mg/L (when in use)				
E-Coli		16.4 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 8.0; average pH was 7.8		
Temperature degrees C				Temperatures ranged from 16.5 to 18.0 C; average temperature of effluent was 17.2 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 5068.6 m<sup>3</sup>/day. This represents 56% of the design average flow. Total treated flow for the month was 157126 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 218.2 m<sup>3</sup> of sewage from the New Gold mine site into the collection system in August. Lab analyses have not been provided.

## INVENTORY

Chemical	End of Month Status	Units
Hypochlorite	1140 +/- @ 8.0% + 2 x 205 L @ 12%	Liters
Alum	18.4 +/- @ 60 %	Cubic meters
Polymer	2 x 205 L drums	Liters

## 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
- Greased Flocculator shaft
- Shear pin was replaced longitudinal drive 2
- Replaced both battery terminals on the John Deere tractor
- New belts were installed both head works exhaust fans
- Both automatic sampler fridges were defrosted
- SPI repaired Drager gas detector

### Pump Stations:

- Ran gensets
- Changed seal water strainers
- A fuel line problem on the genset at Fifth Street was identified and repaired
- Airlocked pumps at Fifth street were remedied
- Pulled and cleaned pumps 1 and 2 at Central Avenue lift station

## **PROCESS AND OPTIMIZATION ISSUES**

A Fournier press technician visited the plant August 1st and 2<sup>nd</sup> to give us some suggestions for optimization. He recommends a water heater be installed for polymer dilution water and that the sludge be tested in colder weather for SVI and filaments that could potentially impede drainage.

## **SLUDGE SUMMARY**

Asselin Storage and Transportation Limited hauled a calculated total of 58.7 m<sup>3</sup> (6 bins) of thickened digested sludge to the Town of Fort Frances landfill site. Dennis Robinson limited hauled a calculated total of 59.9 m<sup>3</sup> (6 bins) of thickened digested sludge to the Town of Fort Frances landfill site. The hauled sludge averaged 17.5 % TS for the month but slump test results from the landfill have not been provided.

## **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 660 (x 180 multiplier) kWh.

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## **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)