



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Fort Frances WPCP
200 McIrvine Rd
Fort Frances, Ontario
P9A 3S3
Tel: 807-274-3121
Fax: 807-274-8381

March 11, 2020

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

Attention: Mr. Craig Miller
Environmental Superintendent

Dear Craig:

**Re: Fort Frances Wastewater Treatment Facility
February 2020 Monthly Report**

As per the operating agreement, the attached document is the February 2020 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. Brad McMahon, Senior Operations Manager.

Yours truly,

A handwritten signature in black ink, appearing to read "Kelly C." followed by a stylized flourish.

Kelly Cunningham
Team Lead

For Brad J. McMahon
Senior Operations Manager

**The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
February 2020 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 February 2020; 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.

FEBRUARY 2020 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 ₅	3.0 mg/L	25 mg/L	15 mg/L	15.9 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	5.0 mg/L	25 mg/L	15 mg/L	27.2 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.12 mg/L	1.0 mg/L	0.9 mg/L	0.67 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	12.98 mg/L 4.94 mg/L					
Total Cl ₂ Residual		<0.01 mg/L (when in use)				
E-Coli		22.1 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 6.4 to 7.5; average pH was 6.7			
Temperature degrees C			Temperatures ranged from 8.0 to 8.5 C; average temperature of effluent was 8.1 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 February was 5477.0 m³/day. This represents 61% of the design average flow. Total treated flow for the month was 158832 m³.

The Fort Frances WWTP met all effluent compliance criteria for the parameters listed above as outlined in the Environmental Compliance Approval.

**The Town of Fort Frances accepted an additional 136.4 m³ of sewage from the New Gold mine site into the collection system in February. Lab analyses have not been provided.

MAINTENANCE

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

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
- Monthly inspection of spiral screen access hatch, removed wrapped debris
- Weekly manifold wash and restrictor cleaning on the Fournier press
- Drained and inspected teacup, hosed snail
- Changed filter blower 5
- Hosed aeration cells
- Cleaned DO probes
- Switch issues with WAS pump 1 and Grit pump 1 were resolved by Cannect Electric
- Cannect Electric replaced the board in air valve 1
- Replaced shear pin long collector 1

Pump Stations:

- Ran gensets
- Changed seal water strainers
- Pulled and cleaned pump 1 at Central Avenue lift station

PROCESS AND OPTIMIZATION ISSUES

SLUDGE SUMMARY

Dennis Robinson Limited hauled a calculated total of 108.2 m³ (11 bins) of thickened digested sludge to the Town of Fort Frances landfill site. The hauled sludge averaged 15.9% TS for the month but slump test results from the landfill site have not been provided.

The Fournier press ran for 122.1 hours in February.

COMPLAINTS

There were no complaints during the report period.

BYPASS/OVERFLOW REPORT(S)

There were no bypass events in the reporting period.

COMMENTS

Plant power consumption for the month was 455 (x 180 multiplier) kWh.
The Fournier press has been operated 254.4 hours in 2020.

REPORTS

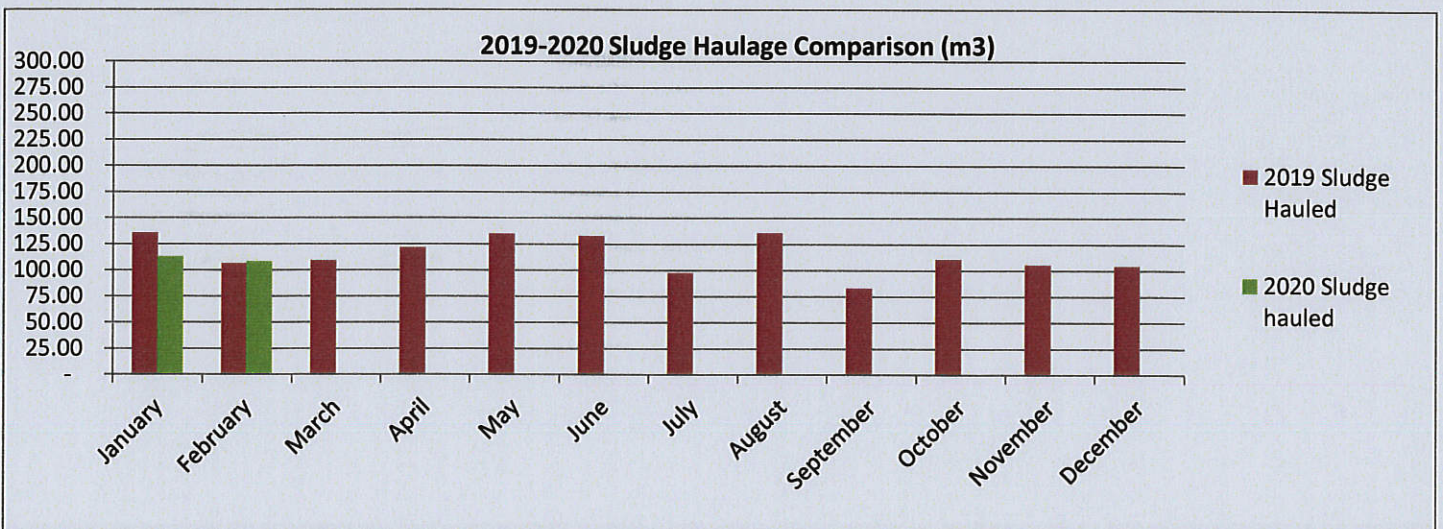
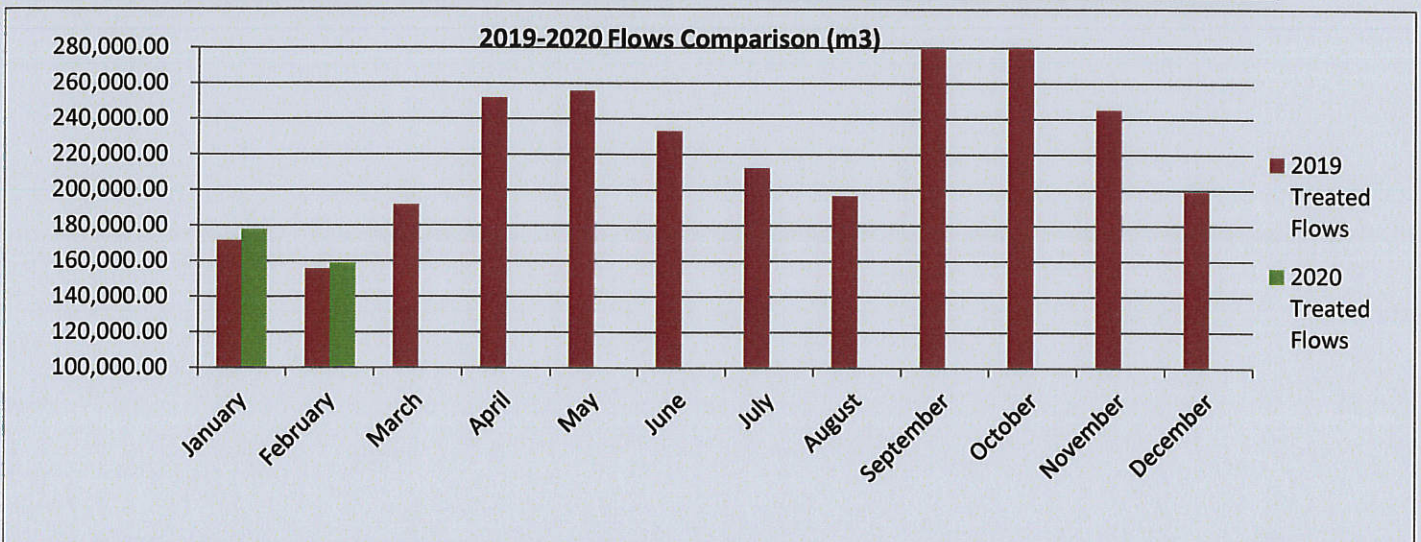
ALS – Environmental Analytical Reports (on-file at plant)
Fort Frances WPCP Equipment Run Time Report (on-file at plant)
Bypass Report (on-file at plant as per occurrence)
Incident Report (on-file at plant as per occurrence)

2020 Fort Frances Wastewater

Month	Sewage Flows Year 2020						Usage		Calculated		Sludge		Removal Efficiency		
	Avg. Day Flow m ³	Max Day Flow m ³	Total		Total		% Plant Capacity	Volume Hauled	M ³	Volume Hauled	Bins Hauled		Suspended Solids	CBOD5	Total Phosphorus
			Treated	Volume ML	ByPass	Volume ML									
January	5733.8	6060	177747			177747	64%	113.2		12				0.941837732	
February	5477.0	5861	158832			158832	61%	108.2		11				0.970081596	
March							0%								0.956448911
April							0%								
May							0%								
June							0%								
July							0%								
August							0%								
September							0%								
October							0%								
November							0%								
December							0%								
Sum					0	336579		221.4		23					
Average	5605		168290			168290	62%	110.7		11.5					
Max	6060		177747			177747				12					
ECA	9000	18000													

Month	BOD5/CBOD5				Suspended Solids				Total Phosphorus				Nitrogen		E. Coli		pH	
	Avg. Raw BOD (mg/L)	Avg. Eff. CBOD (mg/L)	Avg. Load CBOD (kg/day)	S.S. (mg/L)	Avg. Raw S.S. (mg/L)	Avg. Eff. S.S. (mg/L)	Avg. Load S.S. (kg/day)	T.P. (mg/L)	Avg. Raw T.P. (mg/L)	Avg. Eff. T.P. (mg/L)	T.P. (kg/day)	TKN (mg/L)	Avg. Raw Total N (mg/L)	Avg. Eff. Total N (mg/L)	Geo Mean Counts /100ml	Monthly Minimum	Monthly Maximum	
January	92.6	2.9	16.4	167.8	4.9	28.2	0.82	0.14	2.59	0.12	0.67	16.2	12.5	44.6	6.3	6.4	7.5	
February	112.0	9.0	15.9	153.1	5.0	27.2	0.82	0.12	3.38	0.12	0.67	16.4	13.0	22.1	200	6.0	9.5	
March																		
April																		
May																		
June																		
July																		
August																		
September																		
October																		
November																		
December																		
Average	102.3	6.0	16.2	165.5	5.0	27.7	0.75	0.13	3.0	0.13	0.75	16.3	12.8	33.4	6.4	7.1		
Max	112	9	16.4	167.8	5	28.2	0.82	0.14	3.4	0.14	0.82	16.4	13	44.6	6.4	7.5		
ECA		25	225		25	225		1.0		1.0	9.0							

2019-2020 Comparison Chart						
Month	2019 Treated Sewage	2020 Treated Sewage	% Variance 2019 to 2020	2019 Hauled Sludge	2020 Hauled Sludge	% Variance 2019 to 2020
	m3	m3	m3	m3 (calculated)	m3 (calculated)	m3
January	171,621.00	177,747.00	3%	136.00	113.20	-17%
February	155,707.00	158,832.00	2%	106.70	108.20	1%
March	191,603.00		#DIV/0!	109.20		-100%
April	251,711.00		#DIV/0!	121.60		-100%
May	255,574.00		#DIV/0!	135.00		-100%
June	233,001.00		#DIV/0!	132.60		-100%
July	212,351.00		#DIV/0!	97.70		-100%
August	196,772.00		#DIV/0!	136.00		-100%
September	315,918.00		#DIV/0!	83.10		-100%
October	441,076.00		#DIV/0!	111.10		-100%
November	245,097.00		#DIV/0!	105.70		-100%
December	199,047.00		#DIV/0!	104.50		-100%
Totals	2,869,478.00	336,579.00	-753%	1,379.20	221.40	-84%



Workorder Summary Report

Report Start Date: Feb 1, 2020 12:00 AM
Report End Date: Feb 29, 2020 11:59 PM
Location: 1103*
Work Order Type: ADMIN,CALL,CAP,CORR,EMER,OPER,PM
Work Order Class:

WorkOrder				PM Schedule		Workorder Details				WorkLog Detail			
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status		Schedule Start	Actual Start	Actual Finish
1617120	0000227376	PANEL ALARM/DIALER	1103, Fort Frances WPCP, Process, Process Control & Monitoring	PM	Inspection	1	MONTHS	Critical Alarm/Dialer Testing (1m) 1103	COMP	2/1/20 12:00 AM	2/25/20 01:00 PM	2/25/20 01:00 PM	Monthly Dialer -We test daily.
1617124			1103, Fort Frances WPCP	PM	Refurbish/ Replace/Repair	1	MONTHS	Diesel Gensets Inspection/ Functional Tests (1m) 1103	COMP	2/1/20 12:00 AM	2/23/20 01:00 PM	2/23/20 03:00 PM	Monthly Gensets -All gensets ran for one hour.
1617140			1103, Fort Frances WPCP	PM	Health and Safety	1	MONTHS	Health And Safety Inspection (1m) 1103	COMP	2/1/20 12:00 AM	2/25/20 08:00 AM	2/25/20 09:00 AM	H&S Report -No issues at this point
1617151			1103, Fort Frances WPCP	PM	Inspection	1	MONTHS	TPM Inspection/Maintenance (1m) 1103	COMP	2/1/20 12:00 AM	3/1/20 02:42 PM	3/1/20 02:42 PM	
1617479			1103, Fort Frances WPCP	PM	Inspection	1	MONTHS	Blowers/Motors Inspection/Service (1m/3m) 1103	COMP	2/1/20 12:00 AM	2/25/20 09:00 AM	2/25/20 10:00 AM	Blower Maint -I greased all blowers.
1617487	0000246402	CENTRIFUGE GS2-2-1 TEACUP/ GRIT SNAIL	1103, Fort Frances WPCP, Process, Primary Treatment, Primary Sludge Degritting	PM	Inspection	1	MONTHS	Teacup Centrifuge Inspection/ Service (1m/3m/1y) 1103	COMP	2/1/20 12:00 AM	2/25/20 11:00 AM	2/25/20 12:00 PM	Teacup Maint -I inspected and hoses the unit
1623475	0000227421	PUMP CENT VERTICAL NON CLOG SEWAGE P1 FIFTH ST	1103, 5th St. Pumping Station, Process	CALL	Refurbish/ Replace/Repair	0		Fifth St. Pump Fail 1103	COMP		2/16/20 03:25 PM	2/16/20 03:31 PM	Fifth St P1 Fail -I arrived at the lift station and reset the alarm, I then watched two pump cycles to be normal. I then returned to the plant and reset the alarm and watched another two pump cycles and it acted normal.
1624596	0000246414	TANK PROCESS CLARIFIER SECONDARY CELL #1	1103, Fort Frances WPCP, Process, Secondary Treatment	CALL	Refurbish/ Replace/Repair	0		Collector Failure 1103	COMP		2/25/20 08:29 AM	2/25/20 08:35 AM	Clarifier Long Collector 1 Failure -I arrived onsite and locked out the drive motor then changed the shear pin then restarted the drive motor. I then monitored for 30 minutes with no failures.