

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

JUNE 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 ₅	3.0 mg/L	25 mg/L	15 mg/L	22.3 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	6.5 mg/L	25 mg/L	15 mg/L	46.5 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.14 mg/L	1.0 mg/L	0.9 mg/L	0.97 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	8.67 mg/L 4.94 mg/L					
Total Cl ₂ Residual		<0.01 mg/L (when in use)				
E-Coli		21.7 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 7.9; average pH was 7.6		
Temperature degrees C				Temperatures ranged from 11.0 to 14.5 C; average temperature of effluent was 12.4 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 June was 6860.6 m³/day. This represents 76% of the design average flow. Total treated flow for the month was 205818 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 231.9 m³ of sewage from the New Gold mine site into the collection system in June. Lab analyses have not been provided.

INVENTORY

Chemical	End of Month Status	Units
Hypochlorite	1150 +/- @ 8.0% + 2 x 205 L @ 12%	Liters
Alum	6.0 +/- @ 55 %	Cubic meters
Polymer	3 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
- Installed spare DO probe in cell #1
- Drained and inspected teacup
- Replaced RAS pump #1 with spare
- Replaced the motor on blower #3
- The town repaired John Deere tractor
- Shear pin was replaced longitudinal clarifier drive #2
- Replaced tubing effluent sampler
- Removed large rag ball from clarifier #2 inlet channel

Pump Stations:

- Ran gensets
- Changed seal water strainers
- Water pump was repaired on 5th Street lift station genset by Peterbilt
- Pulled and cleaned pump #1 at Central Avenue lift station

PROCESS AND OPTIMIZATION ISSUES

The Town has asked Associated Engineering to arrange for a Fournier press technician to come back to complete optimization.

The operating parameters for the radios at lift stations were adjusted to accommodate suspected interference from equipment at the construction sites in the east end of Fort Frances.

SLUDGE SUMMARY

Asselin Storage and Transportation Limited hauled a calculated total of 125.3 m³ (13 bins) of thickened digested sludge to the Town of Fort Frances landfill site. The hauled sludge averaged 19.3 % 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 was one bypass event on June 10th during the scheduled power outage.

The data from the bypass lab results have not been included in the effluent average results as our process and compliance group has asked for more input from the MOE.

COMMENTS

Plant power consumption for the month was 585 (x 180 multiplier) kWh.

The Town has asked Associated Engineering to arrange for a Fournier press technician to come back to complete optimization.

No mortality or stress was observed during the 96 hour trout testing carried out in June for the WSER program.

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)