



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**

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April 9, 2015

Town of Fort Frances  
320 Portage Avenue  
Fort Frances Ontario  
P9A 3M5

Attention: Mr. Doug Herr  
Environmental and Facilities Superintendent

Dear Doug:

**Re: Fort Frances Wastewater Treatment Facility  
March 2015 Monthly Report**

As per the operating agreement, the attached document is the March 2015 monthly report for the Fort Frances Wastewater Treatment Facility.

The report highlights the influent and effluent quality and the process parameters. Additionally, the routine operation and maintenance activities conducted by the operators are summarized.

If you have any questions regarding this report do not hesitate to contact Mr. Larry Wachter – Operations Manager.

Yours truly,

A handwritten signature in black ink, appearing to read 'Kelly CTD'.

Kelly Cunningham  
Senior Operator

For Larry Wachter  
Operations Manager

**The Corporation of the Town of Fort Frances  
Wastewater Treatment Plant  
(Sewage Plant)  
March 2015 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 2015; 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 received and operates its operation under *Certificate of Approval Number 3-0049-96-006*, in accordance with Section 53 of the Ontario Water Resources Act. The Certificate of Approval 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 2015 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>	3.5 mg/L	25 mg/L	15 mg/L	19.6 kg/d	225 kg/d	135 kg/d
Suspended Solids	8.0 mg/L	25 mg/L	15 mg/L	45.1 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.23 mg/L	1.0 mg/L	1.0 mg/L	1.3 kg/d	9 kg/d	9 kg/d
Ammonia as N	4.22 mg/L					
Nitrite as N	0.14 mg/L					
Nitrate as N	3.49 mg/L					
Total Cl <sub>2</sub> Residual		<0.01 mg/L (when in use)				
E-Coli		14.8 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 6.8 to 7.5; average pH was 7.1		
Temperature degrees C				Temperatures ranged from 7.0 – 7.5 average temperature of effluent at 7.2		

Compliance criteria are mandatory requirements of the C of A and performance objectives are a goal to be achieved using best reasonable efforts.

## WASTEWATER LIQUID PROCESS

The average daily flow for March was 5,608.6 m<sup>3</sup>/day. This represents 62% of the design average flow. Total treated flow for the month was 173,865 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 Certificate of Approval.

## INVENTORY

Chemical	End of Month Status	Units
Hypochlorite	1000 +/-@ 7.0% + 615 @ 12%	Litres
Alum	16.0 +/- @ 60 %	Cubic meters
Polymer	14 Bags (350 kg)	Bags (25 kg/bag)

## MAINTENANCE

The operators performed the routine operations and maintenance at the treatment plant and pumping stations. The activities are highlighted as follows:

### Treatment Plant:

- Alternated lead/lag pumps
- Adjusted fluidizing water to head cell and grit snail as needed
- Greased GBT, mechanical bar screen and grit snail. Lubricated drive chain on grit snail and bar screen
- Regular cleaning of head works EW basket strainer
- Greased all blowers
- Regular cleaning of seal water strainer TFP 9-5
- Removed debris from snail, teacup and headcell inlet
- Replaced belt and filters and greased bearings ASU 01
- Replaced filters, tensioned belt and greased bearings on ASU 02
- Changed oil in all blowers
- Repaired DO probe bracket cell 1
- Drained and inspected clarifier 1 and replaced cross collector shear pin
- Removed 1 link each side of clarifier 1 longitudinal collector chain
- Removed rag ball from sprocket of cross collector 1 as it was jammed
- Tensioned belt and aligned sheaves blower Removed rag ball from clarifier 2 inlet

### Pump Stations:

- Ran gensets
- Changed seal water strainers
- Cleaned bar screens
- Replaced batteries on Central Avenue lift station gen set
- Pulled and cleaned pump 1 at Strachan lift station

## **OPERATIONAL ISSUES**

The facility met all operational requirements for the month.

## **SLUDGE SUMMARY**

The volume directed to the gravity belt thickener totaled 629.4 m<sup>3</sup> for the month. Asselin Transportation and Storage Limited hauled a total of 244.8 m<sup>3</sup> of thickened digested sludge (average 11.7m<sup>3</sup>/load) to the Town of Fort Frances landfill site.

## **COMPLAINTS**

There were no complaints during the report period.

## **BY-PASS REPORT(S)**

There were no bypass events in the report period.

## **COMMENTS**

Plant power consumption for the month was 682 (x 180 multiplier) kWh.  
The additional effluent testing necessary to meet the requirements of the Wastewater Systems Effluent Regulations is now a part of our regular sampling regimen.

## **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)

Month	Sewage Flows Year 2015					Usage % Plant Capacity	Sludge Volume Hauled	Removal Efficiency	
	Avg. Day Flow	Max Day Flow	Total Treated	Total ByPass	Total Volume			CBOD5	
	m3	m3	Volume ML	Volume ML	ML			Suspended Solids	Total Phosphorus
January	5205.2	5615	161362		161362	58%	133.6		
February	5008.5	5247	140237		140237	56%	163.2		
March	5608.6	6833	173865		173865	62%	244.8		
April						0%			
May						0%			
June						0%			
July						0%			
August						0%			
September						0%			
October						0%			
November						0%			
December						0%			
Sum				0	475464		541.6		
Average	5274		158488		158488	59%	180.5		
Max		6833	173865		173865				
C of A	9000	18000							

Month	CBOD5			Suspended Solids			Total Phosphorus			E. Coli			pH	
	Avg Raw CBOD (mg/L)	Avg. Eff. CBOD (mg/L)	Avg. Load CBOD (kg/day)	Avg Raw S.S (mg/L)	Avg. Eff. S.S (mg/L)	Avg. Load S.S (kg/day)	Avg Raw T.P (mg/L)	Avg. Eff. T.P (mg/L)	Avg. Load T.P (kg/day)	Geo Mean Counts /100ml	Monthly Minimum	Monthly Maximum		
January	84.5	2.6	13.6	151.9	6.0	31.0	2.5	0.23	1.18	17.8	6.8	7.6		
February	87.0	3.1	15.3	136.4	6.4	32.1	2.2	0.22	1.12	8.3	6.9	7.5		
March	62.8	3.5	19.6	127.6	8.0	45.1	1.9	0.23	1.29	14.8	6.8	7.5		
April														
May														
June														
July														
August														
September														
October														
November														
December														
Average	78.1	3.1	16.2	138.6	6.8	36.1	2.2	0.23	1.20	13.6	6.8	7.5		
Max	87	3.5	19.6	151.9	8	45.1	2.5	0.23	1.29	17.8	6.9	7.6		
C of A		25	225		25	225		1	9	200	6.0	9.5		