



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

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November 15, 2012

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**  
**October 2012 Monthly Report**

As per the operating agreement, the attached document is the October 2012 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 blue ink, appearing to read 'Kelly Cunningham'.

Kelly Cunningham  
Senior Operator

For Larry Wachter  
Operations Manager

**The Corporation of the Town of Fort Frances  
Wastewater Treatment Plant  
(Sewage Plant)  
October 2012 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 October 2012; 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.

## OCTOBER 2012 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>	2.1 mg/L	25 mg/L	15 mg/L	10.5 kg/d	225 kg/d	135 kg/d
Suspended Solids	4.3 mg/L	25 mg/L	15 mg/L	22.2 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.43 mg/L	1.0 mg/L	1.0 mg/L	2.18 kg/d	9 kg/d	9 kg/d
Ammonia as N	0.12 mg/L					
Nitrite as N	0.08 mg/L					
Nitrate as N	7.77 mg/L					
Total Cl <sub>2</sub> Residual		<0.01 mg/L (when in use)				
E-Coli	29.6 count/100 ml (geometric mean )		200 cnt/100ml (geometric mean )		E-coli not to exceed 150 organisms/100ml (monthly geometric mean density)	
pH			pH range 7.5 to 7.6; average pH was 7.6			
Temperature degrees C			Temperatures ranged from 15.0-18.0 average temperature of effluent at 16.5			

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 October was 5,111.5 m<sup>3</sup>/day; representing 57% of the design average flow. Total treated flow for the month was 158,456 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

<b>Chemical</b>	<b>End of Month Status</b>	<b>Units</b>
Hypochlorite	410 +/- @ 8.0% + 600 @ 10%	Litres
Alum	9.0 +/- @ 65 %	Cubic meters
Polymer	12 Bags (700 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 headcell and grit snail as needed
- Greased GBT, mechanical bar screen and grit snail. Lubricated drive chain on grit snail and bar screen
- Hot water flushed alum lines
- Regular cleaning of head works EW basket strainer
- Exercised portable generators
- Replaced polymer dilution water flow meter
- Greased all blowers
- Regular cleaning of seal water strainer TFP 9-5
- Replaced o ring head works EW basket strainer
- Dismantled piping to remove debris from both grit pumps
- Removed grit from head works inlet channel
- FFPC replaced 3 bulbs in driveway lights
- Put roof section back on digester
- Tensioned belt, replaced filter and greased bearings ASU-01
- Clarifier drives were greased
- The teacup and grit snail were drained for cleaning and inspection
- The UPS unit for the auto dialer and lift station modem cabinet was replaced
- Hosed aeration tanks and grating

### **Pump Stations:**

- Ran gen sets
- Regular cleaning of bar screens
- Changed seal water strainers
- Replaced radiator, temperature sensors and batteries on Central lift station genset
- Isolation valves for pumps 1 and 3 at Central lift station were exercised
- Back flushed pump 1 at White Pine lift station and replaced both check valve springs
- Removed grease and debris from Boundary Road lift station wet well
- Pulled and cleaned pump 1 at Central lift station
- Replaced the fan motor on a space heater at Fifth Street lift station

## **OPERATIONAL ISSUES**

The facility met all operational requirements for the month.

## **SLUDGE SUMMARY**

The volume directed to the gravity belt thickener totaled 686.0 m<sup>3</sup> for the month. Hammond Landscaping (Certificate of Approval Hauler # 11000025801) hauled/transported 164.4 m<sup>3</sup> (average 11.0 m<sup>3</sup>/load) to the agricultural drying bed. The Organic Soil Conditioning site has a valid Certificate of Approval - number S-71048-31.

## **COMPLAINTS**

There were no complaints during the report period.

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

There were no by-pass events during the report period.

## **COMMENTS**

Plant power consumption for the month was 710 (x 180 multiplier) kWh.  
John Deere snow blower was repaired by Parks staff.  
Quarterly sludge samples were sent out.

## **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 2012					Usage % Plant Capacity	Sludge Volume Hauled M3	Removal Efficiency	
	Avg. Day Flow m3	Max Day Flow m3	Total Treated Volume ML	Total ByPass Volume ML	Total			Suspended Solids	CBOD5
January	5023.5	5582	155729		155729	56%	186.2		
February	4854.2	5248	140772		140772	54%	210.5		
March	5612.9	8655	173999		173999	62%	244.0		
April	6692.4	7984	200771		200771	74%	177.7		
May	6174.0	7911	191394		191394	69%	233.1		
June	6127.2	6684	183815		183815	68%	196.6		
July	6079.0	7897	188449		188449	68%	175.2		
August	5912.8	7507	183297		183297	66%	153.1		
September	5199.7	6053	155992		155992	58%	121.1		
October	5111.5	6204	158456		158456	57%	164.4		
November						0%			
December						0%			
Sum				0	1732674		1861.9		
Average	5679		173267		173267	63%	186.2		
Max		8655	200771		200771				
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	67.4	2.3	11.3	144.5	7.5	37.7	2.5	0.19	0.93	10.1	6.6	7.9				
February	70.6	2.6	12.5	147.7	8.1	39.3	2.3	0.22	1.09	8.8	7.1	7.8				
March	75.3	3.4	18.5	139.1	7.9	44.8	2.1	0.26	1.44	12.3	7.1	7.6				
April	51.9	2.5	16.7	123.8	10.7	74.6	1.8	0.27	1.85	16.6	6.9	7.6				
May	51.1	2.0	12.9	124.0	8.4	52.4	1.9	0.31	1.95	19.0	6.9	7.4				
June	68.6	2.9	17.8	124.1	7.1	43.8	2.0	0.35	2.15	12.4	7.0	7.2				
July	67.0	2.1	13.1	141.5	5.2	31.6	2.10	0.28	1.66	9.4	6.9	7.7				
August	65.2	3.0	17.3	155.0	5.3	31.4	1.99	0.25	1.49	4.4	7.6	7.8				
September	75.0	2.1	11.0	140.2	4.0	20.5	2.28	0.29	1.51	24.2	7.5	7.7				
October	78.9	2.1	10.5	139.6	4.3	22.2	2.69	0.43	2.18	29.6	7.5	7.6				
November																
December																
Average	67.1	2.5	14.2	138.0	6.9	39.8	2.2	0.3	1.6	14.7	7.1	7.6				
Max	78.9	3.4	18.5	155	10.7	74.6	2.69	0.43	2.18	29.6	7.6	7.9				
C of A		25	225		25	225		1	9	150	6	9.5				