

TOWN OF FORT FRANCES

Operations and Facilities Executive Committee

AGENDA - February 21, 2018, 8:30 AM

MEETING - Civic Centre

Session #002

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1. <u>Call to Order</u>	
2. <u>Disclosure of pecuniary interest and the general nature thereof</u>	
3. <u>Approval of Previous Committee Minutes</u>	
3.1 Minutes from the previous meeting on February 7, 2018.	3 - 5
4. <u>Non-agenda Items</u>	
5. <u>Items Referred from Council</u>	
5.1 OGRA Policy and Research - Municipal Class Environmental Assessment Process.	6 - 8
6. <u>New Business</u>	
6.1 January 2018 Drinking Water Systems Monthly Summary Report	9 - 16
6.2 Requested dated January 17, 2018 from Boundary Waters Dragon Boat Festival	17 - 18
6.3 Referral from Economic Development Advisory Committee - Urban Trees (back up material previously distributed)	19 - 20
7. <u>Outstanding Items</u>	
7.1 Review of Sidewalk Snow Removal By-law	21 - 25
7.2 Request from EDAC to Review Sewer and Water Infrastructure Installation Costs.	26 - 28
7.3 Letter from Mr. Anthony J. Coen Re: 350 Scott Street Storm Sewer Issues	29 - 31
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Statistics - November 2017	
8.3 Operations and Facilities Division - Public Works Area - Operations Statistics - December 2017	44 - 47
8.4 Aircraft Landings 2018 - as of February 12, 2018	48 - 49
9. <u>Adjourn / Next Meeting Date</u>	

TOWN OF FORT FRANCES

MINUTES

SESSION NO. #001

February 7, 2018

The meeting of Operations & Facilities Executive Committee of the Town of Fort Frances was held in the Civic Centre on February 7, 2018 from 8:30 a.m. to 10:23 a.m.

PRESENT: Paul Ryan, Chairperson, Ken Perry, June Caul, Doug Brown, CAO and Travis Rob.

ALSO PRESENT: Mayor Roy Avis, Doug Herr (8:30 a.m. to 9:20 a.m.), Trish Law (9:20 a.m. to 10:00 a.m.), Patrick Briere (10:00 a.m. to 10:13 a.m.) and Milt Strachan (9:30 a.m. to 10:13 a.m.)

1. Call to Order

1.1 The meeting was called to order at 8:31 a.m.

2. Disclosure of pecuniary interest and the general nature thereof

2.1 None

3. Approval of Previous Committee Minutes

3.1 Minutes from the previous meeting on December 6, 2017 - the minutes were approved as circulated.

4. Non-agenda Items

4.1 None

5. Items Referred from Council

5.1 Letter from Mr. Anthony J. Coen re: 360 Scott Street Storm Sewer Issues - the matter was deferred until Mr. Coen can be contacted to discuss the installation of a heat trace line by the Town.

6. New Business

6.1 2017 Update to the Town GIS Imagery - Trish Law was in attendance and made a presentation on the GIS Imagery which was received as information.

6.2 December 2017 Drinking Water Systems Monthly Summary Report - the report was approved as presented.

- 6.3 Review of Sidewalk Snow Removal By-Law - the committee recommended a revision to the draft by-law. The revision will be made and brought forward to Council.
- 6.4 Tbaytel Public Wi-Fi Signage - Rainy Lake Square - the report was received as information.
- 6.5 Request from EDAC to Review Sewer and Water Infrastructure Installation Costs - the administration report was approved as presented.
- 6.6 Airport Property - Land Lease Private Aircraft Hangers - the administration report was approved as presented.

7. Information

- 7.1 Fort Frances Wastewater Treatment Facility November 2017 Monthly Report - the report was received and will be forwarded to Council as information only. No action required.
- 7.2 Fort Frances Wastewater Treatment Facility December 2017 Monthly Report - the report was received and will be forwarded to Council as information only. No action required.
- 7.3 Operations and Facilities Division - Environmental Area - Operations Statistics - October 2017 - the report was received and will be forwarded to Council as information only. No actions required.
- 7.4 Operations and Facilities Division - Environmental Area - Operations Statistics - November 2017 - the report was received and will be forwarded to Council as information only. No action required.
- 7.5 Operations and Facilities Division - Environmental Area - Operations Statistics - December 2017 - the report was received and will be forwarded to Council as information only. No action required.
- 7.6 Operations and Facilities Division - Public Works Area - Operations Statistics - September 2017 - the report was received and will be forwarded to Council as information only. No action required.
- 7.7 Operations and Facilities Division - Public Works Area - Operations Statistics - October 2017 - the report was received and will be forwarded to Council as information only. No action required.
- 7.8 Aircraft Landings 2017 - updated January 16, 2018 - the report was received and will be

forwarded to Council as information only. No action required.

- 7.9 Sewer and Water Data for 2017 - updated January 2018 - the report was received and will be forwarded to Council as information only. No action required.
- 7.10 2017 Tonnage at Landfill Site - updated December 15, 2017 - the report was received and will be forwarded to Council as information only. No action required.
- 7.11 Rainy Lake Market Square Committee Minutes - February 8, 2017 - the report was received and will be forwarded to Council as information only. No action required.

8. Adjourn / Next Meeting Date

The meeting was adjourned at 10:23 a.m.

Executive Committee Chair

T. Rob, Manager of Operations & Facilities

Lisa Slomke

From: Scott Butler <scott@ogra.org>
Sent: Wednesday, January 17, 2018 3:09 PM
To: Lisa Slomke
Subject: OGRA Requests Support for MCEA Process Reform



**ONTARIO
GOOD ROADS
ASSOCIATION**
1525 Cornwall Road, Unit 22
Oakville, Ontario
L6J 0B2
Telephone 289-291-6472
Fax 289-291-6477

Wednesday, January 17, 2018

Lisa Slomke
Clerk
Town of Fort Frances

Good afternoon Lisa:

The following correspondence was sent to your Head of Council earlier this afternoon. OGRA respectfully requests that you please it on your next Council agenda for information.

Regards,

Scott R. Butler
OGRA, Policy and Research
22 - 1525 Cornwall Road, Oakville, Ontario L6J 0B2
T: 289-291-6472 Ext. 24 C: 416-564-4319 www.ogra.org

The Ontario Good Roads Association is seeking reforms to the Municipal Class Environmental Assessment (MCEA) process. In its current form the MCEA process has made municipal infrastructure projects longer in duration and more costly. The OGRA Board of Directors encourages all municipalities in Ontario to adopt the following resolution that calls on the Minister of the Environment and Climate Change to accelerate the Application for Review of the MCEA process.

Links to further background information about the Municipal Class Environmental Assessment process can be found below the resolution.

DRAFT RESOLUTION

Whereas a coalition of the Municipal Engineers Association (MEA) and the Residential and Civil Construction Alliance of Ontario have successfully applied to have a review of the Municipal Class Environmental Assessment process conducted under Part IV (Section 61) of the *Environmental Bill of Rights Act, 1993* (EBR Act);

And whereas impact studies and public meetings required by the MCEA process often take two years or more to complete before construction can commence;

And whereas the MCEA requirements to evaluate alternatives are often not well aligned with prior or municipal land use planning decisions;

And whereas analysis by the Residential and Civil Construction Alliance of Ontario (RCCAO) has demonstrated that the time to complete an EA rose from 19 months to 26.7 months and costs went from an average of \$113,300 to \$386,500;

And whereas the Auditor General of Ontario has tabled recommendations for modernizing the MCEA process;

And whereas in spite of written commitments made by the Ministry of the Environment between 2013-2015, no action has been taken;

And whereas local projects that do not have the necessary approvals could lose out on the next intake of Build Canada funding;

Therefore be it resolved that Town of Fort Frances requests that the Minister of the Environment and Climate Change take immediate steps to expedite the response process for Part II Orders or Bump-Up requests, as part of the s.61 review to improve MCEA process times and reduce study costs;

And further that the Minister of the Environment and Climate Change support changes to better integrate and harmonize the MCEA process with processes defined under the *Planning Act*;

And further that the Minister of the Environment and Climate Change amend the scope of MCEA reports and studies to reduce duplication with existing public processes and decisions made under municipal Official Plans and provincial legislation.

BACKGROUND INFORMATION

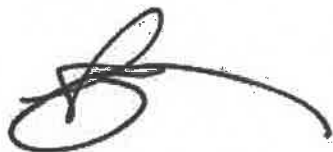
The following links provide a comprehensive background of the work that the Municipal Engineers Association and the Residential and Civil Construction Alliance of Ontario have done to advance this issue of MCEA reform.

- [October 2017 Correspondence from the Municipal Engineers Association and the Residential and Civil Construction Alliance of Ontario to the Hon. Chris Ballard, Minister of the Environment and Climate Change.](#)
- [ReNew Magazine editorial examining the need to review the Municipal Class Environmental Assessment process](#)
- [The Development Approval Roundtable Action Plan, November 2017](#)

- Meeting Notes from the November 29, 2017 Evolution of the MCEA Workshop.
- The MEA Companion Guide for the Municipal Class Environmental Assessment Manual
- Are Ontario's Municipal Class Environmental Assessments Worth the Added Time and Costs? The 2014 Edition

If you have any questions or concerns, please contact Scott Butler, OGRA's Manager of Policy and Research at 289-291-6472 ext. 24 or via email at scott@ogra.org.

Regards,



Scott R. Butler
OGRA, Policy and Research
22 - 1525 Cornwall Road, Oakville, Ontario L6J 0B2
T: 289-291-6472 Ext. 24 C: 416-564-4319 www.ogra.org

Scott Butler

February 14, 2018

Report To: Mayor & Council

From: Travis Rob, Manager of Operations & Facilities

SUBJECT: January 2018 Drinking Water Systems Monthly Summary Report

Please find attached the January 2018 Summary Report on the drinking water systems, prepared by Randy White, Senior WTP Operator.

Your Administration recommends that Operations & Facilities Executive Committee accept the January 2018 report as presented.

Respectfully submitted,
Operations & Facilities Division

Travis Rob, E.I.T.
Manager of Operations & Facilities

Council approval of this report will accept the January 2018 report prior to it being made available to the general public.
--

c.c. – Doug Herr, Environmental & Facilities Supt.
Randy White, Senior WTP Operator

03CouncilwaterreportMarch 2015

January, 2018

**Monthly Summary Report
Water Systems**

**Prepared by: Randy White, ORO
Senior Water Treatment Plant Operator**

Dated: February 14, 2018

1) **Introduction:**

This report contains the major maintenance activities and operational events that occurred during the month of January 2018 at the Water Treatment Plant - Water Works # 220000978 and the Airport Groundwater Well Water Works No. 849N7DGE0 (Precedes Airport Groundwater Well Water Works No. 26002736). This information report has been prepared for Council to better understand how the water systems they own and operate are maintained on a monthly basis. Also, this report will assist Council as Directors of the Corporation in exercising its obligation to meet a reasonable Standard of Care as outlined in Section 19 of the Safe Drinking Water Act.

A NEW drinking water system at the Airport was put into service August 01, 2017. The system is classified as a Small Drinking Water System, System No. 849N7DGE0 which falls under the requirements of Ontario Regulation 319/08 – Small Drinking Water Systems. The old drinking water system, Airport Groundwater Well Water Works # 26002736 has been decommissioned.

2) **Flow Data:**

Water Treatment Plant: See attached spreadsheet.

Airport Groundwater Well – Raw water flow data: 50.0 m3 as of February 10, 2018. (7.2 m3 used in January).

3) **Microbiological (Health Related) Water Analysis - Main Water System No. 220000978:**

Water Treatment Plant (treated): 5 samples taken no adverse results

Water Treatment Plant (raw): 5 samples taken no adverse results

Water Distribution System: 20 samples taken where 25% of samples were tested for heterotrophic plate count (HPC) - no adverse results.

We take microbiological samples on a weekly basis, which includes 1 raw sample, 1 treated sample and 4 distribution samples. The 4 distribution samples are taken at different locations throughout the distribution system.

Water distribution samples taken at the following locations:

- | | | | |
|-----------------------|-----------------------|------------------------|--------------|
| 1. 740 Scott St. | 2. 1036 Victoria Ave. | 3. 901 Wright Ave. | 4. W. Tower |
| 5. 523 First St. E. | 6. 1103 Church St. | 7. 1324 King's Hwy. | 8. W. Tower |
| 9. 901 Wright Ave. | 10. 122 Scott St. | 11. 810 King's Hwy. | 12. W. Tower |
| 13. 740 Scott St. | 14. 1150 Portage Ave. | 15. 901 Wright Ave. | 16. W. Tower |
| 17. 1111 First St. E. | 18. 1104 Church St. | 19. 1036 Victoria Ave. | 20. W. Tower |

4) Microbiological (Health Related) Water Analysis - Airport Groundwater Well No. 849N7DGE0:

New drinking water system put on line August 01, 2017. No treatment required as the Airport groundwater tested negative for bacteria.

The Airport drinking water system is to be sampled and tested for bacteria once every three (3) months in accordance with Section 25 – Microbiological Sampling and Testing of the Small Drinking Water Systems Regulation, O. Reg. 319/08.

Water distribution sample taken January 15, 2018 – no adverse results.

5) Free Available Chlorine Residual (FAC) - Main Water System No. 220000978:

FAC residuals are taken at a minimum daily at both the Water Treatment Plant and within the Water Distribution System.

6) Free Available Chlorine Residual (FAC) - Airport Groundwater Well System No. 849N7DGE0:

New drinking water system put on line August 01, 2017. No treatment required as the Airport groundwater well tested negative for bacteria.

7) Maintenance Activities at the WTP:

Jan. 04th - cleaned top and bottom tanks on the poly unit.
- cleaned all four (4) check valves on the poly unit.

Jan. 09th - cleaned the troughs in Clarifier No. 2.

Jan. 12th - calibrated the Distribution Chlorine Analyzer.

Jan. 16th - worked on air compressors.

Jan. 17th - greased clarifier chains, gears and bearings.

Jan. 24th - ran standby generator for an hour.

Jan. 25th - cleaned top and bottom tanks on the poly unit.
- cleaned all four (4) check valves on the poly unit.

8) **Water Complaints:**

- Poor Pressure – 0 complaints:
- Water quality – 0 complaints:

9) **Other Miscellaneous Information:**

Jan. 02nd - took weekly routine micro samples.

Jan. 08th - took weekly routine micro samples.

Jan. 15th - took weekly routine micro samples.
- took routine micro sample at the Airport.

Jan. 16th - received a shipment pf Liquid Alum.

Jan. 19th - took grab samples off the filters.

Jan. 22nd - Ministry of the Environment and Climate Change (MOECC) inspection.
- took weekly routine micro samples.

Jan. 23rd - Ministry of the Environment and Climate Change (MOECC) inspection.

Jan. 29th - took weekly routine micro samples.

10) In order to acknowledge that all levels of responsibility within the Corporation of the Town of Fort Frances have received and reviewed this monthly report, it is necessary to sign-off in the appropriate location below:

- Randy White, ORO, Senior WTP Operator: _____
- Doug Herr, Environmental & Facilities Supt.: _____
- Travis Rob, Manager of Operations & Facilities: _____
- Doug Brown, CAO: _____
- Paul Ryan, Chair O& F Exec Committee: _____
- Roy Avis, Mayor: _____
- June Caul, Councillor: _____
- John Albanese, Councillor: _____
- Wendy Brunetta, Councillor: _____
- Doug Kitowski, Councillor: _____
- Ken Perry, Councillor: _____

Note: Once all signatures have been obtained, the report will be distributed and made available to the public. If you have any questions, please feel free to contact myself or Randy White, Senior WTP Operator at 274-2325.

Monthly Report January 2018

Operating Data	Units	*MAC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	Average
		or Range																																	
Flow rates																																			
Raw Water	10^3 M^3	17	5.30	5.46	5.23	5.23	5.11	5.40	5.32	4.98	5.27	5.25	5.22	5.22	5.17	5.20	5.30	5.25	4.97	5.35	5.24	5.22	5.24	5.20	5.21	5.02	4.93	5.30	5.42	5.31	5.01	5.26	5.17	161.76	5.22
Peak Instantaneous - Raw Water	L/s	n/a	61.15	61.09	61.08	61.03	61.07	61.07	61.20	61.17	61.08	61.17	61.09	61.14	61.05	61.06	61.12	61.00	60.94	60.97	60.91	60.85	60.99	60.92	60.84	60.94	61.20	61.21	61.15	61.15	61.18	61.11	61.47	1893.40	61.08
Treated Water	10^3 M^3	17	3.90	3.94	3.79	3.83	3.73	3.94	3.92	3.75	3.92	3.92	3.85	3.80	4.05	3.74	4.11	3.93	3.65	4.03	3.84	3.76	3.85	3.93	3.87	3.59	3.95	3.76	3.90	3.83	3.68	3.75	3.67	119.18	3.85
Peak Instantaneous - Treated Water	L/s	n/a	63.21	61.84	63.79	62.82	63.44	62.59	62.71	62.81	64.40	64.99	64.43	64.12	90.66	77.13	63.88	64.45	64.57	64.43	64.69	63.91	63.17	63.28	64.45	80.73	79.07	63.59	63.08	62.67	62.29	64.44	63.87	2045.51	65.98
BackWash Water	10^3 M^3	n/a		0.280	0.163	0.249		0.279	0.268	0.248	0.277		0.311	0.247	0.551			0.247	0.279		0.273	0.243	0.276		0.274	0.220	0.281	0.273	0.236	0.279	0.275	0.240	0.279	6.548	0.273
Fluoride Information																																			
Fluoride Residual - Treated Water	mg/l	0.5 to 0.8	0.56	0.55	0.55	0.56	0.55	0.56	0.55	0.52	0.54	0.50	0.50	0.52	0.53	0.50	0.53	0.55	0.57	0.57	0.57	0.56	0.56	0.57	0.58	0.57	0.58	0.57	0.58	0.57	0.57	0.57	0.57	17.13	0.55
Turbidity Information																																			
Raw Water	NTU	n/a	0.86	0.93	0.91	0.96	0.99	0.90	0.93	0.95	0.96	0.93	0.95	0.94	0.94	0.91	0.89	0.82	0.77	0.73	0.60	0.79	0.75	0.63	0.52	0.47	0.50	0.46	0.57	0.55	0.49	0.50	0.47	23.57	0.76
Settled Water	NTU	n/a	0.14	0.13	0.14	0.14	0.12	0.11	0.12	0.14	0.14	0.15	0.14	0.14	0.16	0.14	0.16	0.17	0.16	0.16	0.14	0.12	0.11	0.12	0.12	0.11	0.12	0.11	0.10	0.11	0.11	0.12	0.11	4.06	0.13
Treated Water	NTU	1	0.06	0.06	0.05	0.06	0.09	0.07	0.09	0.07	0.06	0.06	0.07	0.06	0.05	0.06	0.05	0.05	0.07	0.07	0.06	0.05	0.09	0.08	0.08	0.06	0.06	0.06	0.05	0.08	0.06	0.07	0.07	2.02	0.07
Other Operating Parameters																																			
pH - Treated Water	no units	6.5 to 8.5	7.27	7.10	7.12	7.15	7.17	7.08	7.11	7.19	7.18	7.20	7.24	7.21	7.25	7.23	7.15	7.19	7.22	7.16	7.24	7.26	7.27	7.13	7.14	7.18	7.16	7.13	7.17	7.20	7.18	7.09	7.10	222.47	7.18
pH - Settled water	no units	n/a	6.26	6.24	6.29	6.3	6.35	6.27	6.37	6.27	6.26	6.31	6.2	6.19	6.05	6.1	6.31	6.28	6.17	6.14	6.2	6.34	6.2	6.13	6.18	6.18	6.19	6.16	6.22	6.31	6.18	6.17	6.16	192.98	6.23
pH - Raw Water	no units	n/a	7.06	7.08	7.05	7.01	7.07	7.00	7.00	6.97	7.10	7.01	6.89	7.01	6.91	6.98	6.92	6.95	6.87	6.87	6.84	6.90	6.92	6.86	6.91	6.89	6.86	6.89	6.81	6.88	6.94	6.94	6.95	215.34	6.95
FAC - Treated Water	mg/l	0.2 to 4	2.28	2.34	2.32	2.26	2.24	2.28	2.31	2.32	2.20	2.18	2.17	1.90	2.34	2.60	2.38	2.46	2.44	2.18	2.13	2.12	2.15	2.11	2.07	2.15	2.04	2.20	2.15	2.12	2.20	2.14	2.13	68.91	2.22
Total Chlorine Residual Treated	mg/l	0.3 to 7	2.46	2.46	2.42	2.38	2.48	2.56	2.58	2.60	2.40	2.30	2.26	2.22	2.42	2.76	2.48	2.62	2.58	2.32	2.26	2.28	2.30	2.40	2.36	2.44	2.28	2.42	2.20	2.32	2.46	2.46	2.38	74.86	2.41
Temperature	C	15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	62.0	2.0
Fluoride used (Total Daily Consumption)	kg	n/a	22.0	22.00	20.0	20.0	20.0	27.0	15.0	18.0	13.0	16.0	15.0	15.0	14.0	14.0	15.0	19.0	22.0	23.0	23.0	22.0	22.0	21.0	21.0	20.0	25.0	20.0	21.0	20.0	19.0	19.0	21.0	604.00	19.5
Chlorine used (Total Daily Consumption)	kg	n/a	21.0	21.0	20.0	20.0	20.0	20.0	21.0	21.0	19.0	20.0	21.0	21.0	15.0	20.0	22.0	22.0	22.0	19.0	21.0	20.0	20.0	20.0	20.0	19.0	16.0	22.0	20.0	21.0	18.0	21.0	623.00	20.1	
Soda ash (Total Daily Consumption)	kg	n/a	185.5	191.1	183.1	183.1	178.9	189.0	186.2	174.3	184.5	183.8	182.7	182.7	181.0	182.0	185.5	183.8	174.0	187.3	183.4	182.7	183.4	182.0	182.4	175.7	172.6	185.5	189.7	185.9	175.4	184.1	181.0	5661.60	182.6
Soda Ash - Dosage	mg/l	n/a	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	1085.00	35.0
Alum residual - (Total Daily Consumption)	kg	n/a	185.5	191.1	183.1	183.1	178.9	189.0	186.2	174.3	184.5	183.8	182.7	182.7	181.0	182.0	185.5	183.8	174.0	187.3	183.4	182.7	183.4	182.0	182.4	175.7	172.6	185.5	189.7	185.9	175.4	184.1	181.0	5661.60	182.6
Alum residual - Dosage	mg/l	n/a	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	1085.00	35.0
Alum residual - Treated Water	mg/l	0.1	0.01	0.02	0.02	0.01	0.04	0.05	0.04	0.05	0.04	0.04	0.05	0.04	0.05	0.05	0.04	0.04	0.03	0.04	0.03	0.04	0.06	0.06	0.04	0.03	0.04	0.03	0.04	0.04	0.04	0.03	0.04	1.18	0.04
Poly bags added (25 kg bags)	kg											1.0					0.5									0.5								62.5	

Flow Data	January	Units	2016		2017		2018	
			Day of the Month		Day of the Month		Day of the Month	
Total Raw Water	m ³			158340		168830		161760
Raw Maximum Day	m ³		Friday 01st	5440	Monday 14th	5640	Tuesday 02nd	5460
Raw Minimum Day	m ³		Monday 25th	4820	Tuesday 26th	5140	Thursday 25th	4930
Raw Average Daily Consumption	m ³			5110		5450		5220
Total Treated Water	m ³			118110		114550		119180
Treated Water Maximim Day Consumption	m ³		Monday 18th	4130	Friday 05th	4130	Monday 15th	4110
Treated Water Minimim Day Consumption	m ³		Saturday 02nd	3340	Sunday 02nd & 25th	3460	Wednesday 24th	3590
Treated Water Average Day Consumption	m ³			3810		3700		3850
Daily Average Per Household Consumption Rate	m ³			1.007		0.978		1.018
* Daily Average Per Person Consumption Rate	m ³			0.477		0.463		0.482
Monthly Averages - Operating Parameters WTP:								
FAC Residual - Treated Water	mg/L			2.18		2.25		2.22
Total Chlorine Residual - Treated Water	mg/L			2.38		2.46		2.41
Aluminum Sulphate - Raw Water	mg/L			35.0		35.0		35.0
Aluminum Sulphate - Treated Water Residual	mg/L			0.04		0.04		0.04
Fluoride - Treated Water	mg/L			0.61		0.54		0.55
Soda Ash - Raw Water	mg/L			35.0		35.0		35.0
PH - Adjusted	mg/L			7.32		7.24		7.18
Temperature	C			2.1		2.5		2.0
Quantity of Chemical Used:								
Aluminum Sulphate	kg			5541.9		5909.1		5661.6
Polyelectrolyte	kg			62.5		75.0		62.5
Chlorine Gas	kg			617		647		623
Soda Ash - Used for PH Adjustment	kg			5541.9		5909.1		5661.6
Fluoride	kg			470		553		604

- * The Canadian Average is 450 Litres (0.45 m³) per day.
- * Population is 7986
- * Number of Households is 3783

February 21, 2018

Report To: Administration and Finance Executive Committee

From: Operations and Facilities Executive Committee

RE: Request dated January 17, 2018 From Boundary Waters Dragon Boat Festival

On February 12, 2018 a request was brought forward from the Boundary Water Dragon Boat Festival requesting assistance from the Town to hold the 7th annual International Boundary Waters Dragon Boat Festival on Saturday June 30, 2018. I have taken the liberty to only comment on the items that are directly related to the Operations and facilities division:

Item 2: The use of picnic tables, with pickup and drop off to be organized by the Committee - Town will provide picnic tables where the Festival volunteers will be responsible to have the picnic tables delivered to the event site, properly located within the site and returned after the event. However the Boundary Waters Dragon Boat Club will be responsible to wash down and clean up the picnic tables after they have been utilized. Co-ordinate through Travis Rob, Operations & Facilities Manager at 274-9893.

Item 4 and 5: Allow for the closure of Front Street from the Hallett to the Marina, and further provide signage to facilitate the road closure.

The organizers will be responsible to arrange with Milt Strachan, Transportation Superintendent for signage and barricades to be dropped off on site Friday prior to the event. The organizers will be responsible to setup and take down the barricades before and after the event. The barricades will be picked up on the first business day after the event.

Item 6: Allow Festival committee to attach pennants, signs & banners to streetlight poles, fencing and other creative places with the assurance that no damage will be done to the infrastructure and the material will be promptly removed after the event - The installation of banners, signs & pennants should not create a safety hazard to pedestrians walking or riding bikes along the Waterfront walkways. Also motorists' sight lines or vision should not be obstructed when driving along Front Street.

Item 8: Ensure Extra Garbage Cans at the Site - Additional garbage containers can be set out for the event. However the O & F division is not in a position to provide manpower to pick-up garbage at the end of the event day. The O&F Division will collect the garbage on Tuesday July 3, 2018.

Further for the 2018 event the committee is looking to host, again, the international tug of war with International Falls. To facilitate this the committee is looking for additional items, again those directly affecting the Operations and Facilities Division will be commented on.

Item 9: Use of the Tug of war rope – The rope is stored at the Public Works yard and is ready for use. Arrangements can be made with Milt Strachan, Transportation Superintendent to have the rope available prior to the event.

Item 11: Closure of the Front Street from the Marina to Minnie Avenue from 12:00pm to 4:00pm on June 30, 2018. – There will need to be a lane maintained to the launch and Sorting Gap from Minnie Avenue at all times. Additional barricades can be organized when the original road closure is setup.

Other divisions within the Town's organization will deal with the other matters requested in the letter dated January 17, 2018.

The Operations & Facilities Executive Committee Recommends the following:

- 1) That the Operations & Facilities Division continues to provide in-kind services for **item No. 2** as outlined in the January 17, 2018 letter from Mr. Greg Thorstad. However the Boundary Waters Dragon Boat Club will be responsible to wash down and clean up the picnic tables after they have been utilized.
- 2) That permission is granted to the Boundary Waters Dragon Boat Club in regard to **items No. 4, 5, 9 and 11** in accordance with the guidelines listed above.
- 3) **Item No. 7** – The Town will ensure that additional available garbage containers will be provided as requested. However if extra garbage dumpsters are required on site, and a garbage pick-up at the end of the day- these costs and services are the responsibility of the Boundary Waters Dragon Boat Club and not the Town.

Respectfully Submitted

Paul Ryan, Chairman
Operations & Facilities Executive Committee
2018Feb Dragon Boat Request

February 21, 2018

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities and Patrick Briere, By-Law Enforcement Officer

RE: Referral from Economic Development Advisory Committee – Urban Trees

At the November 6, 2017 meeting of the Economic Development Advisory Committee a matter regarding urban trees was referred to Operations and Facilities Executive Committee with input from the Planning & Development Executive Committee.

Over the last number of years, the issue of trees placed within the Town boulevards has been dealt with through the Operations and Facilities Division as required to maintain the infrastructure within the boulevard as well as to maintain public health and safety. Through 2017 the topic of boulevard trees came to the forefront as the Town undertook works to reconstruct the sidewalks along the 200 block of Scott Street as well as the full road reconstruction along Second Street between Portage Avenue and Mowat Avenue.

The issues with the trees, in both of these instances were that the roots were causing heavy damage to the Town's infrastructure. The primary reason for replacing the sidewalk on the 200 block of Scott Street was due to the tree roots heaving the sidewalk. There were property owners with damage being caused to their building foundations as well as roots propagating into building sewers causing blockages. On Second Street, the trees had, in places, grown so large that the bases were encroaching on the services and excavation could not be completed without the removal of the tree, in addition and much the same as Scott Street, the tree growth was causing damage to the sidewalk and curb as well as sewer services. When trees get to be the size that was seen on Second Street, it would be stressful to the tree to excavate to the depth required for a road reconstruction in such proximity, and due to the need to align the road with both intersections the new infrastructure would have to be installed, again, directly adjacent to the tree, resulting in failure within a remarkably short duration.

The Town of Fort Frances roadways are typically 10m wide within a right of way that is 20m wide. This means that, provided the roadway is centred within the right of way, the boulevard area is 5m wide on each side. Typically, the Town endeavours to install sidewalks on all roadways and in many areas sidewalks are on both sides of the street. Sidewalks are 1.5m in width leaving 3.5m of useable space remaining for the installation of utility infrastructure such as natural gas, power, street lighting, communications and in some instances storm sewer. In the winter time we rely on this space in the boulevard to push snow off of the roadway and place snow from sidewalks and lanes.

The information provided from EDAC included the guide put out by the City of Toronto for the installation of trees within boulevards. The first thing that is very apparent and a key difference in this guide compared to the Town of Fort Frances is that they only dedicate a 0.46m buffer zone between the roadway and the start of the planting zone for snow. Given the snow accumulations that are received in Fort Frances and taking into consideration the potential impacts road salt has on tree health, a 1m buffer would be a minimum to ensure sufficient snow storage and buffer to promote tree health. When looking at the recommended minimum boulevard width, and a larger required buffer space for Fort Frances, the boulevards in the Town of Fort Frances are simply not large enough.

There are new technology systems that can be utilized for the installation of trees within boulevards where an engineered and premanufactured structure is placed prior to the planting of the tree, or an engineered selection of specialized soils are used to control and limit the growth of roots to help protect infrastructure. These methods drive the cost of tree installation up substantially and make planting a new tree along an existing roadway difficult if not impossible. This makes a large-scale replacement project cost prohibitive based on our municipal budget.

The benefits of trees are well researched and well documented, however a walk down the Town's sidewalks will show that the damages that can be caused by Trees is extensive as well. Because of the ongoing damages seen in the Town's infrastructure, the installation of Trees within the Town of Fort Frances has been focused within parks and greenspaces away from underground and overhead infrastructure, not in boulevards.

Respectfully Submitted



Travis Rob, P.Eng

Patrick Briere

<p>Council approval of this report will ensure that the documents provided by Mr. Cumming are received by Council and that no further action be taken.</p>

Manager of Operations and Facilities

By-Law Enforcement Officer

February 7, 2018

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities

RE: Review of Sidewalk Snow Removal By-Law

Background

The Town of Fort Frances has a by-law in place respecting the removal of snow from sidewalks, this by-law is known as by-law 181 and was enacted in 1909. The current by-law outlines the responsibilities of property owners with sidewalks fronting their properties regarding the removal of snow and ice to ensure the safe passage of pedestrians in the winter months. At the November 27, 2017 meeting of Council, a letter regarding snow removal on Scott Street was referred to the Operations and Facilities Executive Committee where a recommendation was brought forward to, in part, review the current snow removal by-law regarding sidewalks, particularly regarding sidewalks in the downtown core.

Legal Requirements

The Town utilizes the provisions of Ontario Regulation 239/02, Minimum Maintenance Standards for Municipal Roadways to outline how we care for our roadways in the winter months as this regulation is very prescriptive in nature for roadways. For Sidewalks O.Reg 239/02 only stipulates requirements for addressing surface discontinuities not snow removal. Currently the Town owns and operates two sidewalk machines for the removal of snow from the sidewalks throughout the Town, and in addition crews manually remove snow from intersections within the downtown core as well as the museum court yard, Civic Centre and Rainy Lake Square. All sidewalks in the downtown core are currently cleared by the property owners whereby the snow is added to the banks left by the graders at the curb line to be collected and removed by Town forces during night operations.

By-Law Review

Operations and Facilities in concert with By-Law Enforcement went out to take a look at other Municipalities and their by-laws respecting the same as well as review the provisions of the current by-law. By-law 181 is still used regularly respecting the sidewalks in the downtown core specifically and is still enforceable, so the intent was not to stray too far from the provisions of this by-law in any new by-law that was created. Most municipalities do not have by-laws respecting the removal of snow from sidewalks so gathering other by-laws was not an easy task, however Kenora did provide us with a copy of their by-law for review and consideration in the reworking of our by-law. Attached to this report is a copy of the draft by-law as well as a copy of the current By-Law 181.

It is the recommendation of Operations and Facilities Executive Committee to:

1. Accept the Draft By-Law to Regulate the Depositing and Removal of Snow and Ice from Privately Owned Property onto Town Owned or Town Maintained Sidewalks and Road Allowances
2. Bring a by-law forward at the next council meeting to repeal By-Law 181 and enact the attached.
3. Apply to the Ministry of the Attorney General for short form wording to simplify the enforcement and levying of fines in respect to this by-law

Respectfully Submitted



Travis Rob, P.Eng

Council approval of this report will ensure the following:

- 1. Accept the Draft By-Law to Regulate the Depositing and Removal of Snow and Ice from Privately Owned Property onto Town Owned or Town Maintained Sidewalks and Road Allowances**
- 2. Bring a by-law forward at the next council meeting to repeal By-Law 181 and enact the attached.**
- 3. Apply to the Ministry of the Attorney General for short form wording to simplify the enforcement and levying of fines in respect to this by-law**

Manager of Operations and Facilities

2018Feb Sidewalk Snow Removal By-Law2

A By-Law to Regulate the Depositing and Removal of Snow and Ice from Privately Owned Property onto Town Owned or Town Maintained Sidewalks and Road Allowances

WHEREAS the Municipal Act, 2001 S.O 2006, c .32, Sched. A, s. 8. as amended provides that a single-tier municipality may pass by-laws respecting the health, safety and well-being of the inhabitants of the municipality; and

AND WHEREAS the Municipal Act, 2001, as amended, provides that if a municipality has the authority under this or any other *Act* or under a by-law under this or any other *Act* direct or require a person to do a matter or thing, the municipality may also provide that , in default of it being done by the person directed or required to do it, the matter or thing shall be done at the person's expense, and may recover the costs by adding them to the tax roll and collecting them in the same manner as taxes;

AND WHEREAS it is expedient to replace By-Law 181 with this new by-law

NOW THEREFORE the Council of the Corporation of the Town of Fort Frances
HEREBY ENACTS as follows:

1. Short Title

The short title for this by-law is the "The Snow Removal By-Law."

2. Definitions:

2.1 The following terms are defined for the purpose of this by-law:

"By-law Enforcement Officer" means an individual appointed by the Council of the Town pursuant to the Police Services Act, RSO, 1990, c. P. 15, as amended;

"Town" means The Corporation of the Town of Fort Frances;

"Council" means the municipal council of the Town;

"highway" includes a common and public highway, street, avenue, lane, bridge, any part of which is intended for or used by the general public for the passage of vehicles and includes the area between the lateral property lines thereof, which is under the jurisdiction of the Town;

"ice" means the solid form of water, produced by freezing;

"owner" means a registered owner, occupant or tenant of a property, or a person who, for the time being or permanently, is managing or receiving the rent from a property, whether on his or her own account or on account of an agent or trustee of any other person, or any one of the aforesaid;

“person” means any individual, owner or operator of vehicle, corporation, partnership, company, association or party and the heirs, executors, administrators or other legal representative of such person to whom the context can apply according to the laws; shall include any group of persons comprising a society or other organization and shall include the plural wherein the context requires;

“Police Officer” means an officer of Ontario Provincial Police;

“sidewalk” means that part of the highway meant for pedestrian use, typically indicated by some sort of concrete or paved walkway;

“snow” includes precipitation in the form of ice crystals and often agglomerated into snowflakes, formed directly from the freezing of the water vapour in the air.

3.0 General Prohibitions:

3.1 No person shall move, or cause to be moved, any snow or ice from privately-owned lands onto municipally owned lands; a boulevard, sidewalk or roadway.

3.2 No Owner of a property fronting a sidewalk shall allow accumulation of snow, hail, water or ice on the sidewalk to remain after 10 o clock the morning following the fall of snow, hail, ice or water.

3.3 No Owner of a property fronting near a street, sidewalk or thoroughfare shall permit snow or ice accumulation to fall upon the street, sidewalk or thoroughfare from any roof, eve, awning, sign or other appurtenance.

3.4 No person shall remove, or cause to be removed, any snow or ice in a manner that would damage a sidewalk, curb or highway.

3.5 No person shall pile, redistribute or otherwise cause the accumulation of any snow or ice to obstruct traffic, the view of traffic, or obstruct in any way the movement of snow clearing equipment under the jurisdiction of the Operations and Facilities Division.

4.0 Exemption:

4.1 Any municipal and/or municipally contracted snow clearing, and snow removal operations are exempt from this by-law.

4.2 Upon written request; the Operations and Facilities Manager or designate may exempt or exempt with conditions any person/s from the requirements of this by-law.

5.0 Enforcement:

5.1 Enforcement of this By-law may commence upon receipt of a signed written complaint or upon receipt of an issue tracking complaint, from any resident who considers him/herself to be aggrieved by any condition not in compliance with this by-law.

5.2 Enforcement of this By-law may commence upon a request from the Ontario Provincial Police, By-Law Enforcement Officer or from the Town of Fort Frances Operations and Facilities Manager or designate.

5.3 A By-law Enforcement Officer, Police Officer or Operations and Facilities Manager or designate are responsible for the enforcement and provisions of the By-law and are authorized to enter on any land at any reasonable time for the purposes of carrying out an inspection to determine whether or not this by-law is being complied with.

5.4 Where an owner fails to comply with any provision of this by-law, an Order may be issued to the owner requiring compliance. The Order will give reasonable particulars of the reasons why and will indicate the time for compliance.

5.5 Where an Order has been issued and compliance has not been achieved within the required time period as set out in the Order, the Town may, through its employees or agents or persons acting on its behalf, carry out the Order at the Owners expense, and all expenses incurred may be added to the tax roll and collected from the Owner of the property in the same manner as municipal taxes.

6.0 Repeal

6.1 By-Law No. 181, as amended is hereby repealed

This By-Law shall come into force and take effect on the final passing thereof.

READ THREE TIMES and finally passed in open Council this ____th Day of _____, 2018

February 21, 2018

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities

RE: Request From EDAC to Review Sewer and Water Infrastructure Installation Costs.

At the December 4, 2017 meeting of the Economic Development Advisory Committee, a recommendation was referred to the Operations and Facilities Executive Committee with input from the Planner to investigate a flat rate for sewer and water service installations for residential properties within the Town of Fort Frances. This request is not a simple one as there are numerous factors that affect the price to install sewer and water into a property. Further the costs outlined within this report are all assuming that there is already sewer and water infrastructure fronting the property in question that has sufficient capacity to accept additional connections.

Primary Factors Affecting servicing:

- Distance from main to property line
- Main depth
- Curb and gutter
- Sidewalk
- Road surface material type and thickness
- Required service size
- Location of other utilities within excavation
- Soil type
- Frost or other unforeseen obstacles

Currently the installation of new services are completed by the Town within the road right of way at a cost plus 10% plus road restoration model. The town does everything in its power to limit the expenses when completing these types of works to the benefit of the property owner. Additionally the Town will include services in a road works tender to help get a preferential rate for these works when notification is given well in advance. Attached to this report is a listing of the private services that have been installed by the Town and the associated costs to complete those works over the last three years.

As can be seen, the costs are widely varying due to the factors listed above. To move away from a cost-plus system would mean that one property owner would be subsidising another to cover the costs of service installations where one is lower than the flat rate and the other is higher. The other factor to consider is the material costs and changes over time. A flat rate system would have to be reviewed annually as the costs of materials change annually and usually more than the inflationary increases seen within our use fee by-law, a good example of this is asphalt costs. This would mean that an annual review of costs would have to be completed and the change to this fee would have to be completed to reflect true costs.

Should council choose to shift to a flat rate model for this type of installation the following should be imposed as limitations on the fee, based on consultation with the Municipal Planner:

1. The lot must be an existing serviced lot
2. The Property must have, or be in the process of having a single detached dwelling being constructed under Building Permit

3. ¾" copper water service and 6" PVC Sanitary service sizes only
4. Only applies to one service per lot
5. Where sewer and water infrastructure is available and suitable to be connected to
6. Only for installations between May 1 and October 15

Given the variable nature in servicing costs throughout town and in an effort to provide servicing in a fair and equitable manner, it is the recommendation of Administration that the fees for service installation remains a cost-plus model.

Respectfully Submitted

A handwritten signature in black ink, appearing to read 'Travis Rob', with a stylized flourish at the end.

Travis Rob, P.Eng

Council approval of this report will ensure that there will be no change to the way that sewer and water services installations are invoiced to the customers.

Manager of Operations and Facilities

Sanitary and Water Service Installation Costs - 2014 to 2017

Location	Month/Year Installed	Sanitary Sewer Installation Cost	Water Service Installation Cost	Sewer & Water Service Installation Cost	Service Depth	Soil Conditions	Utilities Encountered	Remarks
228 Sixth St. E.	November-14			\$8,836.81	1.95m - Water 1.5m - Sewer	Good, Dry	None	No frost. Existing curb/gutter and sidewalk left intact.
1316 Sixth St. E.	August-15		\$4,503.96		2.5m	Good, Dry		Ditches, no curb/gutter or sidewalk
103 Sixth St. E.	May-15			\$11,791.18	2.5m - Water 1.8m - Sewer	Good, Dry	Gas main	Existing curb/gutter left intact.
130 Fifth St. E.	November-17	\$10,773.41			3.2m	Good, Dry	Two gas services	18" Frost Patch cost estimated - \$2,200
1009 Cornwall Ave. N.	July-17			\$14,818.99	2.1m - Water 2.6m - Sewer	Wet	Two gas mains	Ditches, no curb/gutter or sidewalk Ditches, no curb/gutter or sidewalk

Notes:

Almost every location is different:

1. May have to deal with different infrastructure - i.e.; curb/gutter/driveways, sidewalks, storm sewer, poles, etc.
2. Sanitary sewer and water main are at different depth throughout the Town.
3. The water main is generally on the north and east sides of the road right-of-ways. Properties being service on the north/east sides of the right-of-way will have less water service to install.
4. Residential properties along the highway will have to tend with thicker asphalt. Highway are generally up to 150 mm whereas residential streets are 50 mm.
5. Some locations you will have to deal with other utilities - i.e.: gas, bell, tbaytel, mill effluent line, etc.

February 7, 2018

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities

RE: Letter from Mr. Anthony J. Coen RE 360 Scott Street Storm Sewer Issues

The building at 360 Scott Street, known as the Bargain! Shop has been plagued with reoccurring issues with the roof drain backing up into the store every spring. Over the last number of years, the property owner has had the Town complete closed-circuit television inspections of the storm sewer connection to the property to identify the issue. At each inspection the Town representatives find the same issue and suggest to the property owner or agent the same remedy. It should also be noted that the only time that the Town is aware that the line backs up, is during spring freshet when the snow from the roof of the building is melting.

The storm sewer connection to this building takes water from the roof and carries this water under the roadway into the storm sewer main located under the south side of Scott Street. Due to the nature of this main, it is quite shallow in this area and well within the frost penetration depth. The pipe is in good condition, as is the main, and to date there have been no other reports of issues in any of the other buildings tied into this storm main. The storm sewer lateral from the building does show a dip in the line just before the connection to the main and as a result water will pond in this area.

The issue with this installation is that there is no heat trace line contained within the lateral. The lateral is approximately 13m in length under the roadway and within the frost. The mid season melts that occur typically periodically through the winter will contribute a small amount of water into the service each time, which will freeze prior to reaching the main and after a few of these occurrences, will cause the pipe to freeze solid. This type of storm connection is not uncommon throughout town, all are shallow and numerous connections have heat trace lines. At every instance when the Town has completed an inspection of the line, the suggestion is always given to get a heat trace line installed in this lateral to prevent freezing. Should the Town excavate this line to repair the dip within the line just before the main, the issue will still persist as the line will still be susceptible to freezing, it is long, and no heat trace is provided.

In Mr. Cohen's email he mentions debris in the line which after reviewing the video is correct, however the debris is just silty material likely washed off the roof over a number of years and settling into the pipe. There is no gravel or rock within the pipe which would indicate an issue with the integrity of the system.

Regarding the Salvation Army issue, which Mr. Cohen brings up in his letter, at that time the building was under renovations. In speaking with Mr. Tyson Dennis, Chief Building Official, the issue that caused the flooding in that building was internal. During the renovations the heat trace line for that building was removed and was never reinstated, the roof drain froze, causing the flooding. The heat trace was reconnected, and the issue was resolved.

Given the above information, Administration recommends that the owner of 360 Scott Street install a heat trace line within their storm sewer connection from the building to the main to prevent the line from freezing and protecting the property from flooding during periods of melting. Alternatively, a secondary discharge line could be installed within the building to overflow the system into the alley

where there is additional storm sewer infrastructure. Both of these options would be completed at the property owners cost.

Respectfully Submitted

A handwritten signature in dark ink, appearing to read 'Travis Rob', with a stylized flourish at the end.

Travis Rob, P.Eng

Council approval of this report will ensure that Operations and Facilities Division direct the Bargain! Shop to install a heat trace line within the roof drain and service to prevent the storm sewer service from freezing or alternatively installing an overflow line to the rear of the building at the property owners cost.

Manager of Operations and Facilities

2018Feb 360 Scott Street Storm Sewer Issue

From: Anthony Cohen (Gulf & Pacific) [<mailto:ACohen@gpequities.com>]
Sent: December-18-17 12:01 PM
To: Roy Avis <ravis@fortfrances.ca>
Cc: 'lakracer@yahoo.ca' <lakracer@yahoo.ca>; 53060@redapplestores.com; Travis Rob <trob@fortfrances.ca>
Subject: 360 Scott Street Fort Frances
Importance: High

Your Worship Mayor Avis,

For the last several years we have had a flooding problem at 360 Scott Street in Fort Frances. We have had different plumbers and tradesmen look at the problem. Both plumbers that we have used have identified the problem as being a Town of Fort Frances problem. The cause of the flooding is where the sewer line from the property meets the main Town of Fort Frances sewer line. There is a dip that causes water to back up according to 2 different plumbers. Also, significantly, the Manager of The Bargain! Shop informed me that when The Bargain! Shop was flooded, The Salvation Army across the street was flooded too at the same time. I was told to run a heat trace down the pipe of 360 Scott Street. I tried numerous times and never was able to get anyone to do it. I authorized the Town to run one if they could get someone to do it. I also authorized a camera to be run down the line and 2 cameras were run down the line. They show, according to the plumber that there is a problem underneath Scott Street where the Town sewer line meets our sewer line. I was told that the camera showed debris in the pipes (which would have backed into our sewer line from the Town sewer line). Both plumbers told The Bargain! Shop Manager and myself that the problem lies with the Town sewer line underneath Scott Street and that it is the Town's responsibility to fix.

I am totally frustrated because for the last several years I am trying to get this fixed and when I found out through the camera photos that the problem is with the Town's sewer pipe I am told by the Town that "it is my problem". I would ask you to please rectify this serious problem because there are a number of businesses that are suffering flooding because of this problem. I really appreciate you looking into this. Thank you.

Best regards,
Anthony j. Cohen

February 15, 2018

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 2018 Monthly Report**

As per the operating agreement, the attached document is the January 2018 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 – Sr. Operations Manager.

Yours truly,



Kelly Cunningham
Team Lead

For Larry Wachter
Sr. Operations Manager

**The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
January 2018 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 2018; 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 2018 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	3.3 mg/L	25 mg/L	15 mg/L	18.1 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	6.4 mg/L	25 mg/L	15 mg/L	34.8 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.22 mg/L	1.0 mg/L	0.9 mg/L	1.19 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	8.08 mg/L 5.02 mg/L					
Total Cl ₂ Residual		<0.01 mg/L (when in use)				
E-Coli		69.5 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 7.3 to 7.9; average pH was 7.7			
Temperature degrees C			Temperatures ranged from 8.5 to 10.0 C; average temperature of effluent was 9.1 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 January was 5458.1 m³/day. This represents 61% of the design average flow. Total treated flow for the month was 169201 m³.

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.

**The Town of Fort Frances accepted an additional 123 m³ of untested sewage from the New Gold mine site into the collection system in January.

INVENTORY

Chemical	End of Month Status	Units
Hypochlorite	1000 +/- @ 8.0% +3x205 L @ 12%	Liters
Alum	13.6 +/- @ 55 %	Cubic meters
Polymer	2 x 205 L drums	Liters

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 on the Fournier press
- Cleaned DO probes
- Drained and inspected teacup
- Replaced filter blower 2
- Greased flocculator seal bearing
- Greased all clarifier drives
- Replaced 5 fuses UV bank C
- Repaired sample line
- Thawed frozen sump line in aeration channel
- Replaced springs and balls in polymer check valves
- The Town replaced a hydraulic hose on the John Deere tractor
- Acid washed quartz sleeves UV banks A and B

Pump Stations:

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

PROCESS AND OPTIMIZATION ISSUES

Optimization of the new sludge thickener process continues to be hampered by deficiencies and unfinished work.

**The Town of Fort Frances accepted an additional 123 m³ of untested sewage from the New Gold mine site into the collection system in January.

SLUDGE SUMMARY

Asselin Storage and Transportation Limited hauled a calculated total of 128.9 m³ (13 bins) of thickened digested sludge to the Town of Fort Frances landfill site. The hauled sludge averaged 17.2 % TS for the month. Optimization has not been completed for the Fournier press as the polymer water booster pump is not installed and 18% TS was not met.

COMPLAINTS

There were no complaints during the report period.

BYPASS/OVERFLOW REPORT(S)

There were no bypass or overflow events during the reporting period.

COMMENTS

Plant power consumption for the month was 637 (x 180 multiplier) kWh.

Boiler inspections were completed, report to follow.

Screen and Dewatering Upgrades at the FFWWTP have been under way since May 30, 2016.

**The Town of Fort Frances accepted an additional 123 m³ of untested sewage from the New Gold mine site into the collection system in January.

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)

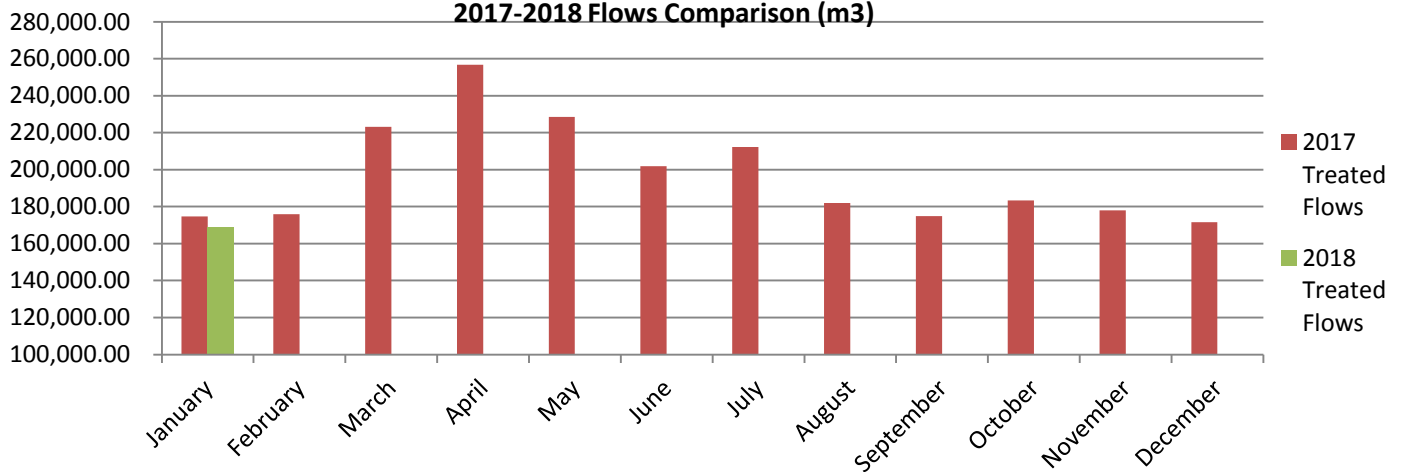
Month	Sewage Flows Year 2018					Usage	Calculated	Sludge	Removal Efficiency	
	Avg. Day	Max Day	Total	Total	Total	% Plant	Volume	Bins	CBOD5 0.967836257	
	Flow	Flow	Treated	ByPass	Volume	Capacity	Hauled	Hauled	Suspended Solids 0.958921694	
	m3	m3	Volume ML	Volume ML	ML		M3		Total Phosphorus 0.915384615	
January	5458.1	5955	169201		169201	61%	128.9	13		
February						0%				
March						0%				
April						0%				
May						0%				
June						0%				
July						0%				
August						0%				
September						0%				
October						0%				
November						0%				
December						0%				
Sum				0	169201		128.9	13		
Average	5458		169201		169201	61%	128.9	13.0		
Max		5955	169201		169201			13		
C of A	9000	18000								

	BOD5/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
	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	102.6	3.3	18.1	155.8	6.4	34.8	2.6	0.22	1.19	19.4	8.1	69.5
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
Average	102.6	3.3	18.1	155.8	6.4	34.8	2.6	0.22	1.19	19.4	8.1	69.5
Max	102.6	3.3	18.1	155.8	6.4	34.8	2.6	0.22	1.19	19.4	8.1	69.5
C of A		25	225		25	225		1.0	9.0	200	6.0	200

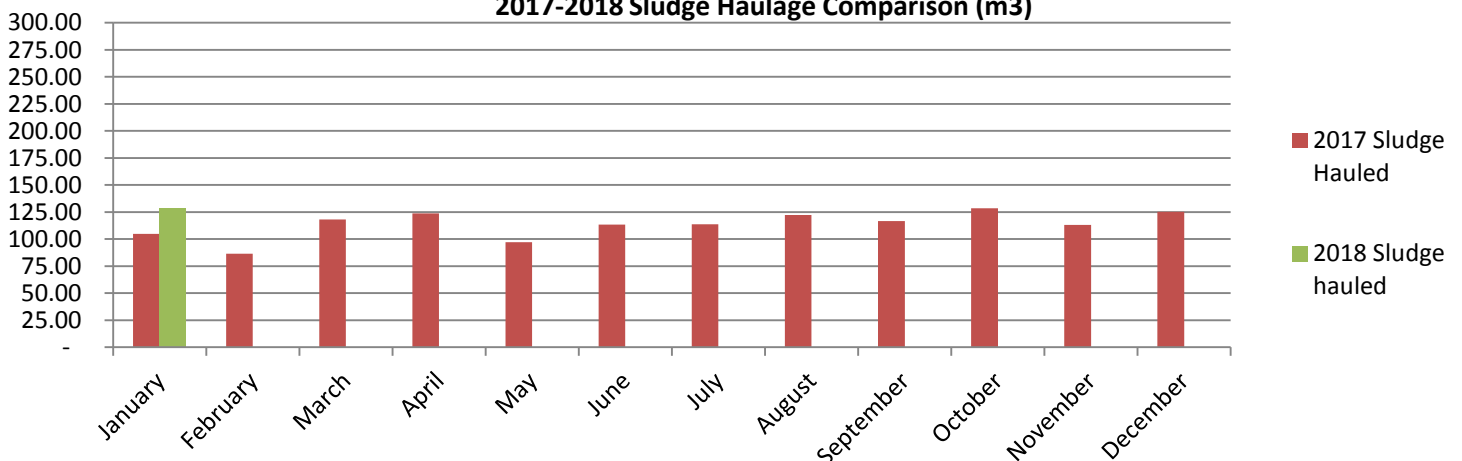
2017-2018 Comparison Chart

Month	2017 Treated Sewage	2018 Treated Sewage	% Variance 2017 to 2018	2017 Hauled Sludge	2018 Hauled Sludge	% Variance 2017 to 2018
	m3	m3	m3	m3 (calculated)	m3 (calculated)	m3
January	174,745.00	169,201.00	-3%	104.90	128.90	23%
February	175,956.00			86.50		
March	223,183.00			118.10		
April	256,759.00			123.70		
May	228,551.00			97.20		
June	201,914.00			113.50		
July	212,264.00			113.80		
August	181,956.00			122.20		
September	174,796.00			116.50		
October	183,450.00			128.50		
November	177,999.00			113.10		
December	171,598.00			125.10		
Totals	2,363,171.00	169,201.00	-1297%	1,363.10	128.90	-91%

2017-2018 Flows Comparison (m3)



2017-2018 Sludge Haulage Comparison (m3)



Workorder Summary Report

Report Start Date: Jan 1, 2018 12:00 AM

Report End Date: Jan 31, 2018 11:59 PM

Location: 1103*

Work Order Type: ADMIN,CALL,CAP,CORR,EMER,OPER,PM

Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
629306	0000129812	METER LEVEL MILLTRONIC EFFLUENT FLOW	1103, Fort Frances WPCP, Process, Process Control & Monitoring	CALL	REFURBISH/REPLACE/REPAIR	0		Plant Effleunt Alarm 1103	COMP		1/30/18 07:51 AM	1/30/18 07:58 AM	Plant Effluent Alarm -I arrived onsite to find the plants outfall to be excessive. I then checked SCADA and realized it was a false reading due to extreme cold weather. I then also completed a visual inspection and all was normal.
619953			1103, Fort Frances WPCP	PM	HEALTH AND SAFETY	1	MONTHS	Health And Safety Inspection (1m) 1103	COMP	1/1/18 12:00 AM	1/30/18 08:07 AM	1/30/18 08:07 AM	Monthly Inspection -Still some outstanding construction issues.
620375			1103, Fort Frances WPCP	PM	INSPECTION	1	MONTHS	Blowers/Motors Inspection/Service (1m/3m) 1103	COMP	1/1/18 12:00 AM	1/30/18 08:05 AM	1/30/18 08:05 AM	Monthly Blower Maint. -I greased all blowers and inspected air filters.
620383	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	1/1/18 12:00 AM	1/26/18 03:31 PM	1/26/18 03:31 PM	Teacup Centrifuge Inspection/Service (1m/3m/1y) 1103 -The teacup was drained for inspection. There was no debris found and the snail was drained and hosed for inspection. Lubrication was completed.

OPERATIONS AND FACILITIES DIVISION - PUBLIC WORKS AREA
OPERATIONS STATISTICS
November 2017

STAFFING

The following table is a breakdown of lost man shifts during the month:

	2016	2017
WSIB	0.00	0.00
WI/LTD	17.00	25.00
SICK DAYS	14.44	9.06
COMPASSIONATE LEAVE	0.00	0.00
FLOATERS	1.00	1.00
VACATION	20.25	25.81
BANKED TIME USED	15.44	16.25
OFF	2.25	1.97
STATUTORY HOLIDAYS	23.00	23.00
TOTAL	93.38	102.09

OVERTIME HOURS

Equivalent Straight Time Hours:

	2016	2017	2016	2017
	Nov	Nov	Year To	Year To
			Date	Date
ADMIN/FLIGHT THE BLIGHT	0.00	0.00	142.50	0.00
TRAVEL	0.00	0.00	2.50	14.00
ENGINEERING	0.00	0.00	8.00	7.50
INTERDEPARTMENTAL	0.00	0.00	14.75	50.50
PRIVATE WORK	0.00	0.00	30.50	6.75
RECYCLE/GARBAGE	0.00	0.00	31.75	22.75
ROADS	50.00	204.75	364.75	500.50
SEWER COLLECTION	32.00	32.75	396.50	247.75
SIDEWALKS	0.00	12.00	3.00	57.75
STORES	0.75	0.00	30.75	16.75
VEHICLE & EQUIPMENT	0.00	19.00	4.00	26.00
WATER TREATMENT PLANT	34.25	13.50	354.00	145.25
WATER DISTRIBUTION	7.50	25.75	593.50	277.00
TRAINING	0.00	0.00	0.00	2.25
TOTAL	124.50	307.75	1976.50	1374.75

TRANSPORTATION REPORT

November 2017

ROADS:

Storm Water Management – Urban:

- Cleaned debris from catchbasins

Storm Water Management - Rural:

- Removed beaver dams as required

Hard Top Maintenance:

- Levelled utility cuts – twice weekly
- Pothole patching as required
- Cleaned up all cement tools and equipment and put in storage for the winter

Loose Top Maintenance:

- Graded all loose top roads as required
- Graded lanes as required.

Roadside Maintenance:

- FFPC removed some problem trees from Town boulevards and Public Works crews cleaned up debris behind them on November 27, 28 and 29.

Winter Control:

- Two (2) events – November 2nd and 8th
- Plowed all roadways and lanes as required
- Sanded/salted roads as required
- Mixed additional sand/salt
- Removed snow from Water Treatment Plant parking lot

Traffic Operations:

- Repaired and replaced signs as required.
- Continued replacing signs that failed reflectivity.

Regular Maintenance:

- Garbage pickup - Tuesday and Friday - Downtown and Public Works Shop
- Assisted Engineering with locates and CCTV inspections.
- Assisted with tasks at Civic Centre as required.
- Maintenance checks at the Civic Centre as required
- Repaired deficiencies found in Routine Road Patrols

Buildings and Grounds:

- Cleaned Shop as required
- Cleaned vehicles and equipment as required.
- Cleaned up storage buildings and yards
- Stockpiled additional Granular A material on November 29th.

Private Work:**Sidewalks – Winter:**

- Cleaned snow and ice from Civic Centre sidewalks
- Cleaned snow and ice from Downtown corners
- Cleaned snow and ice from underpass sidewalk
- Plowed all sidewalks as required.

Sidewalks – Summer:**Vehicles and Equipment:**

- Preventive Maintenance - pre-trip inspections 5:30 -7:30 a.m. Monday to Friday
- Regular scheduled maintenance of all vehicles and equipment
- Maintenance and repairs, Fire Department, Water Treatment Plant, Memorial Sportsplex, Day Care, Handi-Van and Civic Centre vehicles as required.

Public Relations:

- Delivered barricades and stage to the 200 Block of Scott Street and set up detour for truck route for Scott Street concerts on November 2nd. Removed barricades, stage and detour the day following each concert.
- Scott Gosman supplied coverage for vacation, etc. at the Airport on November 1, 2, 3, 17, 18 and 19th.

Sewer and Water:

- Provided labour and equipment for Water Distribution and Sewer Collection repairs and maintenance.
- Handed out “Water Turn Off Advisories”, “Drinking Water Advisories” and “Lifting of Drinking Water Advisories” when required
- Issued “Delinquent Account Notices” and turned off water for non-compliance as required.
- Flushed and cleaned deadend sewer mains

Interdepartmental:

- Removed several dead ash trees from the Point Park
- Vacuum excavated for FFPC to install a utility pole on Minnie Avenue North on November 2nd.
- Removed Zamboni snow at the Memorial Sports Centre
- Disposed of old filters at the Civic Centre.

Recycling:

- Emptied glass recycling bin as required
- Pushed up piles in recycling building as required
- Loaded commercial recycling bin as required
- Cleaned up recycling yard as required.

Training:

- Bryan Patterson and Scott Gosman received training on the Sand Truck, Loaders and Tandem Trucks on November 23rd and 24th
- Employees received training on the new John Deere rubber tire backhoe on November 30th.

Health & Safety:

- A workplace inspection was done at the Public Works Building on November 28th.
- A Tailgate Meeting was held in the Public Works shop area on November 22nd.

Milt Strachan,
Superintendent of Transportation

OPERATIONS AND FACILITIES DIVISION - PUBLIC WORKS AREA
OPERATIONS STATISTICS
December 2017

STAFFING

The following table is a breakdown of lost man shifts during the month:

	2016	2017
WSIB	0.00	0.00
WI/LTD	0.00	32.00
SICK DAYS	9.34	4.75
COMPASSIONATE LEAVE	0.00	0.00
FLOATERS	7.50	1.00
VACATION	66.00	51.63
BANKED TIME USED	11.28	13.63
OFF	1.75	0.44
STATUTORY HOLIDAYS	75.00	72.00
TOTAL	170.87	175.45

OVERTIME HOURS

Equivalent Straight Time Hours:

	2016	2017	2016	2017
	Dec	Dec	Year To	Year To
			Date	Date
ADMINISTRATION	0.00	0.00	0.00	0.00
TRAVEL	0.00	0.00	0.00	14.00
ENGINEERING	0.00	0.00	4.00	7.50
INTERDEPARTMENTAL	0.00	2.25	30.25	52.75
PRIVATE WORK	0.00	0.00	22.50	6.75
RECYCLE/GARBAGE	0.00	4.00	25.25	26.75
ROADS	298.50	192.50	480.00	693.00
SEWER COLLECTION	19.00	52.00	477.25	299.75
SIDEWALKS	33.75	13.50	24.75	71.25
STORES	0.00	38.00	28.75	54.75
VEHICLE & EQUIPMENT	11.00	0.00	31.00	26.00
WATER TREATMENT PLANT	20.00	20.00	397.75	165.25
WATER DISTRIBUTION	0.00	12.00	517.25	289.00
TRAINING	0.00	0.00	4.00	2.25
TOTAL	382.25	334.25	2042.75	1709.00

TRANSPORTATION REPORT

December 2017

ROADS:

Storm Water Management – Urban:

Storm Water Management - Rural:

Hard Top Maintenance:

- Levelled utility cuts – twice weekly
- Pothole patching as required

Loose Top Maintenance:

Roadside Maintenance:

- FFPC removed some problem trees from Town boulevards and Public Works crews cleaned up debris behind them on December 4th and 5th.

Winter Control:

- Four (4) events – December 4th, 11th, 12th and 19th.
- Plowed all roadways and lanes as required.
- Sanded/salted roads as required.
- Stockpiled additional sand on December 1st.
- Removed snow from Downtown area twice
- Removed snow from Municipal parking lots twice
- Removed snow from OPP parking lot
- Five employee night shift for Winter Control went into effect on December 5th
- Removed snow from intersections along priority routes
- Removed snow piles from Cul-de-sacs

Traffic Operations:

- Repaired and replaced signs as required.
- Continued replacing signs that failed reflectivity.

Regular Maintenance:

- Garbage pickup - Tuesday and Friday - Downtown and Public Works Shop
- Assisted Engineering with locates and CCTV inspections.
- Assisted with tasks at Civic Centre as required.
- Maintenance checks at the Civic Centre as required
- Repaired deficiencies found in Routine Road Patrols

Buildings and Grounds:

- Cleaned Shop as required
- Cleaned vehicles and equipment as required.

Private Work:

- Supplied barricades for Bell Canada to suck out water from the Bell Manhole at Second Street and Central Avenue on December 13th.

Sidewalks – Winter:

- Cleaned snow and ice from Civic Centre sidewalks and applied ice melt as required
- Cleaned snow from underpass sidewalk and downtown corners and applied ice melt or sand/salt as required.
- Plowed all sidewalks as required.

Sidewalks – Summer:**Vehicles and Equipment:**

- Preventive Maintenance - pre-trip inspections 5:30 -7:30 a.m. Monday to Friday
- Regular scheduled maintenance of all vehicles and equipment
- Maintenance and repairs, Fire Department, Water Treatment Plant, Memorial Sportsplex, Day Care, Handi-Van and Civic Centre vehicles as required.

Public Relations:

- Delivered barricades for the Christmas Parade on December 1st and picked them up on December 4th.

Sewer and Water:

- Provided labour and equipment for Water Distribution and Sewer Collection repairs and maintenance.
- Handed out “Water Turn Off Advisories”, “Drinking Water Advisories” and “Lifting of Drinking Water Advisories” when required
- Issued “Delinquent Account Notices” and turned off water for non-compliance as required.
- Flushed deadend sanitary sewer mains

Interdepartmental:

- Removed Zamboni snow from the Memorial Sports Centre on December 7th.
- Hand delivered corrected garbage schedules to Area #4 on December 8th.
- Randy McArthur assisted Parks with a burial on December 15th
- Scott Gosman supplied coverage for vacation at the Airport on December 1, 2, 3, 15, 16 and 17th.

Recycling:

- Emptied glass recycling bin as required
- Pushed up piles in recycling building as required
- Loaded commercial recycling bin as required
- Cleaned up recycling yard as required.

Training:**Health & Safety:**

Milt Strachan,
Superintendent of Transportation

Aircraft Landings 2018
As of February 12, 2018 Statistics - Page 1/2

Month	Bearskin Flights			Bearskin- Passengers			Government			Private			Med-I-vacs			International			Commercial			Totals			Variance
	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018	2017	2016	2018-2017
January	68	76	70	198	308	261	0	0	1	3	2	3	55	42	30	2	4	3	73	48	36	201	143	177	58
February		80	69		334	233		1	1		1	1		32	35		0	1		39	49	0	156	155	-156
March		90	69		336	199		10	0		4	17		50	34		14	3		51	55	0	178	192	-178
1/4 Total	68	246	208	198	978	693	0	11	2	3	7	21	55	124	99	2	18	7	73	138	140	201	477	524	-276
April		67	81		289	288		0	7		18	8		40	47		4	3		41	40	0	186	201	-186
May		87	88		389	309		8	4		8	9		50	37		0	32		54	59	0	229	259	-229
June		82	76		324	273		10	0		16	30		38	38		14	77		63	52	0	273	328	-273
1/2 Total	68	482	453	198	1980	1563	0	29	13	3	49	68	55	252	221	2	36	119	73	296	291	201	1165	1312	-964
July		70	72		224	221		3	2		26	48		52	51		76	66		54	47	0	286	324	-286
August		82	84		292	256		4	6		27	42		46	66		80	71		50	53	0	322	313	-322
September		79	78		267	277		7	1		14	15		40	40		42	45		39	51	0	230	249	-230
3/4 Total	68	713	687	198	2763	2317	0	43	22	3	116	173	55	390	378	2	234	301	73	439	442	201	2003	2198	-1802
October		72	85		255	357		6	2		16	10		44	41		18	18		42	47	0	203	214	-203
November		71	72		281	328		0	3		2	20		28	28		0	7		40	38	0	168	146	-168
December		62	64		199	231		0	0		2	0		36	29		0	0		40	29	0	122	139	-122
Total	68	918	908	198	3498	3233	0	49	27	3	136	203	55	498	476	2	252	326	73	561	556	201	2496	2697	-2295

Fort Frances Airport- Page 2/2 - Fuel Sales - As of February 12, 2018																			
Fuel Sales Recap - 2018									2018	2017	2016	2015	2014	2013	2012	2011	2010	9 year	Variance
Month	100LL		Jet Trk		Jet Cab		Month	Year	per	per	per	per	per	per	per	per	per	Average	2018-2017
	Liters	Total	Liters	Total	Liters	Total	Total	Total	month	month	month	month	month	month	month	month	month	2018 to 2009	per month
January	269	269	16,228	16,228	100	100	16,597	16,597	16,597	25,675	7,528	8,692	11,543	7,216	10,252	7,308	10,971	13,924	-9,078
February		269		16,228		100	0	16,597		12,503	11,904	11,231	12,304	6,197	6,918	3,687	5,782	16,051	-12,503
March		269		16,228		100	0	16,597		21,928	13,255	17,795	10,508	12,077	9,329	10,390	15,539	24,461	-21,928
April		269		16,228		100	0	16,597		13,102	8,592	13,219	8,377	4,453	8,251	5,294	24,825	29,302	-13,102
May		269		16,228		100	0	16,597		21,362	24,681	16,161	29,753	18,350	21,891	19,790	25,375	47,114	-21,362
June		269		16,228		100	0	16,597		27,380	26,015	45,698	30,789	22,786	23,537	25,723	27,768	60,775	-27,380
July		269		16,228		100	0	16,597		24,642	29,002	28,150	14,441	19,232	32,650	19,124	30,455	68,788	-24,642
August		269		16,228		100	0	16,597		23,029	21,119	36,638	20,450	20,075	30,783	21,467	33,139	80,752	-23,029
September		269		16,228		100	0	16,597		13,489	21,325	24,238	21,837	18,005	19,431	22,511	23,363	84,571	-13,489
October		269		16,228		100	0	16,597		16,604	30,655	8,216	15,472	13,109	11,325	13,677	15,033	87,897	-16,604
November		269		16,228		100	0	16,597		9,924	22,349	11,616	7,238	6,398	8,170	6,785	17,747	89,273	-9,924
December		269		16,228		100	0	16,597		6,560	13,797	7,592	6,849	2,028	8,179	2,446	7,641	89,639	-6,560
Total	269		16,228		100		16,597			216,198	230,222	229,246	189,561	149,926	190,716	158,202	237,638	692,546	(199,601)
							Jan to Jan		16,597	25,675	7,528	8,692	11,543	7,216	10,252	7,308	10,971	13,924	(199601)

Lowest month in last 9 years
Highest month in last 9 years
Highest month
lowest month