Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Fort Frances WPCP
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April 11, 2016

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 2016 Monthly Report

As per the operating agreement, the attached document is the March 2016 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,

Kelly Cunningham
Senior Operator

For Larry Wachter
Operations Manager

The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
March 2016 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 2016; 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 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 2016 EFFLUENT QUALITY

Parameters	***Monthly Actual Concentration* mg/L**	***Compliance Criteria Concentration* mg/L**	***Performance Objective Concentration*** mg/L	***Monthly Actual Loading, kg/d***	***Compliance Criteria Loading kg/d***	***Performance Objective Loading* kg/d**
$CBOD_5$	2.3 mg/L	25 mg/L	15 mg/L	16.1 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	5.7 mg/L	25 mg/L	15 mg/L	47.7 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.11 mg/L	1.0 mg/L	0.9 mg/L	0.94 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	9.67 mg/L 4.50 mg/L					
Total Cl_2 Residual		<0.01 mg/L (when in use)				
E-Coli	21.4 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 7.4			
Temperature degrees C			Temperatures ranged from 8.0 to 9.5; average temperature of effluent was 8.8 C			

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 7463.4 m^3 /day. This represents 83% of the design average flow. Total treated flow for the month was 231365 m^3.
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	1150 +/-@ 7.0% + 410 @ 12%	Litres
Alum	15.5 +/- @ 60 %	Cubic meters
Polymer	11 Bags (275 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
- Regular cleaning of seal water strainer TFP 9-5
- Greased all blowers
- New heat trace and insulation installed on outside alum line
- Repaired digester automatic air valve
- Exercised portable diesel and Yamaha generators
- Boiler 1 off
- Flushed digester level sensor
- Greased clarifier drives
- Removed 3 buckets debris from Headcell inlet and 1 bucket debris from Teacup
- Drained and hosed Teacup and Snail
- Removed rag balls from both clarifier inlet weirs
- Replaced a shear pin in clarifier longitudinal drive 1

Pump Stations:

- Ran gensets
- Changed seal water strainers
- Cleaned bar screens

OPERATIONAL ISSUES

There were no operational issues in the report period.

SLUDGE SUMMARY

Asselin Transportation and Storage Limited hauled a total of 212.7 m3 of thickened digested sludge (11.8 m3/load average) 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 679 (x 180 multiplier) kWh.
OCWA brought their new Maximo maintenance program online in the northwest hub.
Lakeside Controls and Dell Tech Support have been working to resolve some issues with one of the Delta V workstations.
Contractors interested in bidding on the screen and sludge handling upgrade project toured the facility.

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)

Month	Avg. Day Flow m3	Sewage Flows Year 2016 Max Day Flow m3	Total Treated Volume ML	Total ByPass Volume ML	Total Volume ML	Usage % Plant Capacity	Sludge Volume Hauled M3
January	5668.1	5900	175712		175712	63%	249.9
February	5417.8	5665	157117		157117	60%	251.7
March	7463.4	12988	231365		231365	83%	212.7
April						0%	
May						0%	
June						0%	
July						0%	
August						0%	
September						0%	
October						0%	
November						0%	
December						0%	
Sum				0	564194		714.3
Average	6183		188065		188065	69%	238.1
Max		12988	231365		231365		
C of A	9000	18000					

Removal Efficiency	
CBOD5	0.963796909
Suspended Solids	0.958688355
Total Phosphorus	0.9421875

	CBOD5			Suspended Solids			Total Phosphorus			Nitrogen		E. Coli
	Avg. Raw	Avg. Eff.	Avg. Load	Avg. Raw	Avg. Eff.	Avg. Load	Avg. Raw	Avg. Eff.	Avg. Load	Avg. Raw	Avg. Eff.	Geo Mean
Month	BOD	CBOD	CBOD	S.S	S.S	S.S	T.P	T.P	T.P	TKN	Total N	Counts
	(mg/L)	(mg/L)	(kg/day)	(mg/L)	(mg/L)	(kg/day)	(mg/L)	(mg/L)	(kg/day)	(mg/L)	(mg/L)	/100ml
January	87.0	2.4	13.5	142.4	6.0	34.7	2.41	0.15	0.83			23.7
February	74.3	3.5	18.5	132.5	4.3	23.2	2.12	0.11	0.57	17.3	8.9	19.3
March	65.2	2.3	16.1	112.4	5.7	47.7	1.87	0.11	0.94	15.1	9.7	21.4
April												
May												
June												
July												
August												
September												
October												
November												
December												
Average	75.5	2.7	16.0	129.1	5.3	35.2	2.1	0.12	0.78	16.2	9.3	21.5
Max	87	3.5	18.5	142.4	6	47.7	2.4	0.15	0.94	17.3	9.7	23.7
C of A		25	225		25	225		0.9	9	200	6.0	200