

**The Corporation of the Town of Fort Frances  
Wastewater Treatment Plant  
(Sewage Plant)  
March 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 March 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.

## MARCH 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>	3.1 mg/L	25 mg/L	15 mg/L	16.7 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	7.6 mg/L	25 mg/L	15 mg/L	41.4 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.16 mg/L	1.0 mg/L	0.9 mg/L	0.86 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	12.6 mg/L 3.42 mg/L					
Total Cl <sub>2</sub> Residual		<0.01 mg/L (when in use)				
E-Coli		14.1 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 6.9 to 7.5; average pH was 7.2		
Temperature degrees C				Temperatures ranged from 7.5 to 8.0 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 March was 5409.9 m<sup>3</sup>/day. This represents 60% of the design average flow. Total treated flow for the month was 167707 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 163.7 m<sup>3</sup> of sewage from the New Gold mine site into the collection system in March. Dates of discharge and lab analysis has not been provided.

## INVENTORY

Chemical	End of Month Status	Units
Hypochlorite	980 +/- @ 8.0% +3x205 L @ 12%	Liters
Alum	10.2 +/- @ 55 %	Cubic meters
Polymer	1 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
- Cleaned DO probes
- Drained and inspected teacup
- Replaced belts exhaust fans EF 01 and EF 02
- Pulled main building sump pump 2
- Replaced belts blower 4
- Greased flocculator seal bearing
- Pumped out digester sump pit

### Pump Stations:

- Ran gensets
- Changed seal water strainers
- Pulled and cleaned Pump 1 at Central Avenue lift station
- Installed rebuilt pump 2 at Central Avenue lift station
- Pulled pump 3 at Fifth Street lift station and sent out for repair

## **PROCESS AND OPTIMIZATION ISSUES**

We would like a Fournier press technician to come back to complete optimization as the polymer water booster pump has been installed and 18% TS cake has not been produced.

## **SLUDGE SUMMARY**

Asselin Storage and Transportation Limited hauled a calculated total of 95.0 m<sup>3</sup> (9 bins) of thickened digested sludge to the Town of Fort Frances landfill site. The hauled sludge averaged 17.3 % TS for the month which is under the 18% guideline and 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 or overflow events during the reporting period.

## **COMMENTS**

Plant power consumption for the month was 605 (x 180 multiplier) kWh.  
The Town has asked Associated Engineering to arrange for a Fournier press technician to come back to complete optimization as the polymer water booster pump has been installed and 18% TS cake has not been produced.

## **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)