Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Fort Frances WPCP
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February 10, 2017

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
January 2017 Monthly Report

As per the operating agreement, the attached document is the January 2017 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)
January 2017 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 January 2017; 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.

JANUARY 2017 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**
$CBOD_5$	2.0 mg/L	25 mg/L	15 mg/L	11.3 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	3.2 mg/L	25 mg/L	15 mg/L	18.1 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.11 mg/L	1.0 mg/L	0.9 mg/L	0.6 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	8.83 mg/L 7.29 mg/L					
Total Cl_2 Residual		<0.01 mg/L (when in use)				
E-Coli	3.6 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 7.5 to 7.8; average pH was 7.7			
Temperature degrees C			Temperatures ranged from 9.0 to 10.5 C; average temperature of effluent was 9.9 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 January was 5636.9 m^3 /day. This represents 63% of the design average flow. Total treated flow for the month was 174745 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 Environmental Compliance Approval.

INVENTORY

Chemical	End of Month Status	Units
Hypochlorite	1110 +/-@ 8.0% +3x205 L @ 12%	Litres
Alum	18.0 +/- @ 55 %	Cubic meters
Polymer	2x 205 L drums	Litres

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 all blowers
- Regular cleaning of head works EW basket strainer
- Greased Grit Snail and lubricated drive chain
- Weekly inspection spiral screen access hatch, removed wrapped debris as required
- Replaced shear pin clarifier 2 longitudinal collector x 2
- Repaired/replaced a section of alum line and a valve
- Hot water flushed alum line
- Installed new parts on snow plow
- Installed new influent sampler
- Greased flocculator shaft seal
- Repaired spiral screen drain line
- Exercised portable gensets
- Filled holes above CP-2 cabinet
- Replaced belt air handler ASU-0
- Trouble with newly rebuilt blower 4, sent back to Dingwells

Pump Stations:

- Ran gensets
- Changed seal water strainers
- Ordered a new starter for pump 1 at Boundary Road lift station
- Cycled power and reset fault at the Church St lift station

OPERATIONAL ISSUES

A communications problem between the Fournier panel and the Delta V equipment in CP-2 occurred and was remedied.

SLUDGE SUMMARY

Asselin Storage and Transportation Limited hauled a total of 85.3

m3 (11 bins) of thickened digested sludge to the Town of Fort Frances landfill site.

COMPLAINTS

There were no complaints during the report period.

BYPASS REPORT(S)

There were no bypass events during the report period.

COMMENTS

Plant power consumption for the month was 687 (x 180 multiplier) kWh.
Screen and Dewatering Upgrades at the FFWWTP have been under way since May 30, 2016.
A communications problem between the Fournier panel and the Delta V equipment in CP-2 occurred and was remedied.
Dan Veneruzzo from our polymer supplier was on site for polymer jar testing on our digested sludge.

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	5636.9	6162	174745		174745	63%	85.3
February						0%	
March						0%	
April						0%	
May						0%	
June						0%	
July						0%	
August						0%	
September						0%	
October						0%	
November						0%	
December						0%	
Sum				0	174745		85.3
Average	5637		174745		174745	63%	85.3
Max		6162	174745		174745		
C of A	9000	18000					

Removal Efficiency	
CBOD5	0.976190476
Suspended Solids	0.976878613
Total Phosphorus	0.952380952

	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	84.0	2.0	11.3	138.4	3.2	18.1	2.31	0.11	0.63	17.5	8.8	3.6
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
Average	84.0	2.0	11.3	138.4	3.2	18.1	2.3	0.11	0.63	17.5	8.8	3.6
Max	84	2	11.3	138.4	3.2	18.1	2.3	0.11	0.63	17.5	8.8	3.6
C of A		25	225		25	225		0.9	8.1	200	6.0	200