



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

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June 9, 2014

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  
May 2014 Monthly Report**

As per the operating agreement, the attached document is the May 2014 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 purple ink, appearing to read 'Kelly C'. The signature is written in a cursive, flowing style.

Kelly Cunningham  
Senior Operator

For Larry Wachter  
Operations Manager

**The Corporation of the Town of Fort Frances  
Wastewater Treatment Plant  
(Sewage Plant)  
May 2014 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 May 2014; 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.

## MAY 2014 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>	4.0 mg/L	25 mg/L	15 mg/L	46.7 kg/d	225 kg/d	135 kg/d
Suspended Solids	7.6 mg/L	25 mg/L	15 mg/L	81.2 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.36 mg/L	1.0 mg/L	1.0 mg/L	3.8 kg/d	9 kg/d	9 kg/d
Ammonia as N	3.77 mg/L					
Nitrite as N	0.20 mg/L					
Nitrate as N	2.27 mg/L					
Total Cl <sub>2</sub> Residual		<0.01 mg/L (when in use)				
E-Coli		36.0 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 7.2 to 7.7; average pH was 7.5			
Temperature degrees C			Temperatures ranged from 7.0 – 8.5 average temperature of effluent at 7.3			

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 May was 10,855.8 m<sup>3</sup>/day; representing 121% of the design average flow. Total treated flow for the month was 336,530 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	270 +/- @ 7.0% + 800 @ 12%	Litres
Alum	18.0 +/- @ 60 %	Cubic meters
Polymer	7 Bags (175 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
- Cleaned wash box and sprayers on GBT
- Removed debris from Teacup X 2
- Installed wheel kit on Yamaha portable generator
- Toilet was replaced
- Removed debris from grit pump 2
- Replaced brushes polymer mixing motor
- Reversed hose and calibrated EW sampler
- Hosed aeration tanks and UV channel
- Removed grit from head works inlet channel

### Pump Stations:

- Ran gen sets
- Changed seal water strainers
- Cleaned bar screens
- Purged and reset the bubbler system at White Pine lift station

- Remedied air locked pumps at Boundary Road lift station
- Pulled and cleaned pumps 1 and 3 at Central Avenue lift station
- Removed grease from wet wells at Boundary Road and Church Street lift stations
- Reset a communications fault at Church 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 695.0 m<sup>3</sup> for the month. Hammond Landscaping (Certificate of Approval Hauler # 11000025801) hauled/transported 243.5 m<sup>3</sup> (average 11.1 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 in the report period.

## **COMMENTS**

Plant power consumption for the month was 632 (x 180 multiplier) kWh.

The additional effluent testing that is required as of January 1, 2013 to meet the requirements of the Wastewater Systems Effluent Regulations is now a part of our regular sampling regimen.

Hatch Mott MacDonald was on site to confirm information and proceed with work on the single line electrical drawings.

## **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	Avg. Day Flow m3	Sewage Flows Year 2014					Total Volume ML	Usage % Plant Capacity	Sludge Volume Hauled M3	Removal Efficiency	
		Max Day Flow m3	Total Treated Volume ML	Total ByPass Volume ML	Total	CBOD5 Suspended Solids Total Phosphorus					
January	5057.6	5552	156785			156785	56%	143.5			
February	5630.1	6812	157644			157644	63%	129.8			
March	8118.8	10455	251682			251682	90%	217.9			
April	10927.7	14036	327830			327830	121%	198.3			
May	10855.8	18381	336530			336530	121%	243.5			
June							0%				
July							0%				
August							0%				
September							0%				
October							0%				
November							0%				
December							0%				
Sum				0		1230471		933			
Average	8118		246094			246094	90%	186.6			
Max		18381	336530			336530					
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	76.0	3.7	18.2	147.0	7.3	36.8	2.2	0.20	1.02	2.8	7.2	7.7				
February	88.3	4.3	23.2	146.9	7.4	42.6	2.6	0.18	1.02	10.4	7.2	7.5				
March	49.8	5.0	42.4	183.0	12.2	102.0	1.6	0.18	1.42	11.9	7.3	7.5				
April	40.6	3.0	31.3	92.5	9.1	93.2	1.2	0.25	2.80	29.6	6.9	7.6				
May	36.3	4.0	46.7	78.6	7.6	81.2	1.1	0.36	3.8	36.0	7.2	7.7				
June																
July																
August																
September																
October																
November																
December																
Average	58.2	4.0	32.4	129.6	8.7	71.2	1.7	0.23	2.01	18.1	7.2	7.6				
Max	88.3	5	46.7	183.0	12.2	102	2.6	0.36	3.8	36	7.3	7.7				
C of A		25	225		25	225		1	9	150	6.0	9.5				