

TOWN OF FORT FRANCES

Operations and Facilities Executive Committee

AGENDA - April 22, 2015, 8:30 AM

MEETING - Civic Centre

Page

Call to Order

Disclosure of pecuniary interest and the general nature thereof

Approval of Previous Committee Minutes

- 3.1 Minutes from the meeting of this Committee on April 8, 2015. 2 - 3

Non-agenda Items

New Business

- 5.1 Airport Facility - Private Hangar - Renewal of Hangar Lot Lease Rate with Mr. Ed Tetu for a five (5) year term commencing April 1, 2015. 4 - 7
- 5.2 March 2015 Drinking Water Systems Monthly Summary Report 8 - 16
- 5.3 In-Kind Services for 2015 Harmony of Nations Music Festival Event 17 - 19
- 5.4 Awarding Request for Proposal (RFP) 15-OF-04 - Design/Build of Storage Structure for Winter Control Sand 20 - 36
- 5.5 Review and Endorsement of the Sewer System Management By-Law (Final Draft) 37 - 66

Outstanding Items

- 6.1 Strategic Plan Initiatives for Upcoming Strategic Planning Session - CAO to expand.
- 6.2 Training Opportunity - Airport Familiarization 67 - 73

Information

- 7.1 Canada Post - Installation of Community Mail Box. 74 - 84
- 7.2 2014 Performance Report for the Fort Frances Sewage Treatment Plant. 85 - 120
- 7.3 Fort Frances Wastewater Treatment Facility March 2015 Monthly Report. 121 - 126

Adjourn / Next Meeting Date

TOWN OF FORT FRANCES

MINUTES

SESSION NO. #007

April 8, 2015

A meeting of the Operations & Facilities Executive Committee of the Town of Fort Frances was held in the Civic Centre on April 8, 2015 from 8:30 a.m. to 9:12 a.m.

PRESENT: June Caul, Mark McCaig, CAO and Doug Brown, Manager, Operations & Facilities

ALSO PRESENT: Mayor Avis

1 Call to Order

1.1 The meeting was called to order at 8:30 a.m.

2 Disclosure of pecuniary interest and the general nature thereof

2.1 Mayor Roy Avis declared a conflict of interest on Item 5.2 - Tender 15-OF-09 - Supply of Three Half Ton Trucks.

3 Approval of Previous Committee Minutes

3.1 The minutes from the meeting of this Committee on March 4, 2015 were approved as circulated.

4 Non-agenda Items

4.1 Project Petunia - Mark McCaig explained that the Chamber of Commerce will not be organizing the hanging flower baskets along Central Avenue and King's Hwy this year. Mark thinks that the Chamber should reconsider this decision as it helps to improve the looks of the Town.

5 New Business

5.1 February 2015 Drinking Water Systems Monthly Summary -The Monthly Drinking Water Systems Report for February 2015 was reviewed and will be forwarded to Council for approval.

5.2 Tender 15-OF-09 - Half Ton Trucks 2015 - As a result of Mayor Avis declaring a conflict of interest on this item, the administrative report was not discussed and will be forwarded directly to Council for the Council meeting scheduled for April 13, 2015.

5.3 Strategic Plan Initiatives for Upcoming Strategic Planning Session - CAO to expand - Mark McCaig explained the Upcoming Strategic Planning Session scheduled for June 11, 2015 at Sunny Cove. As a result that there were two members; Councillors Doug Kitowski and Paul Ryan absent from this meeting this item will be placed on the next Operations & Facilities Executive committee scheduled for April 22, 2015. However there were 4 initiatives to be considered by Council from the Operations & Facilities Executive committee:

- 1) Expansion of the existing landfill site.
- 2) Acceleration of the rehabilitation of the municipal infrastructure within the community.
- 3) Redesignation of certain green space properties to residential development.
- 4) Expansion of municipal boundaries.

5.4 Training Opportunity - Airport Familiarization - The email dated March 31, 2015 was

discussed. In order to make a recommendation to Council additional information is required. This item will be placed on the next Operations & Facilities Executive committee agenda.

6 Information

- 6.1 Aircraft Landings 2015 - as of March 31, 2015 - The airport statistics spreadsheets as of March 31, 2015 were reviewed and will be forwarded to Council as information only. No action required.
- 6.2 Operations and Facilities Division - Environmental Area - Operations Statistics - February 2015 - The operations statistics for the Environmental Area of the Operations & Facilities Division were reviewed and will be forwarded to Council as information only. No action required.
- 6.3 2015 Tonnage at the Landfill Site - up-dated April 1, 2015 - The landfill site date spreadsheet as of the end of March 2015 was reviewed and will be forwarded to Council as information only. No action required.

7 Adjourn / Next Meeting Date

- 7.1 The meeting was adjourned at 9:12 a.m.

Executive Committee Chair

D. Brown, Manager of Operations & Facilities

April 10, 2015

Report To: Mayor & Council

From: Doug Brown, Manager Operations & Facilities

SUBJECT: Airport Facility – Private Hangar-Renewal of Hangar Lot Lease Rate with Mr. Ed Tetu for a Five (5) Year Term Commencing on April 1st, 2015.

Please find attached the report prepared by Tom Batiuk, Airport Supervisor, outlining the renewal of a private hangar lot lease with Mr. Ed Tetu. The hangar lot lease agreement is for a 25-year term with the lease rate to be renegotiated every five (5) years. The existing 2015 rate for land lease for private hangar is \$1.74 per square meter plus HST. Ed Tetu's hanger lot is 300 square meters in size.

It is recommended by the Operations & Facilities Executive Committee that Council renew the hangar lot lease rate with Mr. Ed Tetu at \$1.74 per square meter for the next five (5) years and that the Mayor and Clerk be authorized to execute the updated lease rate agreement on behalf of the Corporation.

Respectfully submitted,
Operations & Facilities Division

Doug Brown, P. Eng.
Manager Operations & Facilities

Council approval of this report will ensure that Council renews the hangar lot lease rate with Mr. Ed Tetu at \$1.74 per square meter plus HST for the next five (5) years and that the Mayor and Clerk be authorized to execute the updated lease rate agreement on behalf of the Corporation.

2015AprilHangarLeaseEdTetu.doc

2015-04-10

To: Doug Brown

From: Tom Batiuk

Re: Lease renewal for Ed Tetu

Please find attached the lease renewal agreement for Ed Tetu. This term will be for 5 years effective April 1st, 2015 to March 31st, 2020. Please forward to Town Council for their approval at the next regular meeting

Kind Regards,

Tom Batiuk
Airport Supervisor

THIS AGREEMENT made this 1st day of April, Two Thousand and Fifteen

BETWEEN:

THE CORPORATION OF THE TOWN OF FORT FRANCES
(The “Town”)

-And-

ED TETU
(The “Tenant”)

WHEREAS:

- A. The Town and the Tenant hereinafter collectively referred to as the “Parties” entered into an agreement of lease (the “Lease”) dated April 1, 2000 with respect to the property (“Demised Premises”) described as: A hangar lot comprising of approximately 300 square meters, at the Fort Frances Airport.
- B. The copy of the lease dated April 1, 2000, in each of the Parties possession forms Part of this Agreement as Schedule “A”.
- C. The term (the “Term”) of this lease and subsequent renewals is due to expire and end March 31, 2015.
- D. The Town desires to lease to the Tenant and the Tenant desires to lease from the Town the Demised Premises for a further Term, namely, from April 1, 2015 to and including March 31, 2020 on substantially the same terms and conditions as set out in the Lease.

NOW THEREFORE the Parties agree as follows:

- 1. The Town agreed to lease to the Tenant and the Tenant agrees to lease from the Town the Demised Premises for a further Term from and including April 1, 2015 to March 31, 2020.
- 2. The annual amount payable by the Tenant to the Town in respect of the Tenant’s lease of the Demised Premises for the Term April 1, 2015 to March 31, 2020 shall be the sum of \$ 522.00, plus applicable taxes, which amount shall be payable by the Tenant to the Town upon the signing of this agreement.
- 3. Except as set out in this agreement, the Lease by the Tenant of the Demised Premises from the Town for the term shall be upon the same terms and conditions as set out in the Lease.

IN WITNESS WHERE OF the Parties have executed this Agreement.

For the Corporation of the Town of Fort Frances:

Per: _____
Mayor

Per: _____
Clerk

For Ed Tetu

Witness:_____ Per: _____
Ed Tetu

April 17, 2015, 2015

Report To: Mayor & Council

From: Doug Brown, Manager of Operations & Facilities

SUBJECT: March 2015 Drinking Water Systems Monthly Summary Report

Please find attached the March 2015 Summary Report on the drinking water systems, prepared by Randy White, Senior WTP Operator.

Your Administration recommends that Operations & Facilities Executive Committee accept the March 2015 report as presented.

Respectfully submitted,
Operations & Facilities Division



Doug Brown, P. Eng.
Manager of Operations & Facilities

| |
|---|
| <p>Council approval of this report will accept the March 2015 Drinking Water Systems Monthly Summary Report and approve the report prior to it being made available to the general public.</p> |
|---|

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

03CouncilwaterreportMarch 2015

March, 2015

**Monthly Summary Report
Water Systems**

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

Dated: April 13, 2015

1) **Introduction -**

This report contains the major maintenance activities and operational events that occurred during the month of March 2015 at the Water Treatment Plant - Water Works # 220000978 and the Airport Groundwater Well Water Works # 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.

2) **Flow Data**

Water Treatment Plant: See attached spreadsheet. No flow data for Airport groundwater well.

3) **Microbiological (Health Related) Water Analysis– Main Water System # 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.

4) **Microbiological (Health Related) Water Analysis– Airport Groundwater Well # 26002736**

No samples taken.

The Airport has signs posted in the men's and women's washroom stating that the water has not been tested or treated for drinking purpose in accordance with the Health Protection and Promotion Act – Section 7 of the Small Drinking Water Systems Regulation, O. Reg. 318/08 (*Amended to Safe Drinking Water Act, 2002 - Section 6 of Ontario Regulation 252/05*). The operators do a visual inspection of the warning notices at a minimum of once per week to ensure that they are legible and comply with Ontario Regulation 318/08, Section 7(5).

5) Free Available Chlorine Residual (FAC) – Main Water System – # 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 # 26002736

Signs posted, exempt from testing.

7) Maintenance Activities at the WTP

- March 02nd - changed filters in soda ash dust collector.
- March 03rd - greased the clarifier gears and chains.
 - calibrated all chemical feeders at plant, including chlorine analyzer
 - took grab samples off each filter.
 - changed west chlorine tank.
- March 05th - cleaned all four (4) check valves on poly unit.
 - cleaned the top and bottom tank on the poly unit.
 - greased the low lift pumps.
- March 06th - put Clear Well #2 back on line after test results came back with no adverse to report.
- March 18th - recalibrated soda ash feeder.
 - flushed poly lines to clarifiers.
- March 20th - calibrated the alum pump.
- March 24th - took grab samples off each filter.
 - changed input out put card on Delta V system.
- March 25th - installed a new auto blow down valve on Compressor #1.
 - Honeywell here but can't get new high lift pumps to work.
- March 26th - greased the low lift pumps and soda ash feeder.
- March 27th - worked on sample pumps.
 - cleaned the top and bottom tank on the poly unit.
 - cleaned all four (4) check valves on poly unit.

March 30th - installed a new circulation pump on boiler.
- flushed and pumped Clear Well #1.

March 31st - flushed poly lines to clarifiers.

8) **Water Complaints –**

- Poor Pressure – 0 complaints
- Water Quality – 0 complaints

9) **Other Miscellaneous Information:**

March 02nd - took weekly routine bacti samples.

March 09th - took weekly routine bacti samples.
- annual samples taken at the Water Treatment Plant and Water Tower.
- took bacti samples (thawed frozen service with Pulse De-icer) at 861 King's Hwy. (North American Lumber) - 1st set.
- took bacti samples, water main break in front of 1330 Colonization Rd. W. - 1st set.

March 10th - took bacti samples, water main break in front of 1330 Colonization Rd. W. - 2nd set.
- took bacti samples (thawed frozen service with Pulse De-icer) at 861 King's Hwy. (North American Lumber) – 2nd set.
- took bacti samples (thawed frozen service with Pulse De-icer) at 825 Crowe Ave. – 1st set.

March 11th - took bacti samples (thawed frozen service with Pulse De-icer) at 825 Crowe Ave. – 2nd set.
- took bacti samples, water main break repair – Sinclair St. (400 blk.) by the Hospital - 1st set.

March 12th - took bacti samples, service repair - 415 Third St. W. - 1st set.
- took bacti samples, water main break repair – Sinclair St. (400 blk.) by the Hospital – 2nd set.

March 16th - took weekly routine bacti samples.
- took bacti samples, service repair - 415 Third St. W. – 2nd set.

March 19th - received a load of Alum.
- Q.M.S. meeting.

- March 23rd - took weekly routine bacti samples.
- March 26th - Q.M.S. meeting (Internal Audit Kick-off meeting).
- March 30th - took weekly routine bacti samples.
- took bacti samples - seasonal service - Fort Frances Cemetery.
- March 31st - Q.M.S. overview.

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.: _____
- Doug Brown, Manager of Operations & Facilities: _____
- Mark McCaig, 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 March 2015

Flow and Operating Data

| Flow Data | MARCH | Units | 2013 | | 2014 | | 2015 | |
|--|----------------|-------|------------------|--------|------------------|--------|------------------------|--------|
| | | | Day of the Month | | Day of the Month | | Day of the Month | |
| Total Raw Water | m ³ | | | 132180 | | 254410 | | 168790 |
| Raw Maximum Day | m ³ | | Sunday 24th | 4460 | Saturday 22nd | 11360 | Saturday 14th | 5970 |
| Raw Minimum Day | m ³ | | Saturday 23rd | 4080 | Sunday 09th | 5710 | Sunday 01st | 4890 |
| Raw Average Daily Consumption | m ³ | | | 4260 | | 8210 | | 5440 |
| * Daily Instantaneous Peak Flow | L/min. | | | | | | | |
| Total Treated Water | m ³ | | | 112290 | | 226450 | | 126450 |
| Treated Water Maximim Day Consumption | m ³ | | Sunday 03rd | 4010 | Friday 21st | 10020 | Tuesday 10th | 5230 |
| Treated Water Minimim Day Consumption | m ³ | | Wednesday 13th | 3360 | Monday 10th | 4780 | Sat. 28th & Tues. 31st | 3630 |
| Treated Water Average Day Consumption | m ³ | | | 3620 | | 7300 | | 4080 |
| Daily Average Per Household Consumption Rate | m ³ | | | 0.96 | | 1.93 | | 1.08 |
| * Daily Average Per Person Consumption Rate | m ³ | | | 0.45 | | 0.91 | | 0.51 |
| Monthly Averages - Operating Parameters WTP: | | | | | | | | |
| FAC Residual - Treated Water | mg/L | | | 1.75 | | 1.97 | | 1.91 |
| Total Chlorine Residual - Treated Water | mg/L | | | 2.05 | | 2.28 | | 2.21 |
| Aluminum Sulphate - Raw Water | mg/L | | | 34.0 | | 34.3 | | 35.6 |
| Aluminum Sulphate - Treated Water Residual | mg/L | | | 0.06 | | 0.07 | | 0.06 |
| Fluoride - Treated Water | mg/L | | | 0.61 | | 0.63 | | 0.60 |
| Soda Ash - Raw Water | mg/L | | | 34.0 | | 34.6 | | 36.4 |
| PH - Adjusted | mg/L | | | 7.23 | | 7.12 | | 7.13 |
| Temperature | C | | | 2.2 | | 2.0 | | 2.6 |
| Quantity of Chemical Used: | | | | | | | | |
| Aluminum Sulphate | kg | | | 4494.1 | | 8733 | | 6000.6 |
| Polyelectrolyte | kg | | | 50.0 | | 137.5 | | 75.0 |
| Chlorine Gas | kg | | | 393 | | 1023 | | 614 |
| Soda Ash - Used for PH Adjustment | kg | | | 4494.1 | | 8816 | | 6144.7 |
| Fluoride | kg | | | 329 | | 912 | | 363 |

* The Canadian Average is 450 Litres (0.45 m³) per day.

* Population is 7986

* Number of Households is 3783

| 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 | 4.89 | 5.36 | 5.11 | 5.30 | 5.01 | 5.36 | 5.16 | 5.14 | 5.06 | 5.16 | 5.12 | 5.52 | 5.65 | 5.97 | 5.54 | 5.34 | 5.60 | 5.61 | 5.58 | 5.64 | 5.53 | 5.70 | 5.57 | 5.60 | 5.62 | 5.61 | 5.59 | 5.54 | 5.68 | 5.61 | 5.62 | 168.79 | 5.44 |
| Peak Instantaneous - Raw Water | L/s | n/a | 60.94 | 60.97 | 60.86 | 60.85 | 60.86 | 60.76 | 60.74 | 60.77 | 60.65 | 60.57 | 60.46 | 66.03 | 66.01 | 65.72 | 65.84 | 65.66 | 65.67 | 65.64 | 65.57 | 65.65 | 65.61 | 65.59 | 65.66 | 65.67 | 65.61 | 65.68 | 65.95 | 65.64 | 65.60 | 65.58 | 64.98 | 1981.79 | 63.93 |
| Treated Water | 10^3 M^3 | 17 | 3.79 | 3.96 | 4.21 | 4.17 | 3.90 | 4.75 | 4.40 | 4.43 | 4.43 | 5.23 | 4.41 | 4.12 | 4.18 | 4.40 | 3.86 | 4.04 | 3.80 | 4.10 | 4.02 | 3.82 | 3.80 | 3.71 | 4.11 | 3.92 | 4.04 | 3.67 | 3.80 | 3.63 | 4.02 | 4.10 | 3.63 | 126.45 | 4.08 |
| Peak Instantaneous - Treated Water | L/s | n/a | 68.61 | 64.75 | 70.88 | 101.8 | 83.45 | 83.85 | 83.91 | 83.4 | 83.55 | 85.94 | 88.4 | 84.2 | 82.98 | 82.65 | 84.7 | 80.83 | 82 | 81.44 | 82.78 | 80.82 | 79.97 | 80.9 | 82.86 | 83.2 | 82.3 | 81.6 | 104 | 81.9 | 81.26 | 83 | 80.82 | 2562.70 | 82.67 |
| BackWash Water | 10^3 M^3 | n/a | 0.218 | 0.243 | 0.217 | 0.229 | 0.240 | 0.214 | 0.229 | 0.236 | 0.217 | 0.216 | 0.226 | 0.236 | 0.213 | 0.229 | 0.234 | 0.215 | 0.233 | | 0.234 | 0.216 | 0.231 | | | 0.234 | 0.214 | 0.230 | 0.229 | 0.216 | 0.226 | 0.237 | 0.215 | 6.327 | 0.226 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fluoride Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fluoride Residual - Treated Water | mg/l | 0.5 to 0.8 | 0.56 | 0.54 | 0.58 | 0.59 | 0.60 | 0.61 | 0.60 | 0.61 | 0.60 | 0.60 | 0.62 | 0.59 | 0.59 | 0.61 | 0.60 | 0.55 | 0.61 | 0.56 | 0.69 | 0.51 | 0.58 | 0.61 | 0.54 | 0.64 | 0.64 | 0.65 | 0.65 | 0.62 | 0.55 | 0.62 | 0.55 | 18.47 | 0.60 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Turbidity Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Raw Water | NTU | n/a | 0.49 | 0.40 | 0.44 | 0.47 | 0.49 | 0.46 | 0.41 | 0.49 | 0.51 | 0.55 | 0.51 | 0.55 | 0.47 | 0.51 | 0.55 | 0.59 | 0.56 | 0.62 | 0.65 | 0.51 | 0.49 | 0.46 | 0.64 | 0.56 | 0.63 | 0.60 | 0.53 | 0.54 | 0.52 | 0.56 | 0.64 | 16.40 | 0.53 |
| Settled Water | NTU | n/a | 0.17 | 0.16 | 0.11 | 0.12 | 0.10 | 0.09 | 0.10 | 0.12 | 0.14 | 0.12 | 0.10 | 0.14 | 0.12 | 0.10 | 0.14 | 0.12 | 0.11 | 0.14 | 0.10 | 0.15 | 0.12 | 0.11 | 0.14 | 0.12 | 0.14 | 0.12 | 0.13 | 0.19 | 0.12 | 0.14 | 0.11 | 3.89 | 0.13 |
| Treated Water | NTU | 1 | 0.03 | 0.08 | 0.05 | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.07 | 0.06 | 0.08 | 0.06 | 0.04 | 0.08 | 0.07 | 0.05 | 0.06 | 0.05 | 0.10 | 0.08 | 0.06 | 0.06 | 0.05 | 0.05 | 0.05 | 0.06 | 0.08 | 0.03 | 0.03 | 0.05 | 1.74 | 0.06 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Operating Parameters | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH - Treated Water | no units | 6.5 to 8.5 | 7.07 | 7.07 | 7.09 | 7.11 | 7.22 | 7.26 | 7.05 | 7.16 | 7.24 | 7.19 | 7.15 | 7.10 | 7.12 | 7.17 | 7.12 | 7.19 | 7.16 | 6.98 | 7.13 | 7.14 | 7.16 | 7.21 | 7.04 | 7.11 | 7.15 | 7.19 | 7.09 | 6.83 | 7.22 | 7.18 | 7.08 | 220.98 | 7.13 |
| pH - Settled water | no units | n/a | 6.62 | 6.51 | 6.47 | 6.55 | 6.49 | 6.52 | 6.56 | 6.49 | 6.54 | 6.45 | 6.41 | 6.37 | 6.41 | 6.45 | 6.51 | 6.42 | 6.47 | 6.57 | 6.64 | 6.93 | 6.87 | 6.61 | 6.65 | 6.58 | 6.56 | 6.52 | 6.49 | 6.71 | 6.95 | 6.91 | 6.72 | 203.95 | 6.58 |
| pH - Raw Water | no units | n/a | 6.84 | 6.74 | 6.82 | 6.99 | 7.04 | 7.00 | 6.97 | 6.94 | 6.96 | 6.91 | 6.91 | 6.95 | 7.01 | 7.10 | 6.99 | 6.87 | 6.92 | 6.73 | 6.73 | 6.73 | 6.86 | 6.88 | 6.69 | 6.81 | 6.96 | 6.86 | 6.94 | 6.44 | 6.65 | 6.60 | 6.75 | 212.59 | 6.86 |
| FAC - Treated Water | mg/l | 0.2 to 4 | 1.80 | 2.05 | 1.86 | 1.89 | 2.02 | 1.96 | 2.03 | 1.93 | 1.88 | 1.86 | 2.10 | 1.86 | 1.85 | 1.89 | 1.75 | 1.92 | 1.83 | 2.06 | 2.08 | 2.01 | 1.74 | 1.71 | 1.95 | 1.94 | 1.94 | 1.80 | 1.86 | 1.96 | 1.88 | 1.75 | 1.95 | 59.11 | 1.91 |
| Total Chlorine Residual Treated | mg/l | 0.3 to 7 | 2.28 | 2.38 | 2.17 | 2.23 | 2.28 | 2.24 | 2.42 | 2.16 | 2.12 | 2.10 | 2.25 | 2.10 | 2.09 | 2.12 | 1.99 | 2.19 | 2.14 | 2.42 | 2.44 | 2.40 | 2.06 | 2.11 | 2.16 | 2.17 | 2.23 | 2.09 | 2.16 | 2.28 | 2.30 | 2.06 | 2.30 | 68.44 | 2.21 |
| Temperature | C | 15 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 81.0 | 2.6 |
| Fluoride used (Total Daily Consumption) | kg | n/a | 10.0 | 11.0 | 10.0 | 11.0 | 10.0 | 11.0 | 12.0 | 11.0 | 12.0 | 12.0 | 12.0 | 13.0 | 13.0 | 13.0 | 12.0 | 12.0 | 12.0 | 12.0 | 13.0 | 12.0 | 12.0 | 12.0 | 11.0 | 12.0 | 11.0 | 12.0 | 12.0 | 11.0 | 12.0 | 12.0 | 12.0 | 363.0 | 11.7 |
| Chlorine used (Total Daily Consumption) | kg | n/a | 18.0 | 20.0 | 18.0 | 18.0 | 18.0 | 20.0 | 19.0 | 19.0 | 19.0 | 19.0 | 21.0 | 20.0 | 21.0 | 21.0 | 21.0 | 19.0 | 21.0 | 20.0 | 20.0 | 21.0 | 19.0 | 21.0 | 21.0 | 20.0 | 20.0 | 20.0 | 21.0 | 20.0 | 20.0 | 19.0 | 19.0 | 614.0 | 19.8 |
| Soda ash (Total Daily Consumption) | kg | n/a | 178.5 | 195.6 | 186.5 | 193.5 | 182.9 | 195.6 | 188.3 | 187.6 | 184.7 | 188.3 | 186.9 | 201.5 | 206.2 | 217.9 | 202.2 | 194.9 | 204.4 | 200.8 | 199.8 | 201.9 | 198.0 | 204.1 | 199.4 | 200.5 | 206.8 | 206.4 | 205.7 | 198.3 | 210.7 | 208.1 | 208.5 | 6144.7 | 198.2 |
| Soda Ash - Dosage | mg/l | n/a | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 35.8 | 35.8 | 35.8 | 35.8 | 35.8 | 35.8 | 35.8 | 36.8 | 36.8 | 36.8 | 35.8 | 37.1 | 37.1 | 37.1 | 1128.6 | 36.4 |
| Alum residual - (Total Daily Consumption) | kg | n/a | 174.6 | 191.4 | 182.4 | 189.2 | 178.9 | 191.4 | 184.2 | 183.5 | 180.6 | 184.2 | 182.8 | 197.1 | 201.7 | 213.1 | 197.8 | 190.6 | 199.9 | 200.3 | 199.2 | 198.5 | 194.7 | 200.6 | 196.1 | 197.1 | 197.8 | 197.5 | 196.8 | 195.6 | 203.3 | 199.7 | 200.1 | 6000.6 | 193.6 |
| Alum residual - Dosage | mg/l | n/a | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.2 | 35.2 | 35.2 | 35.2 | 35.20 | 35.30 | 35.80 | 35.60 | 35.60 | 1102.2 | 35.6 |
| Alum residual - Treated Water | mg/l | 0.1 | 0.07 | 0.08 | 0.06 | 0.07 | 0.06 | 0.07 | 0.06 | 0.06 | 0.06 | 0.05 | 0.04 | 0.04 | 0.04 | 0.05 | 0.06 | 0.03 | 0.04 | 0.05 | 0.05 | 0.08 | 0.06 | 0.04 | 0.06 | 0.04 | 0.06 | 0.06 | 0.07 | 0.06 | 0.06 | 0.06 | 0.05 | 1.74 | 0.06 |
| Poly bags added (25 kg bags) | kg | | | 0.5 | | | | | | | 0.5 | | | | | | | 0.5 | | | | | 0.5 | | | 0.5 | | | | 0.5 | | | | 75.0 | |

April 13, 2015

Report To: Administration & Finance Executive Committee

From: Operations & Facilities Executive Committee

SUBJECT: In-Kind Services for 2015 Harmony of Nations Music Festival Event

Rainy River Future Development Corporation wrote a letter to Mayor & Council requesting in-kind services for the up-coming Music Festival in July 2015. Please find attached letter dated April 2, 2015 from Mr. Geoff Gillion, I have taken the liberty to comment *only* on items related to the Operations & Facilities Division;

Continued Operational Assistance;

Item 2) **Supply of Picnic Tables** - 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. Co-ordinate through Doug Brown, Operations & Facilities Manager at 274-9893.

Item 5) **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.** 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 6) **Assist in the set-up and take down of the Main Event Tent** – In the past the O & F division workforce – 4 PW workers and 4 Parks workers provided assistance in installing/removing the perimeter support pegs and installing/removing the large main tent poles for the FFCBC. This is a similar request where it is my understanding that the main event tent will be set-up for the duration of both events. Each worker puts in approximately 12 hours providing assistance with installing/removing the main event tent.

Other divisions within the Town's organization will deal with all other items outlined in the Rainy River Future Development Corporation letter dated April 2, 2015.

The Operations & Facilities Executive Committee recommends the following;

- 1) That the Operations & Facilities Division continues to provide in-kind services for items No. 2 & 6 as outlined in the April 2, 2015 letter from Mr. Geoff Gillion;
- 2) That permission is granted to the FFCBC organization in regards to item No.5 in accordance with the guidelines listed above.

Respectfully submitted,

Paul Ryan, Chairman
Operations & Facilities Executive Committee

2015AprilFFCBCrequest



**RAINY RIVER FUTURE
DEVELOPMENT CORPORATION**
A Community Futures Development Corporation

April 2, 2015

Mayor and Council
Town of Fort Frances
320 Portage Avenue
P9A 3P9

Re: Harmony of Nations Music Festival

APR - 7 2015

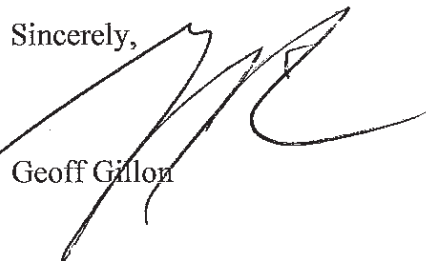
Dear Mayor and Council:

We respectfully request the following support from the Town of Fort Frances from Monday, July 13th through to Sunday, July 20th. FFCBC will then assume the site for the Bass Championship until July 28th. We are working with the FFCBC and sharing the site and venue equipment for our events.

1. Designate, in writing, the "Harmony of Nations Music Festival" as a significant community festival and event;
2. Authorize use of the Memorial Sports Centre stage, tables, chairs and Town picnic tables. The Harmony of Nations Music Festival Committee will arrange for pick-up and return;
3. Supply the Harmony of Nations Music Festival with the necessary documents to facilitate closing the road to accommodate the tent;
4. The FFCBC, on behalf of the Harmony of Nations Music Festival Committee, will be filling out a building permit application for the erection of the tent. We request that the Town cover any charges associated;
5. Allow the Harmony of Nations Music Festival Committee to attach pennants, signs and banners to street light 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;
6. Help with the erection and take-down of the Events Tent;
7. Allow access for electrical power.

We look forward to discussing our request in greater detail at your convenience.

Sincerely,



Geoff Gillon



April 10, 2015

Report To: Mayor & Council

From: Doug Brown, Manager of Operations & Facilities

SUBJECT: Awarding Request for Proposal (RFP) 15-OF-04 – Design/Build of Storage Structure for Winter Control Sand

As you are aware the approved 2015 capital budget included the design/build of a storage structure for approximately 6000 tonnes of salted winter control sand. The total budget for the design, foundation and superstructure for a storage structure is \$528,278. The scope of work identified in the Terms of Reference document included the following 12 main criteria;

- a. The successful firm shall have all structure drawings, foundation drawings, a site layout drawing and all specifications used to design and install the building approved and stamped by a professional engineer registered in Ontario.
- b. A minimum of 2 hard copy sets of the as-built drawings shall be supplied to the Town of Fort Frances, and in a digital autocad format if available.
- c. The area available to accept the outside footprint of the structure is 80 feet wide by 150 feet long. The preferred size of structure is 60 feet wide by 125 feet long. Refer to the attached map (Appendix “B”) showing the approximate location to where the structure will be situated within the Public Works yard site (on lot 501 – 6th Street West property).
- d. Height of the structure shall facilitate approximately 4500 to 6000 tonnes of salted winter control sand and allow the capability to use a portable conveyor stacker that can be wheeled in and out of the structure, in addition to raised truck dump boxes.
- e. It is anticipated for the structure to be rectangular in shape. The structure shall be completely open at one end of the width (short length) to facilitate the entry and exit of haul trucks and equipment to be utilized in the stockpiling and loading of winter control sand.
- f. The condition of the site where the structure is being proposed is basically in a back yard of lot 501 – 6th Street West which is comprised of grass over a small layer of organics. The Town will be responsible to strip the organics, place a layer of granular “B” approximately 450 mm in thickness, a 150 mm thick layer of granular “A” and 80 mm of asphalt. The Town

- workforce will be responsible for preparing the site as outlined herein and will coordinate with the successful firm to ensure the foundation for structure can be installed in a cost effective manner.
- g. If a concrete cast-in- place, in ground foundation is being proposed, the constructor will be responsible to excavate down to the underside of the footing and backfill up to original ground elevation on both sides of the foundation wall.
 - h. The floor elevation within the building will be approximately 1 foot or 300 mm above the existing ground elevation. The floor will be sloped at approximately 1 to 1.5% falling towards the open end of the structure.
 - i. Proposals shall indicate if the asphalt surface is required prior to the concrete wall installation taking place i.e.- should the wall be required to rest on the asphalt surface.
 - j. If a truss & fabric system structure is being proposed, the proposals shall include all data sheets on the proposed truss and fabric system in addition to the concrete foundation/wall concept. The data sheets shall clearly indicate the quality of the fabric and truss system being proposed. The fabric and truss system should be of a workmanship and quality to last for an extended period of time (> 25 years) when exposed to the weather conditions in Fort Frances and to a stockpile of salted winter control sand being stored within the structure on a year round basis.
 - k. Proposals shall clearly indicate the guarantee/warranty on all components of the structure and concrete wall system.
 - l. The structure shall be completed no later than Monday, September 7, 2015. Proposals shall provide a completion date based on the Town awarding the work by Tuesday April 21, 2015.

The R.F.P. call was advertised on February 18, 2015 in the Fort Frances Times with the tender closing on Tuesday, March 31st, 2015 at 2:00 p.m. The RFP documents were developed to be generic in nature to ensure all types of storage structures such as; conventional wood framed, engineered fabric, and pre-engineered steel framed could be submitted. Twenty-six (26) terms of reference documents were distributed to building suppliers and contractors where 10 proposals were received with 13 different structure/ foundation options to consider.

There were 7 engineering fabric structures, 3 wood frame c/w exterior metal cladding structures, 2 wood/galvanized steel c/w exterior metal cladding structures and 1 galvanized steel structure.

The proposals submitted by each individual Building firm were reviewed and scored. A scoring system utilized the following 5 main categories:

- 1) Quality of the proposal submitted - ease of understanding, required components of the proposed structure, work schedule.
- 2) Past Experience in completing similar size and shaped structures
- 3) Key Personnel assigned to the project
- 4) Proposal Cost
- 5) Schedule

Travis Rob – Chief Building Official, Doug Herr – Environmental and Facilities Superintendent and myself completed the evaluation of the 13 options where it was determined that Engineered Fabric cover structures would be eliminated due to the following reasons;

- 1) **Low longevity** approximately 10 years for the fabric cover and approximately 15 years for the structural steel components where the Town wanted a building that has a longevity of 25 years or more.
- 2) **The possibility of microbursts, tornados and wind forces higher than design loads is a reality in the Fort Frances Area.** For example in the summer 2014 a mini tornado or microburst touched down at the International Falls golf course where hundreds of trees blew down and the roof for the sundeck blew and flew 500 hundred feet from the deck. A properly installed fabric cover could be blown off during a high wind event in the Fort Frances area.
- 3) **Highly influenced by Thermal expansion and contraction forces-** (extreme temperatures changes) -40 C to + 35C. The fabric is loosened or tightened on a regular basis where this creates a rubbing action of fabric against the structure steel components, which reduces the longevity of the fabric cover. Harvey Benford of MTO supplied several pictures where the fabric and structural fasteners were damaged & repaired due to thermal expansion and contraction forces. As a result the MTO has stopped erecting engineered fabric structures in Northern Ontario since 2011 and fabric is being replaced with metal cladding and plywood.
- 4) **Reduced side wall clearance-** could result in pre-mature structure damage due to direct contact with loader to structural steel roofing or wall elements. High costs for such spot repairs.
- 5) **Past Experience-** based on information provided by the MTO. The MTO is not considering the erection of engineered fabric cover type structures for salt/winter control sand storage structure based on the on-going maintenance repairs and several failures. Also it should be noted that existing fabric cover structures are being replaced with plywood and metal cladding on existing MTO structures. See attached pictures.

With the elimination of the Engineered fabric cover structures, the evaluation results indicated that the preferred structure is an 80 foot diameter circular storage structure (c/w 8 foot high concrete walls and a peak of 37 feet from the finish floor elevation) design and built by Van Pelt Construction Inc. out of Mitchell, Ontario at a net cost of \$404,582.50. The estimated cost for the Town's workforce to supply, place and compact the granular bases and 80 mm HL4 asphalt base is approximately \$44,500. Therefore the total project cost is estimated at \$449,082.50 which is **approximately \$79,200 less** than the approved capital budget.

The Operations & Facilities Executive Committee recommends the following;

- 1) That the design and construction of a storage structure be awarded to Van Pelt Construction out of Mitchell Ontario at a total cost of \$449,271.05 (all taxes included) as outlined in their proposal dated March 25, 2015 under Option No. 2 – Circular structure.
- 2) That the Mayor and Clerk be authorized to execute the contract documents on behalf of the Corporation of the Town of Fort Frances.
- 3) That the Building Permit fees be waived as outlined in the Terms of reference as the control of this project is under the Town of Fort Frances.

Respectfully Submitted
Operations & Facilities Division



Doug Brown, P. Eng.
Operations and Facilities Manager

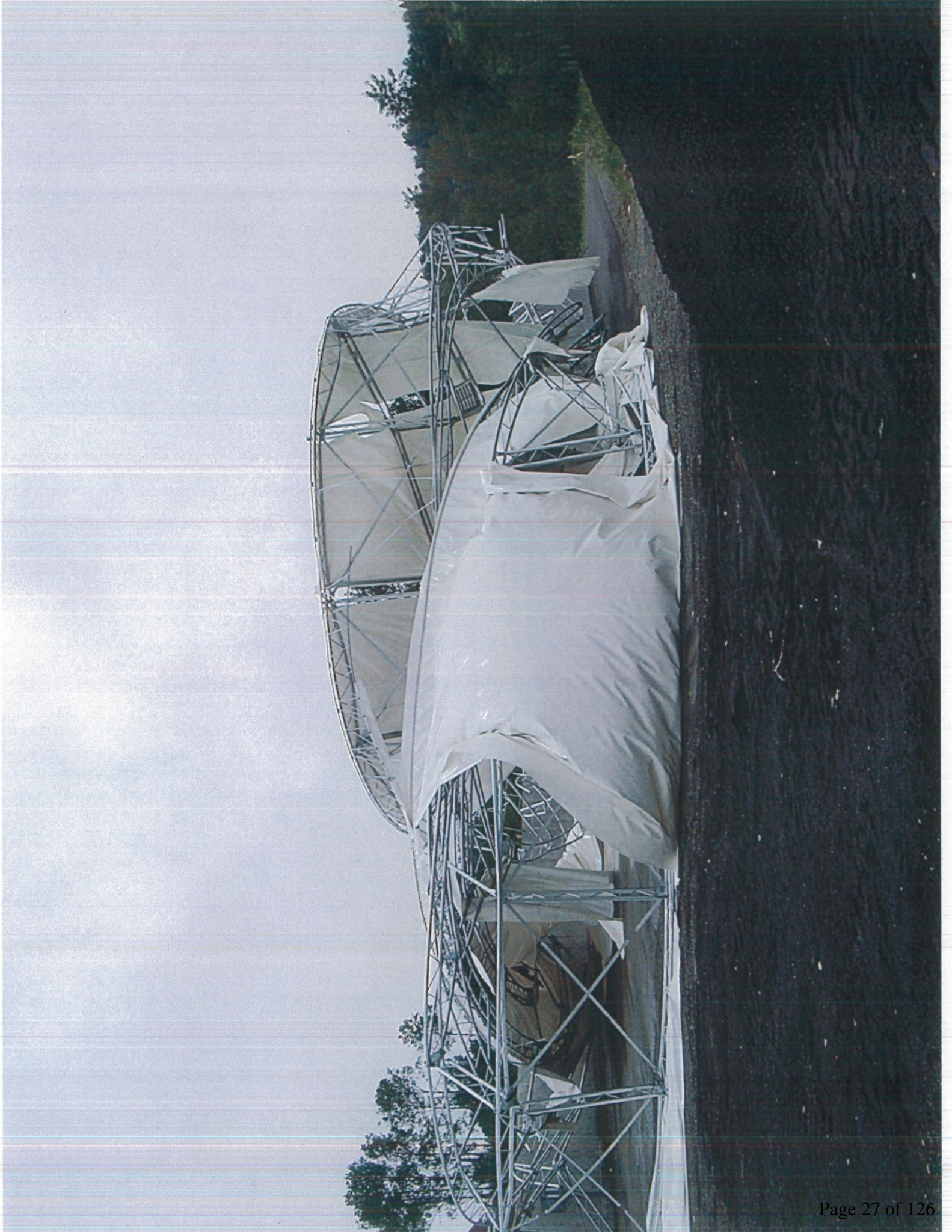
Council approval of this report will ensure the following;

- 1) That the design and construction of a storage structure be awarded to Van Pelt Construction out of Mitchell, Ontario at a total cost of \$449,271.05 (all taxes included) as outlined in their proposal dated March 25, 2015 under Option No. 2 – Circular Structure.
- 2) That the Mayor and Clerk be authorized to execute the contract documents on behalf of the Corporation of the Town of Fort Frances.
- 3) That the Building Permit fees be waived as outlined in the Terms of Reference as the control of this project is under the Town of Fort Frances.













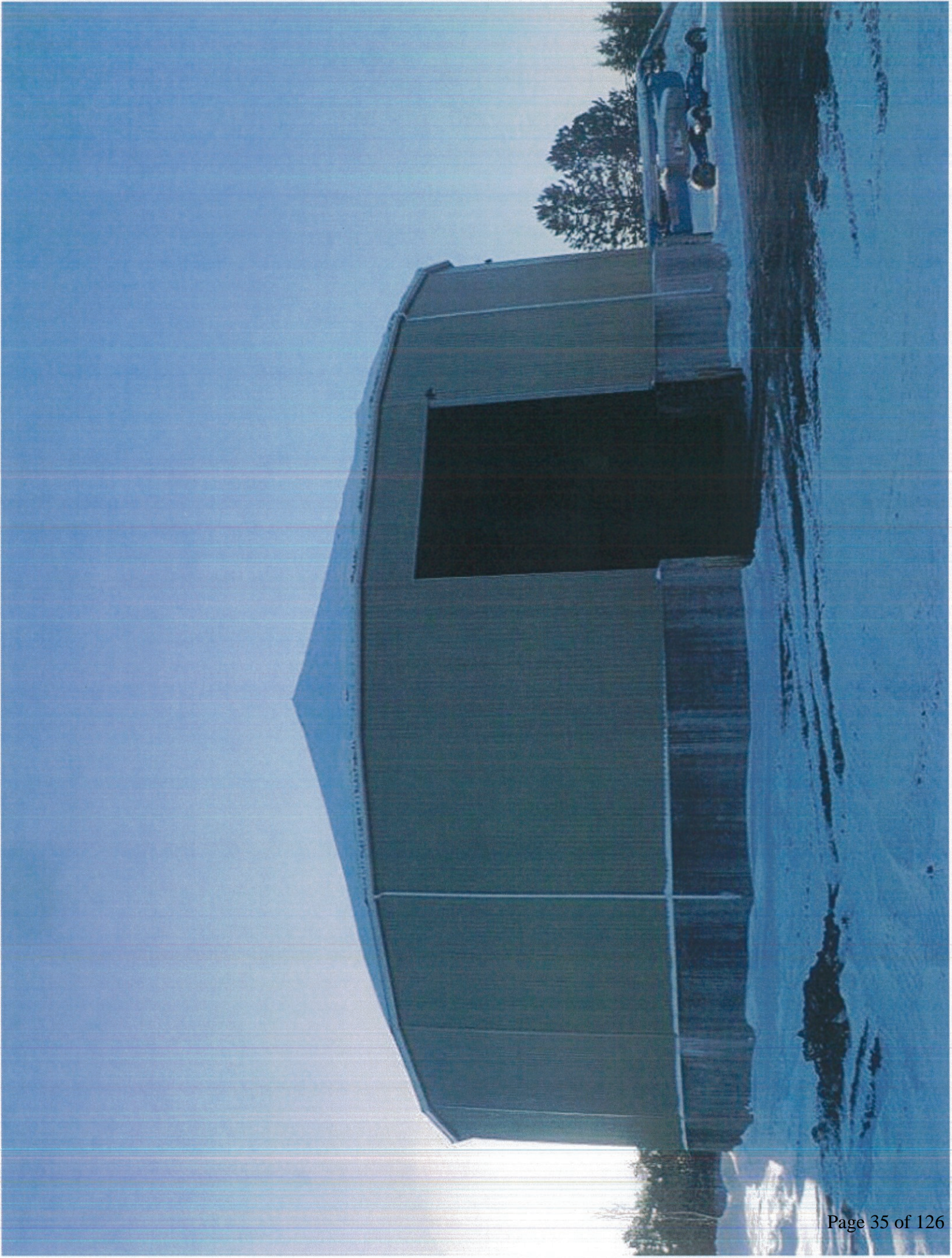


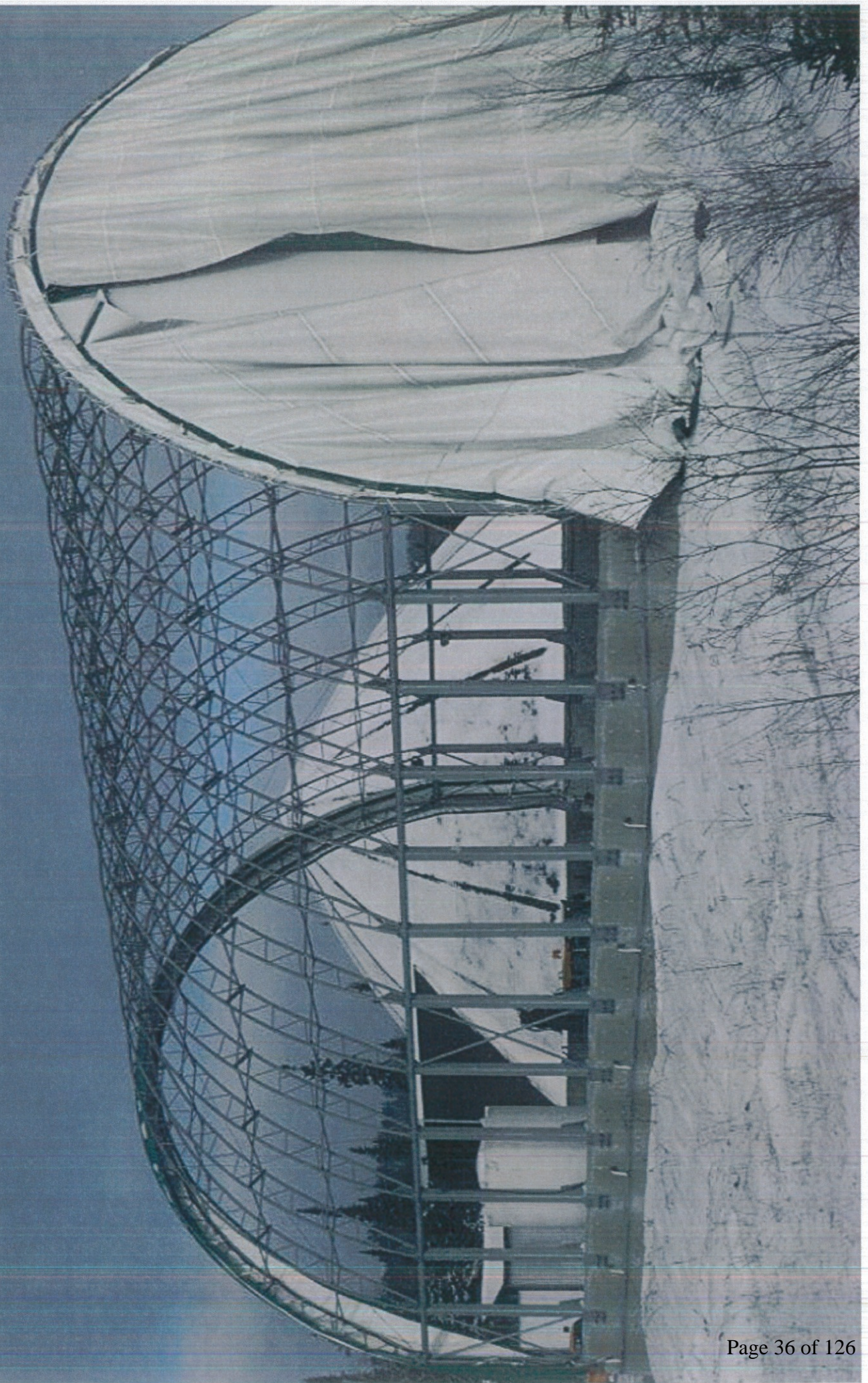












April 17, 2015

Report To: Mayor & Council

From: Doug Brown, Manager of Operations & Facilities

**SUBJECT: Review and Endorsement of the Sewer System Management By-law
(Final Draft)**

The up-dating of the “sewer system management by-law” has been in the works for several years. An extensive review of the existing Town’s by-laws related to both the sanitary sewer system and the storm sewer system was conducted. Also Town staff researched and investigated how communities managed their sewer systems (sanitary & storm).

Please find attached the administration report (c/w a draft copy of the Sewer System By-Law) prepared by Douglas Herr, Environmental and Facilities Superintendent outlining all pertinent revisions on how the Town proposes to manage the sewer systems going forward.

Some of these revisions will have a financial impact on sanitary sewer customers as such the report and draft copy of sewer system management by-law have been distributed at this point in time for an all-embracing review. The proposed By-law will be discussed in-depth at the next O & F executive committee meeting scheduled for May 6, 2015.

Respectfully submitted,
Operations & Facilities Division

A handwritten signature in cursive script that reads "Doug Brown".

Doug Brown, P. Eng.
Operations & Facilities Manager

2015AprilSewerSystembylaw

Memo

To: Doug Brown, P. Eng.
Manager of Operation & Facilities

From: Doug Herr,
Supt. Environmental & Facilities

CC:

Date: Thursday April 16, 2015

Re: "Sewer System Management By-law (FINAL DRAFT)"

Find attached the final version of the Sewer System Management By-law (FINAL DRAFT). With the collaboration of the following departments/personnel; Chief Building Official, Treasurer, Clerk, Utility Billing Clerk, By-law Enforcement, Public Works Administrative Assistant and yourself this by-law was jointly created. Several meetings were held to discuss and obtain input with respect to their area of expertise, all of which have been incorporated.

This by-law has compiled previously associated sewer by-laws, has incorporated new/modified wording and the addition of specific sections to regulate and sustain the Town of Fort Frances' sewer system. In general listed below are some of the particulars that have been incorporated into this by-law:

1. Maintenance responsibility – service lateral – building sewer – charges – Part 2.19: When authorized by the property Owner the Town will perform maintenance work with respect to cleaning of the service lateral and/or building sewer only. The charge to perform maintenance services shall be determined as follows:
 - a) A minimum service charge as outlined in the current Town's User Fee By-law will be charged to the Owner for maintenance services, unplugging/cleaning of the service lateral.

All previous conditions and charges remain unchanged.

2. One service – per premises – Part 2.21: Except as stated herein, in no case shall piping of one building be connected to the piping of another. Pursuant to Ontario Building Code, Article 7.1.5.4, sentences (1), No premises shall be provided with more than one sewer service, except that where a principle use building is serviced, and ancillary/accessory building may be serviced by the same sewer service provided that:
 - a) both building are on the same property,
 - b) the services are registered on title to the lands with the local authority,
 - c) a formal agreement is reached with all interested parties and,
 - d) permission is granted by the Engineer.

3. Purchasing of property – Part 2.25: Purchaser is to search records of outstanding arrears and properties serviced for future development where payment of such service is outstanding.
4. Minimum monthly charge – providing and maintaining – service lateral – who payable by – Part 3.9: The minimum monthly charge for providing and maintaining a service lateral and private drain connection to a property is applicable for every customer serviced by the Town. In instances when the occupant of a premise terminates his account with the Town, subsequent minimum monthly charges shall be rendered to the owner of the premises until such time as a new occupant applies to the Town.
5. Prohibited discharges – roof water/ground water – sanitary sewer – Part 7.1: Identifies all aspects associated with prohibiting roof water and ground water (weeping tile) into the sanitary system. As well as the procedure to obtain access to inspect suspected violations.
6. Separation of mutual service lateral/building sewers – Part 10.3: Identifies the criteria for separating service laterals/building sewers servicing two or more properties.
7. Warranty – Part 10.5: Town to warranty work, whether new installation, replacement or repairs on the service lateral for a period of twenty (20) years.

In regards to Items 1 and 4 a minimum fee would be charged to the Owner. Under Item 1, where the Town performs work cleaning the service lateral either during or after hours, whether there is a blockage or not the Owner will be charged a minimum charge for this service. Attached is a spreadsheet outlining the number of plugged sewers the Town attended to over the past three (3) years. Of these approximately 44.6% of the blockages were within the service lateral (Town road-right-of-way). This equates to approximately 75 blockages per year.

Also shown are three scenarios identifying different minimum charge rates; per regular hours (\$25.00, \$41.47 and \$50.00), after hours and on statutory holidays and what revenue would be generated. Presently the charge to unplug/clean a building service is \$107.80 per regular hour. The scenarios are for your review and consideration.

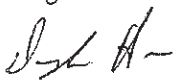
Under Item 4, where an Owner/Occupant terminates his account with the Town the service lateral remains in place. In some cases service laterals have remained in place for years, even decades. Any work involved in repairing the service would be at the cost of the Town. A monthly charge would help offset some of the costs. It is uncertain how many of these types of conditions exist, but by checking through our records we could determine where and how many there are.

I have checked with other communities that implement this fee and the cost varies from \$14.00 to \$19.00 per month. This fee would include both services, sanitary sewer and water. Since this is new I would suggest a \$15.00 charge.

The above items, once approved should be advertised over a period of time, say six (6) months prior to implementation. This will let customers of the Town of Fort Frances become aware of these changes, give them time to ask questions and will ultimately lessen the number of complaints.

If you have any questions regarding the above feel free to contact the undersigned.

Doug Herr



Sanitary Sewer Service Unplugging Data 2012 to 2014

| | Year | | | | |
|---|------|-----|------|-----|------|
| | 2012 | | 2013 | | 2014 |
| Number of Plugged Sewer Services | 161 | | 157 | | 184 |
| Number of Plugged Sewer Services - Billable | 82 | 51% | 94 | 60% | 102 |
| Number of Plugged Sewer Services - Non-Billable | 79 | 49% | 63 | 40% | 82 |
| | | | | | 45% |

3-Year Average (Non-billable):

74.7

| | Regular Hrs. | | O.T. Hrs. | | Holidays | |
|---|--------------|--------------|-----------|--------------|----------|--------------|
| | (x1.0) | Yearly Total | (x1.5) | Yearly Total | (x2.0) | Yearly Total |
| Senerio No. 1 - Minimum Charge (\$25.00) | \$25.00 | \$1,866.67 | \$37.50 | \$2,800.00 | \$50.00 | \$3,733.33 |
| Senerio No. 2 - Minimum Charge (1 - employee (\$41.47)) | \$41.47 | \$3,096.43 | \$62.21 | \$4,644.64 | \$82.94 | \$6,192.85 |
| Senerio No. 3 - Minimum Charge (\$50.00) | \$50.00 | \$3,733.33 | \$75.00 | \$5,600.00 | \$100.00 | \$7,466.67 |

| | 2012 | | 2013 | | 2014 | |
|-------|-------|---------|-------|---------|-------|---------|
| | Total | Private | Total | Private | Total | Private |
| J | 9 | 4 | 17 | 10 | 14 | 10 |
| F | 8 | 2 | 15 | 9 | 14 | 7 |
| M | 14 | 7 | 14 | 9 | 25 | 9 |
| A | 8 | 4 | 21 | 19 | 14 | 6 |
| M | 16 | 11 | 14 | 6 | 20 | 9 |
| J | 8 | 7 | 6 | 4 | 13 | 9 |
| J | 16 | 6 | 16 | 7 | 20 | 13 |
| A | 18 | 9 | 8 | 3 | 8 | 7 |
| S | 12 | 8 | 9 | 4 | 14 | 12 |
| O | 15 | 7 | 7 | 2 | 12 | 4 |
| N | 15 | 8 | 17 | 12 | 15 | 8 |
| D | 22 | 9 | 13 | 9 | 15 | 8 |
| Total | 161 | 82 | 157 | 94 | 184 | 102 |
| Avg. | 13.4 | 6.8 | 13.1 | 7.8 | 15.3 | 8.5 |



2015

**Sewer System
Management By-law
No. XX/15**

Town of Fort Frances

By-law No. XX/XX

A by-law to provide for the
REGULATION OF THE SEWER SYSTEM IN THE
TOWN OF FORT FRANCES

Municipal Act, 2001, R.S.O. 2001, c. 25, Subsections 10(1) and 10(2); the Ontario Water Resources Act, R.S.O. 1990, c. 40, Sections 30(1), 44, 92; and the Environmental Protection Act Sections 2, 14(2) and Regulation 309.

WHEREAS on XXXX XX, XXXX Council approved a recommendation from the Operations and Facilities Executive Committee to enact this by-law.

NOW THEREFORE Council for the Corporation of the Town of Fort Frances
HEREBY ENACTS AS FOLLOWS:

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- 1.6 Building Drain
- 1.7 Building Sewer
- 1.8 Chief Building Official
- 1.9 Clean out
- 1.10 Combined Sewer
- 1.11 Connection Inspection
- 1.12 Construction
- 1.13 Contractor
- 1.14 Corporation
- 1.15 Customer
- 1.16 Dampproofing
- 1.17 Deposit
- 1.18 Developer
- 1.19 Development
- 1.20 Duplex Dwelling
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- 1.26 Main
- 1.27 Municipal Address
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- 1.29 Occupant
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- 1.31 Person
- 1.32 Plumbing Code
- 1.33 Plumbing System
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- 1.36 Private Main
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- 1.43 Semi-detached Dwelling
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- 1.50 Storm Sewer
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- 1.54 Termination of Service
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Illustration of Sewage System.

**SHORT TITLE
SEWER BY-LAW**

**Part 1
DEFINITIONS**

Definitions in this by-law:

1.1 Authorized Representative of the Owner or Operator – defined

“authorized representative of the owner or operator” shall mean;

- a) In the case of the owner or operator is a corporation, a person having signing authority to bind the corporation: or
- b) In the case of the owner or operator being a partner or proprietorship, a participating partner having signing authority to bind the partnership or the person being the proprietor, respectively: or
- c) A duly authorized representative of the individual designated above if such representative is responsible for facilities from which the sewage discharge originates.

1.2 Application – defined

“application” shall mean a contract, expressed or implied, for any of the customary services provided or supplied by, or in conjunction with this the Sewer System Management By-law.

1.3 Building – defined

“building” shall mean any building, structure or premises, whether for principal use or accessory use as defined in Sections 1.4 and 1.5.

1.4 Building, Principal Use – defined

“building, principal use” shall mean any building in which is carried on the principal purpose for which the property is used and shall include a barn or silo used in conjunction with a farm.

1.5 Building, Ancillary/Accessory Use – defined

“building, ancillary/accessory use” shall mean any building or structure, which is incidental, subordinate and exclusively devoted to and located on the same property as the principal use building.

1.6 Building Drain – defined

“building drain” shall mean the lowest horizontal piping, including any vertical offset, that conducts sewage, clear water waste or storm water by gravity to a building sewer.

1.7 Building Sewer – defined

“building sewer” shall mean the portion of a sewer service pipe from the property line to the location one (1) metre outside of the exterior wall of a structure, i.e. an extension of a service lateral.

1.8 Chief Building Official – defined

“chief building official” shall mean the person appointed by Council pursuant to the Building Code Act or any employee of the Town who acts at the direction of the Chief Building Official in the enforcement of this by-law.

1.9 Clean out – defined

“clean out” shall mean a device that has a removable cap and is incorporated into a drainpipe to permit the insertion of a steel sewer rod pipe cleaning apparatus.

1.10 Combined Sewer – defined

“combined sewer” shall mean a sewer intended to function simultaneously as a storm sewer and a sanitary sewer.

1.11 Connection Inspection – defined

“connection inspection” shall mean an examination and/or evaluation of a connection performed by visual, closed circuit television or other means to ensure conformity to all applicable statutes, by-laws and regulations.

1.12 Construction – defined

“construction” shall include new construction, reconstruction, improvements, extension, alteration, replacement and repairs.

- 1.13 Contractor – defined**
“contractor” shall mean a person, partnership, or corporation who contracts to undertake the execution of work commissioned by the owner or the Town to install or maintain mains, service mains, lateral lines, services, hydrants and other appurtenances.
- 1.14 Corporation – defined**
“corporation” shall mean the Corporation of the Town of Fort Frances, its officers or employees.
- 1.15 Customer – defined**
“customer” shall mean any person who enters into a verbal or written contract with the Town to take sewage or to receive sewage related services from the Town.
- 1.16 Dampproofing – defined**
“dampproofing” is a process that involves using a coating on the exterior side of a structure to stop the transference or wicking of ground moisture through a basement/foundation wall. Dampproofing is not intended to keep all water and moisture out, but rather its goal is to retard moisture infiltration and slow water penetration.
- 1.17 Deposit – defined**
“deposit” means the payment in lawful tender of Canada in advance of the work or service to be rendered by the Town of Fort Frances.
- 1.18 Developer – defined**
“developer” shall mean the owner or party specifically named or identified as the developer in a Development Agreement or in a Subdivision Agreement.
- 1.19 Development – defined**
“development” shall mean the construction, erection or planning of one or more buildings or structures on land or the making of an addition or alteration to a building or structure or a subdivision of land into lots that has the effect of increasing the size or usability thereof, and includes the laying out and establishment of a commercial parking lot.
- 1.20 Duplex Dwelling – defined**
“duplex dwelling” shall mean the whole of a dwelling other than a converted dwelling that is divided horizontally/vertically into two separate dwelling units, each of which has an independent entrance either directly from the outside or through a common vestibule.
- 1.21 Engineer – defined**
“Engineer” shall mean the Town’s Engineer or any person acting by his or her authority for the Town of Fort Frances.
- 1.22 Home Industry/Occupation – defined**
“home industry/occupation” shall mean any occupation accessory to, and carried on by at the occupant of, a single-detached dwelling and for which a municipal business license is required.
- 1.23 Inspector – defined**
“inspector” shall mean any person authorized by the Engineer to act on his or her behalf for purposes of inspection.
- 1.24 ICI – defined**
“ICI” shall mean Industrial, Commercial and Institutional.
- 1.25 Land – defined**
“land” shall mean the land in the Town of Fort Frances and includes any estate, term, easement, right or interest in, to, over or affecting land.
- 1.26 Main – defined**
“main” shall mean every sewer pipe, except lateral services and portions of private mains as herein defined, installed on the public road allowance or on any other land to which the Town has the legal interest through title or registered easements.
- 1.27 Municipal Address – defined**
“municipal address” shall mean the combination of the number assigned and name of the street on which a property is located and to identify a building or buildings on a particular property within the Town of Fort Frances.

- 1.28 Municipality – defined**
“municipality” shall mean The Corporation of the Town of Fort Frances.
- 1.29 Occupant – defined**
“occupant” shall include any lessee, tenant, owner, the agent of a lessee, tenant or owner, or any person in possession of or occupier of a property.
- 1.30 Owner – defined**
“owner” shall mean any person who or any firm or corporation that is the registered owner of the property under consideration or any agent thereof, a person entitled to a limited estate in land, a trustee in whom land is vested, a committee of the estate of a mentally incompetent person, an executor, an administrator or a legal guardian.
- 1.31 Person – defined**
“person” shall mean an individual, association, partnership, corporation, municipality, provincial or federal agency or agent or employee thereof and includes an occupant or owner.
- 1.32 Plumbing Code – defined**
“plumbing code” shall mean the regulations respecting plumbing from time to time in force under Part 7 of *Ontario Regulation 350/06, the Ontario Building Code*, or any Regulation passed in amendment thereof or substitution therefore.
- 1.33 Plumbing System – defined**
“plumbing system” shall mean the system of connected piping, fittings, valves, equipment, fixtures and appurtenances contained in plumbing that begins, is located and is connected immediately within private property.
- 1.34 Premises – defined**
“premises” means property (land or real estate) conveyed by a deed. Where the context so requires, “premises” shall mean any house, tenement, building, lot, or part of a lot, or both, in, through, or past which sewer service pipes run.
- 1.35 Private Drain Connection (PDC) – defined**
“private drain connection (PDC)” shall mean that portion of the Town sewage works which joins a building sewer to a service lateral and which is upon lands that are either owned by the Town or subject to an easement registered in the Land Registrar’s Office in favour of the Town.
- 1.36 Private Main – defined**
“private main” shall mean a pipe connected to a main and installed on private property and from which more than one service is connected.
- 1.37 Property – defined**
“property” means a building or structure or part of a building or structure and includes the lands and premises appurtenant thereto and all mobile homes, mobile buildings, mobile structures, accessory buildings, outbuildings, fences and erections thereon whether heretofore or hereafter erected and included vacant property.
- 1.38 Property Owner – defined**
“property owner” shall mean the property owner as shown on the last revised assessment roll of the Corporation of the Town of Fort Frances.
- 1.39 Public Sewage Works – defined**
“public sewage works” shall mean any works for the collection, transmission, treatment and disposal of storm water and sanitary sewage or any part of such works but does not include plumbing to which the latest edition of the Building Code Act applies.
- 1.40 Sanitary Sewage – defined**
“sanitary sewage” shall mean human and industrial waste and septic waste but does not include storm water.
- 1.41 Sanitary Sewer – defined**
“sanitary sewer” shall mean any part of the public sewage works for the collection, transmission, treatment or disposal of domestic, commercial, institutional and industrial sewage or any combination thereof.
- 1.42 Schedule of Fees – defined**
“schedule of fees” shall mean the schedule of user fees as amended from time to time and adopted by by-law passed by Council for the Town of Fort Frances.
- 1.43 Semi-detached Dwelling – defined**
“semi-detached dwelling” shall mean one of a pair of two attached single dwellings with a common masonry wall dividing the pair of single dwellings vertically, each of which has an independent entrance either directly from the outside or through a common vestibule.

1.44 Septage – defined

“septage” shall mean all matter, liquid and solid that is pumped out of septic tanks and holding tanks. Such tanks may be used in residential, commercial or industrial properties, which are not connected to the Town’s sewerage system. Where septage is transported by truck for disposal at a Hauled Liquid Waste Facility, it shall be considered Hauled Liquid Waste.

1.45 Serviceability – defined

“serviceability” shall mean the capability of a component, pipe, and sewer to perform the function for which it was intended.

1.46 Service Lateral – defined

“service lateral” shall mean the portion of a sewer service pipe from a main to the property line.

1.47 Sewer Service – defined

“sewer service” shall include both sanitary sewer and storm sewer services.

1.48 Sewage Works – defined

“sewage works” shall mean all sewers, sewage systems, sewage pumping stations, sewage treatment plants and other works of the Town of Fort Frances. The collection, acceptance, transmission, treatment and disposal of liquid-borne wastes of storm water sewage and sanitary sewage.

1.49 Single-detached Dwelling – defined

“single-detached dwelling” shall mean a single dwelling used for human habitation, which is free standing, separate and detached from other main buildings or main structures including a split level dwelling but does not include a mobile home.

1.50 Storm Sewer – defined

“storm sewer” shall mean a sewer, open channel, ditch or depression for the purpose of which is to carry storm water and the collection and transmission of the uncontaminated water, storm water and drainage from land or from a watercourse or any combination thereof.

1.51 Storm Water – defined

“storm water” shall mean water from rainfall or other natural precipitation or from the melting of snow or ice, swimming pool drain water, water carried in underground drains, foundation drain flows and ground water but does not include sanitary sewage or septage.

1.52 Storm Water Retention System – defined

“storm water retention system” shall mean a system, which has been designed and constructed under the supervision of a professional engineer to control the rate at which storm water is emptied into the sewage works.

1.53 Sub Divider – defined

“sub divider” shall mean the owner or party specifically named or identified as a sub-divider in a Subdivision Agreement.

1.54 Termination of Service – defined

“termination of service” shall mean the discontinuation of use of a sewer service to supply the transmission and disposal from a premise, either on a permanent or temporary basis.

1.55 Town – defined

“Town” shall mean The Corporation of the Town of Fort Frances.

1.56 Waterproofing – defined

“waterproofing” is designed to stop water infiltration through a structure. Waterproofing materials have the ability to bridge cracks that develop over time due to their elastic, flexible nature and the thickness of the applied coating. Waterproofing materials also are designed to withstand hydrostatic pressures against the waterproofed surface.

Part 2
ADMINISTRATION – GENERAL PURPOSE

2.1 Administration of By-law

This by-law shall be administered by both the Engineer and the Chief Building Official.

2.2 Application – payment prior to installation

An application for sewer service, sanitary and/or storm from the Town shall be completed on the standard forms provided by the Town and any required deposit shall be paid to the Town by the owner or their authorized agent before any work is commenced on the installation of the sewer service.

2.3 Application – existing service – connection – inspection

Where an existing service is required to be connected (private drain connection) to any property, such service(s) is to be inspected by the Town. The owner or their authorized agent shall make appropriate application to the Town.

2.4 Application – termination of service – building demolition – permanent/temporary

In the event of the demolition of any building or buildings on a premise serviced with a sewer service, the appropriate application is to be made to the Town for termination of such sewer service. The service shall be terminated

- a) where the existing sewer service will not or cannot be used or where no building requiring a sewer service is planned, the service is to be permanently terminated.
- b) where the existing sewer service will or can be used, or where a building requiring a sewer service is planned for construction within a specific period of time, the service is to be temporarily terminated.

If in the opinion of the Engineer, circumstances exist where it is not reasonable or practical to permanently terminate the service, it shall be terminated temporarily.

2.5 Application – each property

Separate applications are required for each property serviced.

2.6 Blockage – tree roots - liability

Where a sewer service blockage is caused by tree roots and the tree is located on Town property, the Town may assume liability for costs involved in clearing such blockage. Where the tree is located on private property and causes the blockage of a sewer service then the Owner of the property shall be liable for all of the cost involved in clearing the blockage. The Engineer shall be the sole judge of the location of the problem and as to whether or not the Owner is to be charged with any of the cost.

2.7 Cost of service – owner

The entire cost of the sewer service from the main to the property line shall be borne by the Owner of the premises.

2.8 Cost – deposit – User Fee By-law

The costs and deposits referred to in Sections 2.2 and 2.7 are payable in the amounts provided in the Town's User Fee By-law in effect at the date of the application.

2.9 Cost of termination/connection inspection – owner

The costs associated with the termination of services, whether permanent or temporary and for connection inspections shall be borne by the Owner of the premises. The cost of locating the private drain connection for reconnection is the responsibility of the Owner.

2.10 Decision to be final

All decisions made by the Engineer or the Chief Building Official with respect to any requirements set out in this by-law shall be final and binding.

2.11 Development – agreement

In case of land development where the land will be serviced with municipal sewer, the developer shall enter into an agreement with the Town. Plans and specifications will be prepared by a professional engineer, licensed with the province of Ontario and approved by the Engineer prior to any work commencing.

2.12 Development – property – servicing requirements – costs

In case of land development, whether under agreement or not and there is no municipal sewer (sanitary or storm) fronting the property, the developer shall extend the municipal sewer completely across the frontage being developed. All costs associated with the installation of the municipal services shall be the responsibility of the developer.

2.13 Discontinuance of service – payment

The Owner shall notify the Town immediately when the use of a sewer service for the collection of sewage from the premises is no longer required. The Town shall decide whether the service is to be terminated on a permanent or temporary basis for the charges provided in this by-law unless prior application for sewer service is received.

2.14 Entry onto private property

For the purpose of the administration of this by-law, the Engineer, any consultant engaged by the Corporation of the Town of Fort Frances and directed by the Engineer, and any person appointed by the Council to carry out inspection in respect of discharges prohibited or regulated by this by-law and directed by the Engineer may, upon production of identification enter in or upon land or premises, except land or premises being used as a dwelling unit, at any time without a warrant and carry out such inspections and take such tests and samples as are necessary for the purpose of the inspections.

2.15 Entry into dwelling – exception

Except under the authority of a search warrant issued under section 158 of the *Provincial Offences Act*, R.S.O. 1990, c. P. 33, as amended, for the purposes of enforcing this by-law, no person shall enter any place or room actually used as a dwelling without requesting and obtaining the consent of the occupier (being at least 18 years of age), first having informed the occupier that the right of entry may be refused and entry made only under the authority of a search warrant.

2.16 Frozen service – thawing – application

Thawing of a frozen sewer service between the building and main may be carried out by the Town's Public Works personnel providing that application for such is made on the Town's standard forms. The property Owners will be charged per hour (one hour minimum charge) for the appropriate equipment and manpower as established in the Town's User Fee By-law.

2.17 Maintenance responsibility – owner – building sewer

The maintenance, renewal or removal of that portion of the building sewer between the property line and the premises shall be the responsibility of the Owner.

2.18 Maintenance responsibility – owner – service lateral – charges

The Owner is responsible for the condition and maintenance of the service lateral servicing property under their ownership. All work upon such lateral shall be done exclusively by the Town at the request and expense of the Owner.

2.19 Maintenance responsibility – service lateral – building sewer – charges

When authorized by the property Owner the Town will perform maintenance work with respect to cleaning of the service lateral and/or building sewer only. The Owner or Authorized representative of the Owner shall give the Town written authorization to perform such work by executing the appropriate Work Requisition form. The charge for maintenance services shall be determined as follows:

- a) A minimum service charge as outlined in the current Town's User Fee By-law will be charged to the Owner for maintenance services.
- b) Where it is determined by the Town that the location of the obstruction is on the Owner's property all charges incurred, less the minimum service charge shall be paid by the Owner.
- c) Where it is determined by the Town that the location of the obstruction is on the Town's property. This only applies to normal service laterals, property line to main (normally approximately ten (10) metres or thirty-three (33) feet) and not those made under special agreement with the Town. The Town may assume all costs for maintenance services to clear the blockage, except for the minimum service charge.
- d) Where it is discovered that the service obstruction is the direct result of a person(s) discharging or depositing items, i.e. female hygiene products, paper towels, etc. other than those deemed normal every day usage, regardless of the location of the obstruction (Owner's or Town's property), the Owner shall be responsible for the costs of the work done to clear the obstruction.

2.20 Ownership change – notice

Upon change in ownership of premises supplied with a sewer service by the Town, the new Owner shall notify the Town of the change.

2.21 One service – per premises

Except as stated herein, in no case shall piping of one building be connected to the piping of another. Pursuant to Ontario Building Code, Article 7.1.5.4, sentences (1), No premises shall be provided with more than one sewer service, except that where a principle use building is serviced, and ancillary/accessory building may be serviced by the same sewer service provided that:

- a) both building are on the same property,
- b) the services are registered on title to the lands with the local authority,
- c) a formal agreement is reached with all interested parties and,
- d) permission is granted by the Engineer.

2.22 Purchasing of property – arrears outstanding

It shall be the responsibility of any person purchasing property to which, sewer is supplied by the Town, to cause a search to be made of records for utility arrears outstanding against the property prior to completion of purchase and to obtain from the Town a certificate of such arrears.

2.23 Private Drain Connection – requirements

No person shall join or permit to be joined a building sewer to a service lateral:

- a) until an application, under section 2.3 is filed with the Town and:

- b) until an inspection by the Town employees has been carried out to confirm all work performed is in conformity to all applicable statutes, by-laws and regulations, and;
- c) until a television inspection has been carried out by Town employees to verify its serviceability and been deemed to be adequate for use and an approved connection can be made; [Note: where the connection is not approved for use the Owner shall renew the service lateral, as described in Section 6.8 of this by-law]; and
- d) until all payments required by this by-law have been paid.

2.24 Private drain connections – serving dwelling units

If a single detached dwelling or a semi-detached dwelling is served by a sanitary sewage service lateral, such dwelling shall have an individual building sewer and private drain connection.

This section does not apply to existing residential dwelling units, which share a private drain connection.

2.25 Purchasing of property – serviced with sewer service – future development – payment

It shall be the responsibility of any person purchasing property to which sewer service is supplied by the Town for future development, to cause a search of records for the service information prior to completion of purchase. Where properties are serviced as such, the person purchasing such property shall be required to make application for such sewer service and make payment as outlined in the Town's User Fee by-law in effect at the time.

2.26 Random Inspection – Vacancies – Town

Once property owners of vacant unit(s) listed under sections 2.28 & 2.29 complete a credit adjustment form or report, the Town may conduct random inspections of these unit(s) to ensure that they are vacant and are not using sewer services. If the Town becomes aware that a vacant unit(s) is occupied or the property owner is using sewer services in a vacant unit(s), the property owner shall be charged with an offence under this by-law and the applicable fees for sewer services will be charged back to the date the credit adjustment form or report became effective.

2.27 Sewer rate – single tenant – responsibility

Where a building is used or occupied by a tenant in a residential zone whose application for a supply of sewer services to such building is accepted by the Town, the owner of the premises shall be liable to the Town for the payment of all rates in respect of sewer services supplied to the building.

2.28 Sewer rate – multiple tenants – responsibility

Where a building is used or occupied by:

- a) an owner and one or more tenants: or
- b) two or more tenants each residing in separate dwelling units,

In a residential zone, it is the responsibility of the owner to make application for sewer service to such building and the owner shall be liable to the Town for the payment of all rates in respect of sewer supplied to such building.

2.29 Sewer rate – ICI – responsibility

Where a building is used or occupied by an owner and/or tenant in an ICI zone and a sanitary or storm sewer service is supplied, the Town shall accept an application for sewer service to such building from the owner and the owner shall be liable to the Town for the payment of all rates in respect of the sewer service supplied to such building.

2.30 Sewer Fees or Charges – Unoccupied or Vacant Residential Properties

A residential property owner may qualify for an adjustment to applicable fees for sewer services, if the water curb stop valve is placed in the "off" position in accordance with the terms and conditions outlined in the current Water System Management By-law 06/03, as amended and the sewer is not in use. Also the property owner is required to complete a credit adjustment form in accordance with timelines and guidelines as established by the Town of Fort Frances Utilities Department.

2.31 Sewer Fees or Charges – Unoccupied or Vacant Multi-residential Unit(s)

A multi-residential property owner with unoccupied or vacant multi-residential unit(s) may qualify for an adjustment to applicable fees for sewer services, if the property owner completes a credit adjustment form in accordance with timelines and guidelines as established by the Town of Fort Frances Utilities Department.

2.32 Sewer Fees or Charges – Unoccupied or Vacant Mobile Home Trailer(s)

This clause addresses mobile home trailer(s) located within a mobile home trailer park, exclusive of Recreational Vehicle (RV) campgrounds. A mobile home trailer park property owner with vacant trailer(s) may qualify for an adjustment to applicable fees for sewer services,

if the property owner completes a credit adjustment to applicable fees for sewer services and, if the property owner completes a credit adjustment report in accordance with timelines and guidelines as established by the Town of Fort Frances Utilities Department.

2.33 Sewer Usage – Vacant Multi-residential Unit(s) or Vacant Mobile Trailer(s)

Under no circumstances will applicable fees for sewer services be adjusted where vacant multi-residential unit(s) or vacant mobile home trailer(s) listed under clauses 2.31 or 2.32 are either:

- a) using water, and/or
- b) bleeding water in order to prevent their water service line from freezing.

Part 3
SEWER RATES AND CHARGES

3.1 Application for sewer service

Before the initial supply of a sewer service, private drain connection or any subsequent reconnection to any premises in the Town, the owner shall make application for the same, and the owner shall be governed by the requirements of this by-law.

3.2 Application – termination of service

Before the termination of a sewer service, whether temporary or permanent, the owner shall make application for the same on the appropriate forms and the owner shall be governed by the requirements of this by-law.

3.3 Billing – flat rate

Customers shall be billed bi-monthly for sewer services at the rates outlined in accordance with the current Town's User Fee by-law.

3.4 Billing – metered customers

Customers shall be billed bi-monthly for sewer at the rates outlined in accordance with the current Town's User Fee By-law.

3.5 Collection - charge

When it has been necessary for a "notice of disconnection" to be delivered as set out in Section 3.10 of this part of the by-law, a collection charge shall be applied to the outstanding account. Where two (2) consecutive billings have resulted in the need for such notice of disconnection to be delivered as described herein, then a collection charge shall be applied for each occurrence. The rates for collection charges are outlined in the current Town of Fort Frances Collections Policy.

3.6 Cost – outstanding - completion

The applicant shall pay the remaining portion of the actual cost of installation within thirty (30) days from the date of billing for such installation.

3.7 Deposit – prior to installation

A deposit, as set out in the current Town's User Fee by-law, shall be made prior to installation of the service.

3.8 Frozen service – thawing charge

Costs of the thawing of frozen sewer service lateral, private drain connections or building sewer service are set forth in accordance with the current Town's User Fee by-law.

3.9 Minimum monthly charge – providing and maintaining – service lateral – who payable by

The minimum monthly charge for providing and maintaining a service lateral and private drain connection to a property is applicable for every customer serviced by the Town. In instances when the occupant of a premise terminates his account with the Town, subsequent minimum monthly charges shall be rendered to the owner of the premises until such time as a new occupant applies to the Town.

3.10 Non-payment – water turn off – lien

If the customer at any premises omits, neglects or refuses to pay any bills rendered, whether for sewer service installations, meter, service charges or any other monies to which the Town may be entitled in respect of sewer services to such premises, such charges shall remain as a lien on the property where they have been incurred by the owner of the property and may be collected in accordance with the procedures permitted by Section 398(2) of the *Municipal Act, 2001*.

3.11 Notice of arrears – outstanding account – late payment charge

When an account is not paid by the due date stated on the bill, a late payment charge, as outlined in accordance with the Town's Collection Policy will be assessed to the account. On

second billing, with one full bi-monthly in arrears, a notice of arrears will be served reminding the customer of the outstanding account and advising of further action.

3.12 Notice of arrears – served

The notice of arrears shall be served personally (hand delivered) or by “Registered Mail” to the premises or the last known property owner to which the service had been supplied.

3.13 Notice of disconnection

On third billing, with two full bi-monthly billings in arrears should the account remain unpaid, a water disconnection notice will be issued. The Engineer will deliver or cause to be delivered to the serviced address, advising the customer that unless payment is received, in full within ten (10) days the water supply will be discontinued.

3.14 Reconnection – charge – non-payment

Where it has been necessary to discontinue service as a result of “non-payment”, a reconnection charge as shown in current Town’s User Fee by-law will be levied against the delinquent account, in addition to the applicable collection charge.

3.15 Service installation charges

The Engineer, upon application for such sewer service shall prepare an estimate of the service installation costs.

3.16 Unpaid bills - interest

Unpaid bills, after thirty (30) days, shall have a 1.25 per cent interest charge added per month and each month thereafter until paid in full.

Part 4
DEPOSITS

4.1 Deposit – security for payment

Whenever an application is made to the Town for a private drain connection, the Town will require the customer to make a deposit of such a sum of money, as it may consider advisable or as specified within this by-law. Each such deposit shall be security for payment for all services required in respect to which the deposit was made. In the case of discontinuance of service the customer is to notify the Town in writing. All requests will be in writing on the applicable forms for services required.

4.2 Deposit – applied as payment

Where a deposit has been made pursuant to Section 4.1 of this by-law, and the private drain connection supplied to the customer has not been paid for on demand as may be provided by the Town’s by-laws and regulations, then the deposit, or as much of it as shall be necessary, shall be applied in payment for such service and said service shall be discontinued until further monies have been paid to the Town sufficient to again bring up the deposit to the amount required.

Part 5
SEWER SYSTEM – OPERATION – USE

5.1 Authority – Town

The Town in its own right shall have the sole responsibility, authority, power and capacity to construct, maintain and operate all sewer works, plant and equipment within its boundaries serving the Town and to establish whether the terms upon which municipalities or persons outside its boundaries may be allowed to connect to the said sewer works as consumers and to establish the rates to be charged for use by such consumers.

5.2 Cleanout – existing

Where cleanouts exist on the property line the property owner shall keep them in good repair and free from leaks, damage and disrepair.

5.3 Connection to sewers – every building – having plumbing fixtures

Every building in which plumbing fixtures are installed shall have a connection to a public sewer or private sewage disposal system by the most direct line from the building to the public sewer unless approved otherwise by the Engineer.

5.4 Manholes

No person except the Engineer or person authorized by the Engineer shall be permitted to interfere with the operation of the sewer system manholes.

5.5 Sanitary sewer – location – restricted

Unless otherwise approved by the Chief Building Official no sanitary sewer shall pass under any residential building other than the building it serves and the entire plumbing system of every building or premises shall be separate from and independent of that of

every other building or premises and shall have an independent connection with a public sewer.

5.6 Private system – limitations

No person shall construct or maintain any private system of disposal of excremental matter or sewage except upon permission by the Engineer. Application for permission shall be accompanied by a detailed description of the system and its location on the premises.

5.7 Private system – where prohibited

No private system of disposal of sewage shall be allowed to exist on lands abutting streets which have sewage facilities or upon those premises which, by reason of their situation, may connect to existing sewers where a public sewer exists and all such private systems of disposal are hereby declared as a nuisance within the meaning of the *Health Protection and Promotion Act*.

5.8 Private system – discontinuance

Where the Chief Building Official or the Engineer is satisfied upon due examination of a building that the connection to the sewers of the municipality is disconnected, the same must be made within thirty (30) days after written notice thereof has been given to the lessee, owner or occupant of such premises and the existing private system of disposal shall be cleaned, filled, removed or destroyed within a period of ten (10) days after the connection has been made to the sewerage system.

5.9 Operation or interference – unauthorized – offence

No person except the Engineer shall open or close any manhole, or valves within the sewer system, remove, tamper with or in any way interfere with any operation of valves or structures within the sewer works collection system.

5.10 Pipes – maintained

All persons supplied with a sewer service by the Town shall keep pipes, private drain connections, valves, fixtures and other appurtenances on their property of premises in good repair.

Part 6

SEWER SERVICE CONSTRUCTION

6.1 Connection to main – prior application

The installation of the service lateral will not be scheduled or commenced in any way until the customer has met the requirements of this by-law.

6.2 Installation – access for inspection

The Town or persons authorized by the Town for inspection shall at all times, be entitled to enter any premises for the purposes of examining pipes, connections and fixtures which are used in connection of the sewer service pipe and/or service main.

6.3 Installation – alteration – approval by Town

For any new service lateral or private main installation or alteration of existing service lateral or private main, the owner must apply for approval from the Town.

6.4 Installation – by Town – by Contractor

All sewer services between the sewer main and the property line shall be installed by the Town or by contractors engaged by the Town for the purposes of such installation or as specified in new land development projects where agreement with the Town and the developer or sub-divider to complete such work.

6.5 Installation – Inspection by Town

The Town must inspect all sewage works and appurtenances installed including those required under a Subdivision or Development Agreement. The charge for inspection is to be at an hourly wage charge plus a vehicle or as specified in the Subdivision or Development Agreement.

6.6 Installation to Town specifications – Ontario Building Code requirements – Building Permit

All sewage works and private mains located within the Town limits shall be inspected by and constructed according to Town specifications as approved by the Engineer from time to time. All sewage work plans and private mains located on private property shall be constructed in accordance with the Ontario Building Code as revised from time to time and in accordance with good engineering practices and shall be approved by the Chief Building Official prior to backfilling. Where the Ontario Building Code is silent the Town's specifications shall be applied and shall prevail. All such private mains and building services located on private property require a building permit for installation.

6.7 Maintenance of service lateral – Town

The Town of Fort Frances at its expense shall maintain the service lateral.

6.8 Renewal of service lateral – Building Permit – Town – Owner

Upon issuance of a building permit for new construction, reconstruction or as determined necessary by the Chief Building Official or Engineer, the Town shall renew service lateral on public property at the Owner's expense if in the opinion of the Engineer one of the following exists:

- a) piping beyond repair (structurally); or
- b) existing pipe material is of substandard material; or
- c) serviceability is deemed unacceptable.

Replacement piping shall conform to the specifications of the Town and shall be the same size as existing or the minimum size as specified in the Ontario Building Code. If the owner requests a larger size, the owner shall pay the difference in material costs. The Owner shall make application as per Section 2.2 of this by-law.

6.9 Responsibility for frozen pipes – Town – Owner

Thawing out frozen service laterals shall be the Town's responsibility. Thawing out frozen building service and private mains shall be the Owner's responsibility. Where any employee of the Town assists the Owner in the thawing of frozen pipes in the Owner's property, all such work will be at the Owner's expense as outlined in accordance with the current Town's User Fee By-law. The Owner shall have no claim against the Town by reason of such work.

6.10 Responsibility for Manhole Maintenance – Town – Private

Any manhole situated within the road allowance is the property of the Town and shall be maintained by the Town. Manholes privately owned and paid for by any persons, other than the Town shall be maintained by qualified persons or the Town through a written agreement.

6.11 Termination of sewer service – building demolition – permanent/temporary

In the event of the demolition of any building or buildings on a premise serviced with sewer, the appropriate application is to be made to the Town and the existing sewer service is to be terminated as follows:

- a) where a sewer service pipe is to be permanently terminated, the service pipe is to be disconnected at the sewer main, the sewer service is to be plugged and the existing cleanout is to be removed from the property line. This work shall be carried out by the Town at the expense of the Owner.
- b) where the sewer service pipe is to be temporarily terminated, the Owner or Authorized Representative of the Owner or their Contractor shall dig at the property line, expose and plug the service with an appropriate plug/cap.

Should the Owner or Authorized Representative of the Owner or their Contractor damage any portion of the Town's infrastructure while performing this work he/she must notify the Town immediately. The repair/replacement of the infrastructure shall be completed by the Town at the expense of the Owner.

6.12 Termination (temporary)/connection of service – inspection

Where a sewer service connection (private drain connection) is required to be temporarily terminated or connected to a premise, such service shall be dug by the Owner or Authorized Representative of the Owner or their Contractor at the property line and the sewer service inspected. The Town shall require forty-eight (48) hours notice prior to any work being done.

Temporary termination:

The Engineer shall inspect the termination of such service to ensure that all particulars outlined in Section 6.11 of this by-law are met.

Connection of service:

The service shall be inspected in accordance with Section 2.23 of this by-law. Connections to existing services are to be inspected by the Town prior to backfilling at the applicable inspection rates as set forth in the current Town's User Fee by-law.

If the service does not meet present standards or by-law requirements or is in a poor state of repair, the Owner shall make application for a new service as described in Section 2.2 of this by-law.

The owner/applicant shall be liable for all the costs of locating the sewer service connection upon application for reconnection.

Part 7
PROHIBITIONS AND DISCHARGES TO PUBLIC SEWAGE WORKS

- 7.1 Prohibited discharges – sanitary sewer**
No person shall permit storm water sewage, surface or subsurface drainage from his or her property to be discharged into a sanitary sewer.
- 7.2 Prohibited discharges – sanitary sewer – ground surface heat pump**
No person shall permit water discharged from a ground source heat pump system located on his or her property to discharge into a sanitary sewer.
- 7.3 Prohibited discharges – storm sewers**
No person shall permit sanitary sewage from his or her property to be discharged into a storm sewer.
- 7.4 Prohibited discharges – storm sewers – ground source heat pump**
No person shall permit water from a ground source heat pump system located on his or her property to be discharged into a storm sewer.
- 7.5 Prohibited discharges – sanitary sewer – storm sewer – general**
No person shall permit the discharge or deposit or cause or permit the discharge or deposit of matter of any kind into or in land drainage works, private branch drains or connections to any sanitary sewer or combined sewer:
- a) matter of any type at any temperature or in any quantity, which may be or may become a health or safety hazard to a sewage works employee, or which may become harmful to sewage works, or which may cause the sewage works effluent to contravene any requirement by or under the Ontario Water Resources Act or the Environmental Protection Act (Ontario), or which may cause the sludge from sewage works to fail to meet the criteria relating to contaminants for spreading the sludge on agricultural lands under Ontario's Guidelines for Sewage Sludge Utilization on Agricultural Lands (as revised from time to time) unless the person has been advised in writing by the operator of the sewage treatment works will never be used on agricultural lands, or which may interfere with the proper operation of a sewage works, or which is or may result in a hazard to any person, animal, property or vegetation and;
 - b) without limiting the generality of the foregoing, any of the following:
 - i. solid or viscous substances in quantities or of such size as to be capable of causing obstruction to the flow in a sewer, including but not limited to bones, cinders, sand, mud, straw, shaving, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, animal guts, female hygiene products, paper towels or tissues, paunch manure, and whole blood
 - ii. sewage that may cause an offensive odour to emanate from a sewage works, and without limiting the generality of the foregoing, sewage containing hydrogen sulphide, carbon disulphide, other reduced sulphur compounds, amines or ammonia in such quantity that may cause an offensive odour
 - iii. except in the case of discharge into a combined sewer, stormwater, water from drainage of roofs or of land, water from a watercourse or uncontaminated water
 - iv. water other than stormwater that has originated from a source separate from the water distribution system of the municipality
- 7.6 Prohibited discharges – roof water/ground water – sanitary sewer**
No person shall permit the drainage of building roof water into the sanitary sewer. Any system of drainage works, including foundation weeping tile sump pump discharge, or building roof water into the sanitary sewer is prohibited. The Corporation may enter any property at reasonable times as may be arranged with the property owner, occupant or their representative, as outlined in Sections 2.14 & 2.15 to determine the system of drainage works for drainage of building roof water or foundation weeping tile sump pump discharge into the sanitary sewer:
- a) In the event the Corporation is denied, prevented or is refused access to any property for the purposes of this by-law, written notice shall be hand delivered or sent by prepaid registered mail to the property owner directing that if the Corporation is not allowed to make its determination within forty-eight hours of the delivery of the notice, any and all sewer and water services to the property shall be discontinued until such determination is permitted. Sewer and water services shall not be reinstated until these costs, including prepayment of costs of reinstatement of services, have been paid in full together with the Corporation completing its determination.
 - b) Where the Corporation determines that any property is draining building roof water and/or ground water from a foundation weeping tile sump pump

system and discharging it into the sanitary sewer or has a system of drainage works for draining of building roof water into the sanitary sewer; The Corporation shall send by registered mail to the property owner, notice to reconstruct the drainage system to cease and desist drainage of building roof water into the sanitary sewer:

- (i) The property owner may make application, within six months of the date of the notice, for an extension of not more than one year from the end of the notice.
- c) In the event the property owner has failed to reconstruct the drainage system to cease and desist drainage of building roof water and/or foundation weeping tile sump pump discharge into the sanitary sewer as per the notice, the Corporation may, without further notice;
 - (i) Seek prosecution for contravention of the by-law, and/or,
 - (ii) Discontinue any and all sewer and water services to the property until such reconstruction is completed. Sewer and water services shall not be reinstated until these costs, including prepayment of costs of reinstatement of service have been paid in full together with the completion of the reconstruction works.
- d) Corporation costs for discontinuance of sewer and water services, if unpaid by the property owner within ten (10) days of billing shall be added to the Collector's Roll of the Corporation and collected in the same manner as taxes in accordance with the Town's Collection Policy.

The above clauses shall not apply where pre-existing (prior to August 12, 1985) weeping tile connections only are connected to a sanitary sewer service except in the event of demolition and reconstruction of a building whereupon the above clauses shall be in affect.

7.7 Prohibited discharges – alterations to prevent

No person shall refuse to alter, relay or repair every plumbing or drain system upon his or her lands to ensure that:

- a) no storm water sewage from their property is discharged into a sanitary sewer and;
- b) no sanitary sewage is discharged into a storm sewer.

7.8 Plumbing systems to be sealed

In the case where a property owner wishes to undertake new construction, addition, partial or whole demolition, alteration or renewal of foundation dampproofing or waterproofing or other works as determined by the Chief Building Official or Engineer, a building permit is to be obtained by the property owner or authorized agent and the building sewer servicing the plumbing system must be sealed against the entry of all foundation drain water.

Part 8

DEVELOPMENT REQUIREMENTS STORM SEWER

8.1 Undertaking a development

Every person shall provide for the discharge of storm water sewage into a storm sewer for all developments other than single-detached, semi-detached or duplex dwelling units. For single-detached semi-detached or duplex dwelling units, every person shall provide for the discharge of storm water sewage in accordance with Sections 8.2 to 8.12.

8.2 Alternate methods of storm water management

Where in the opinion of the Engineer there is no storm sewer accessible or the accessible storm sewer does not have the capacity to accept additional flow. The person undertaking the development shall provide a dry well or storm water retention system, which is certified by a Professional Engineer to the satisfaction of the Engineer.

- a) Where, as determined by the Engineer, there is an acceptable storm sewer abutting the property at an acceptable elevation, the owner may direct the discharge from the weeping tile sump pump to a properly installed connection. The Town of Fort Frances Operations & Facilities Division at the expense of the property owner will complete the installation of the required service from the storm sewer main to the property line. The applicable forms are to be completed before arrangements for the installation is made. The rates for the installation of this service are as provided in the current Town's User Fee by-law.
- b) Where as determined by the Engineer, there is no acceptable storm sewer or open ditch abutting the property, the property owner may make application annually for permission to direct the discharge from the weeping tile sump pump to the sanitary sewer between October 15 and March 31 each year. Approval by the Engineer, of the application is required before any connection to the sanitary sewer is made. The property owner shall terminate the connection of the discharge from the weeping tile sump pump to the sanitary sewer and redirect the discharge to the outdoors by March 31 or as directed by the Engineer.

In special circumstances, the Engineer may grant permission to a property owner to deviate from the foregoing required timelines.

No property owner shall permit the discharge from the weeping tile sump pump to the surface of any municipal roads during winter months.

8.3 Development requiring site plan approval

For all new site plan approvals, all existing connections of foundation drains (weeping tile) shall be removed and no new connection of foundation drains shall be allowed to the sanitary sewer system unless approved by the Engineer.

8.4 Discharge of foundation drain (weeping tile) flows

Every person shall discharge all foundation drain (weeping tile) flows from a building in accordance with this by-law.

8.5 Gravity connections

No gravity connection of foundation drains (weeping tile) will be allowed to the storm sewer system unless the system has the capacity to provide for such connections and is approved by the Engineer.

8.6 New plans of subdivision

Where ever possible no person shall create a lot that does not have a storm sewer adjacent to it and, in subdivisions where the subdivision agreement has been approved by Council no person shall create a lot that does not have a storm private drain connection, except where a geotechnical engineer certifies that foundation drains (weeping tile) are not required.

8.7 When sump pumps are discharged to ground surface

For all new subdivisions, where the subdivision agreement is approved by Council where ever possible sump pumps shall discharge foundation drain (weeping tile) flows into a storm sewer. Where a sump pump discharges foundation drain (weeping tile) flows to the ground surface, the following shall apply:

- a) if a problem related to a lot, caused by the discharge of the sump pump to the ground surface occurs prior to the Town's assumption of the street fronting that lot, the developer will be required to redirect the sump pump discharge to the storm sewer via a storm private drain connection at no cost to the Town;
- b) prior to the assumption of a street by the Town, the developer will be required to engage a geotechnical engineer to certify that the soil and ground water conditions on any vacant lot or lots are such that a direct connection to a storm sewer will not be required. If such certification cannot be provided, the developer shall be required to install a storm private drain connection to serve each affected lot, at no cost to the Town;
- c) prior to the assumption of a street by the Town, should the discharge of a sump pump on any lot adjacent to a vacant lot be required, because of unsuitable or unfavourable soil and ground water conditions, to be connected directly to the storm sewer, the developer shall install storm private drain connections to all vacant lots as directed by the Engineer, at no cost to the Town.

8.8 Requirements for foundation drain (weeping tile) flows

The foundation drain (weeping tile) flows from a building shall be discharged in the following manner:

- a) via a sump pump to the ground surface, provided that the discharge to the ground surface does not create continually wet ground conditions and/or do not create any adverse effect upon municipal sidewalks and roads or upon adjacent properties; or
- b) via a sump pump to a storm sewer; or
- c) via a sump pump to a dry well system, provided that appropriate soil testing is completed to establish the suitability of using a dry well system, and that the dry well system is designed and certified by a qualified Ontario Professional Engineer; or
- d) by gravity water flow to the storm sewer, if capacity and availability, as determined by the Engineer, exists in the storm sewer; and
- e) in subdivisions where the subdivision agreements are approved by Council, notwithstanding the requirements of clauses 8.8 (a) to (d) inclusive, sump pump discharges shall be connected to storm building sewers, which shall be connected to storm private drain connections.

Except in cases where a recommendation is made by a geotechnical engineer, on a site-specific basis that foundation drains are not required due to the nature of the soils.

8.9 Roof water downspouts

No person shall connect a roof water downspout to the sanitary private drain connection.

- 8.10 Roof water downspouts – no discharge to side yard – damage to adjoining property**
No person shall direct a roof water downspout towards a side yard in such a manner as to cause damage or any other adverse affect to adjoining property.
- 8.11 Roof water downspouts – no connection to foundation drains**
No person shall connect a roof water downspout to the foundation drains.
- 8.12 Roof water downspouts – discharge distance from exterior walls**
Every person shall extend all roof water downspout so that the water flow discharges from the downspout a minimum distance of 1.22m (4') from the exterior walls of a building.
- 8.13 Storm private drain connections**
For every residential lot that is created or infill development which comes forward by variance through the Committee of Adjustment, where a storm sewer exists or where in the opinion of the Engineer it can be extended, every person shall provide a storm private drain connection to serve the building, and sump pump discharges from the building shall be connected to the storm building sewer, which shall be connected to the storm private drain connection, except as approved otherwise by the Engineer.
- 8.14 Weeping tile discharge (temporary)**
No person shall redirect weeping tile discharge into the sanitary sewer system unless approved by the Engineer and the appropriate forms are completed. This will allow the occupant to temporarily redirect the weeping tile discharge from the outdoors to the sanitary sewer system between October 15 and March 31.

Part 9
COMMERCIAL, INSTITUTIONS & INDUSTRIAL PREMISES

- 9.1 Billing**
All billing shall be accordance with the current Town's User Fee by-law.
- 9.2 Charge – lien on land – collected as taxes**
Any charge based on the rates set out in the current Town's User Fee by-law imposed upon any owner or occupant of land has priority lien status and may be added to the tax roll against the property in respect of which the sewer service was supplied.
- a) if any charge or any part thereof remains unpaid after its due date, the Tax Administrator, upon notice to the owner or occupant of the amount due, the person by whom it is due, shall add the same to the tax roll.
 - b) if an amount is added to the tax roll in respect of a property under this section, that amount, including interest;
 - (i) may be collected in the same manner as taxes on the property;
 - (ii) may be recovered with costs as a debt due to the municipality from the assessed owner of the property at the time the charge was added to the tax roll and from any subsequent owner of the property or any part of it;
 - (iii) is a special lien on the property in the same manner as taxes under subsection 349(3) of the Municipal Act, 2001; and
 - (iv) may include cancellation price under Part XI of the Municipal Act, 2001 in the same manner, as are taxes on the property.
- 9.3 Default of duty – expense recovery by Town**
Where the owner or occupant of commercial, institutional or industrial premises does not install or maintain each manhole device or facility required under this by-law, such installation or maintain each manhole device or facility required under this by-law, such installation or maintenance may be done at the direction of the Engineer at the expense of the owner or occupant and the Municipality may recover the costs incurred in doing such work by action or by adding the costs to the tax roll and collecting them in the same manner as municipal taxes.
- 9.4 Grease, oil, sand and dirt interceptors and screening devices**
The Engineer may require the owner or occupant of commercial, institutional or industrial premises with one or more connections to the public sewage works to install and maintain in good repair in each connection, a suitable device to prevent the entry of grease, oil, sand and dirt into the public sewage works.
- 9.5 Manhole – accessible at all times**
A person required to install a manhole, device or facility shall ensure such manhole, device or facility is accessible at all times for the purposes of observing, sampling and measuring the flow of sewage therein.

9.6 Manhole – alternative installed and maintained

The Engineer may require the owner or occupant of commercial, institutional or industrial premises with one or more connections to the public sewage works to install and maintain in good repair in each connection a suitable manhole having a diameter of not less than 1.2 metres to allow observation, sampling and measurement of the flow therein. Provided that where installation of a manhole is not possible, an alternative device or facility may be substituted with the approval of the Engineer.

9.7 Manhole – failure to install and maintain – prohibited

No person shall fail to install or maintain in good repair a manhole, device or facility that meets the standards of this by-law upon being required to do so by the Engineer.

9.8 Manhole – other design construction and maintenance

Every manhole, device or facility installed as required by this by-law shall be designed and constructed in accordance with good engineering practice to the satisfaction of the Engineer and shall be constructed and maintained on the land of the owner or occupant of the premises, at the owner's expense.

9.9 Monitoring devices – reporting requirements

The owner or occupant of commercial, institutional or industrial premises shall, at the discretion of the Engineer, install devices to monitor discharges, and if required to do such installation, shall submit regular reports regarding such discharges to the Engineer.

9.10 Monitoring devices – failure to provide reports

No person shall fail to install a device to monitor discharges or fail to submit regular reports regarding such discharges when required to do so by the Engineer.

9.11 Screening devices installed and maintained

No person shall fail to install or maintain a suitable device to prevent the entry of grease, oil, sand and dirt into the public sewage upon being required to do so by the Engineer.

**Part 10
CHARGES FOR SERVICES PROVIDED**

10.1 Rates/charges – applicable taxes

All rates/charges outlined in the current Town's User Fee by-law are exclusive of applicable taxes which are payable by the owner in addition to the charges for services rendered.

10.2 Payment due upon completion of work

The cost of installation, replacement or repair as described within this by-law shall be due and payable in advance of the commencement of the work as a fee or charge under Part XII of the Municipal Act, 2001 as amended. At the property owner's request the fee may be added to the property owner's tax roll over a ten (10) year period with the addition of an appropriate financing charge as determined by the Town's Treasurer, under the authority of subsection 398 (2) of the Municipal Act, 2001, as amended.

10.3 Separation of mutual service lateral/building sewer

Where a mutual service lateral/building sewer serves two or more properties where at least one facility is a single detached, semi-detached or duplex dwelling and separation of the mutual service lateral is desired, the installation of the new sewer service shall be completed by the Town at the expense of the Owner as outlined in the Town's User Fee By-law.

10.4 Services provided by the Engineer – repair, replacement, installation – single detached, semi-detached, duplex dwellings - charge

The fees and charges as set out in the Town's User Fee by-law are imposed on owners of single detached, semi-detached or duplex dwelling for the following services or activities provided by the Engineer.

- a) New service lateral – construction of sewer – sanitary: The installation of a new sanitary sewer lateral in conjunction with a Town construction project that involves the construction of a sanitary sewer main;
- b) New service lateral – construction of sewer – storm: The installation of a new storm sewer lateral in conjunction with a Town construction project that involves the construction of a storm sewer main;
- c) Existing service lateral – replacement – construction of sewer – sanitary: The replacement of an existing sanitary sewer lateral to the property line in conjunction with a Town construction project that involves the construction of a sanitary sewer main;
- d) Existing service lateral – replacement – construction of sewer – storm: The replacement of an existing storm sewer service lateral to the property line in conjunction with a Town construction project that involves the construction of a storm sewer main;

- e) Repair or replace existing service lateral – excavation: The repair or replacement of an existing service lateral in conjunction with a Town construction project with excavation below the road structure where the service lateral is within the excavated area but that does not involve the construction of a sewer main; and
- f) Repair or replace existing service lateral – no construction: The repair or replacement of an existing service lateral do not apply.

10.5 Warranty

Notwithstanding any provision of this by-law, where it is demonstrated by the owner through a closed circuit television inspection, in accordance with the Town's requirements and to the Town's satisfaction, that there is a failure in his/her service lateral which has been installed, replaced or repaired by the Town, due to faulty workmanship or materials within twenty (20) years of the date of the last installation, repair or replacement. There shall be no charge for any work done by the Town to correct the faulty workmanship or materials.

10.6 Work undertaken by the Town - limited

Subject to 10.4, the Engineer shall not undertake:

- a) the repair or replacement of a private drain connection serving a property that is not single detached, semi-detached or a duplex dwelling; or
- b) the installation of new private drain connection for any property
- c) the responsibility and costs for such works in this subsection shall be borne by the property owner.
- d) Despite 10.6 (a) the Engineer may undertake the following for any property for the applicable fee:
 - (i) the repair or replacement of a private drain connection where the work is done in conjunction with Town main sewer construction project or applicable Town construction project under authority of the Municipal Act, 2001: and
 - (ii) the installation of a new private drain connection if the work is done in conjunction with Town main sewer construction project under authority of the Municipal Act, 2001.

Part 11
MISCELLANEOUS

11.1 Failure to comply

The following shall apply;

- a) where sanitary sewage or storm water sewage is discharged from a building in contravention of the by-law, the owner shall forthwith perform all necessary work to comply with the requirements of this by-law;
- b) where any building sewer or private drain connection is required to be sealed under this by-law, the owner shall forthwith perform all necessary work to comply with the requirements of this by-law; and
- c) where any building sewer, private drain connection, plumbing system or drainage system is required to be altered, relayed or repaired under this by-law, the owner shall forthwith perform all necessary work to comply with the requirements of this by-law.

11.2 Offences

Every person who contravenes this by-law is guilty of an offence.

Part 12
ENFORCEMENT AND PENALTIES

12.1 Administration – enforcement – for contravention

The provisions of this by-law are to be enforced by both the Chief Building Official and/or the By-Law Enforcement Officers, as Council for the Town of Fort Frances appoints them from time to time.

12.2 Penalty for contravention

Any person who contravenes any provision of this by-law is, upon conviction, guilty of an offence and is liable to a penalty as provided in the *Provincial Offences Act*.

12.3 Fines for contravention

Any person other than a corporation who contravenes any section of this by-law is guilty of an offence and upon conviction is liable for a fine of not more \$5,000.00 for a first offence and not more than \$25,000.00 for each subsequent offence.

12.4 Fines for contravention – corporation

Notwithstanding any other provision of this by-law, a corporation upon conviction of a contravention of this by-law is liable for a fine of not more than \$50,000.00 for a first offence and not more than \$100,000.00 for each of any subsequent offences.

12.5 Contravention – repetition – prohibited – by order

The court in which the conviction has been entered, and any court of competent jurisdiction thereafter, may make and order prohibiting the continuation or repetition of the offence by the person convicted, and such order shall be in addition to any other penalty imposed on the person convicted.

Part 13
REPEALING

13.1 By-law – previous – repealed

By-laws No.6/92, 27/85, 62/88 and all amendments thereto are hereby repealed.

Part 14
EFFECTIVE DATE

14.1 By-law effective date

This by-law comes into force and effect on XXXX/XX/XXXX

Part 14
APPENDIX

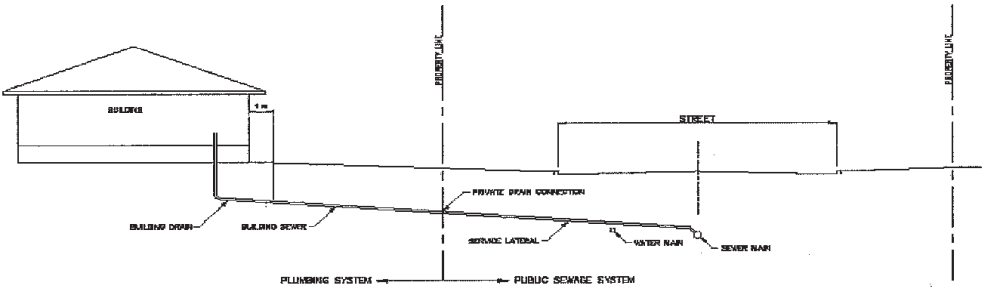


ILLUSTRATION OF SEWAGE SYSTEM



Melissa Swain
<melissa@explorersolutions.ca>

04/08/2015 10:59 AM

To "dbrown@fort-frances.com" <dbrown@fort-frances.com>

cc

bcc

Subject RE: Training Opportunity - Airport Familiarization

History: This message has been forwarded.

Hello,

The course is only \$375 per person and it include refreshments and lunch. Afterwards, a certificate and reference booklet is provided.

I have attached the syllabus and information sheet for you. Please don't hesitate to touch base with me if you need more information.

Sincerely,

Melissa Swain

From: dbrown@fort-frances.com [dbrown@fort-frances.com]

Sent: Wednesday, April 08, 2015 11:06 AM

To: tbatuik@fort-frances.com

Cc: Melissa Swain

Subject: RE: Training Opportunity - Airport Familiarization

Hi Tom & Melissa, the information contain in this email was discussed at the Operations & Facilities Executive committee meeting today, additional information is required in order to make a recommendation to Council such as the syllabus, information sheet and the cost per Councilor to attend Airport Familiarization training workshop. The next O & F executive committee meeting is scheduled for Wednesday April 22, 2015 please forward information. Thanks

Doug Brown, P. Eng.
Operations & Facilities Manager
320 Portage Avenue, Fort Frances, Ontario
Town of Fort Frances

AIRPORT FAMILIARIZATION SEMINAR

UNDERSTANDING REGIONAL AND SMALL AIRPORT MANAGEMENT & OPERATIONS FROM A TO Z

Explorer Solutions is pleased to present this new one-day seminar, created primarily for members of small and regional airport boards and advisory committees, municipal staff involved in planning, public works, marketing and communications, as well as economic development representatives.

Designed to review all of the key aspects of airport operations and management, the seminar covers multiple topics, from Transport Canada Rules and Regulations to innovative marketing and revenue generating strategies at airports.

In addition, learn about the common issues being faced by many of today's regional and small airports and stay current on industry best practices.

Course Objectives:

Airports are important economic engines. As a result, airport representatives must be well-versed and up-to-date on the aviation sector in order to make well informed decisions. This seminar presents the critical information necessary to understand airport operations and today's changing airport environment.

OUTLINE:

- Transport Canada Rules and Regulations
- Airport Governance
- Airport Management & Infrastructure
- Airport Users – GA, BA, FBO, Airlines, Flight schools
- Land Use, Planning and Development
- Navigation and Weather Systems
- Airport Security and Safety Systems
- Alternative Sources of Revenue for Airport
- Airport Budgets – Revenues, Expenses and Funding Sources
- Air Service Development
- Airport Marketing
- Airport Best Practices



This course will equip you with a solid background to make informed decisions and present the relevant issues to municipal councils and airport governing bodies.

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EXPLORER SOLUTIONS

AIRPORT FAMILIARIZATION SEMINAR

Seminar Content

Introduction: Canada's Aviation and Aerospace Industries

- Section 1: Transport Canada Rules and Regulations
- Section 2: Airport Ownership and Governance
- Section 3: Airport Operations and Management
- Section 4: Navigation and Weather Systems
- Section 5: Airport Security
- Section 6: Land Use, Planning and Development
- Section 7: Airport Tenants/Cientele, Revenue Generation and Airport Marketing

EXPLORER
SOLUTIONS

Section 1

Transport Canada Rules and Regulations

Topics covered in this section:

- ❖ Transport Canada
- ❖ Canadian Aviation Regulations (CARs)
- ❖ Aerodromes and Airports
- ❖ Airport Standards and Requirements - Safety Management Systems; Airport Wildlife Management Plan; Airport Emergency Plan; Aircraft Rescue and Firefighting
- ❖ TP 312 – *Aerodrome Standards and Recommended Practices*
- ❖ Airport Zoning Regulations (AZR)
- ❖ Runway End Safety Area (RESA)

Section 2

Airport Ownership and Governance

Topics covered in this section:

- ❖ The National Airports Policy (NAP)
- ❖ NAS Airports
- ❖ Canada's Airport Authorities
- ❖ NAS Governance Model
- ❖ Non-NAS Airports
- ❖ Airports Capital Assistance Program (ACAP)
- ❖ Non-NAS Airport Governance Model
- ❖ Outsourcing Airport Management



Section 3

Airport Operations and Management

Topics covered in this section:

- ❖ Role of Airport Manager
- ❖ Airport Management – Operations; Administration; Airport Planning and Development
- ❖ Airport Infrastructure
- ❖ A Day in the Life of an Airport Manager
- ❖ Obligations of Airport Manager/Authorized/Prohibited Actions
- ❖ Airport Budgets

Section 4

Navigation and Weather Systems

Topics Covered in this section:

- ❖ Nav Canada
- ❖ Air Navigation
- ❖ Instrument Approaches at Airports
- ❖ Global Navigation Satellite System (GNSS)
- ❖ New Policies Affecting Airports
- ❖ Canadian Domestic Airspace
- ❖ Weather Considerations



Section 5

Airport Security

Topics Covered in this section:

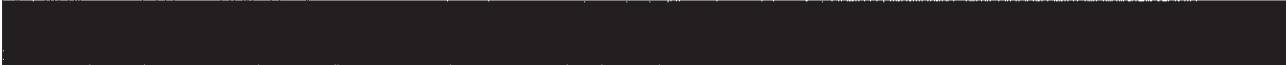
- ❖ International Civil Aviation Organization (ICAO)
- ❖ Aviation Security
- ❖ Canadian Air Transport Security Authority (CATSA)
- ❖ *Canadian Aviation Security Regulations, 2012*
- ❖ Airport Security Programs
- ❖ Canadian Border Services Agency (CBSA)

Section 6

Land Use, Planning and Development

Topics Covered in this section:

- ❖ Airport Master Plan
- ❖ Airside Development
- ❖ Transport Canada Advisory Circular 300-009 – Land Use and Jurisdictional Issues at Aerodromes
- ❖ TP 1247 - Land Use in the Vicinity of Airports
- ❖ Groundside Development
- ❖ Airport Revenue Generation



Section 7

Airport Tenants/Clientele, Revenue Generation and Airport Marketing

Sujets abordés dans cette section:

- ❖ Charter and private operators
- ❖ Cargo Carriers
- ❖ Airport Tenants
- ❖ Airport Marketing



"WALASEK, Andrew"
<andrew.walasek@canadapost.postescanada.ca>
04/10/2015 07:40 AM

To "dbrown@fort-frances.com" <dbrown@fort-frances.com>
cc "klawson@fort-frances.com" <klawson@fort-frances.com>, "mmccaig@fort-frances.com" <mmccaig@fort-frances.com>
bcc
Subject RE: Health and Safety Notification 1 - 3rd Ave., Fort Frances, ON

Good morning Mr. Brown.

The administration of a national postal service, which is both a national and international obligation, is the responsibility of the Government of Canada. In order to meet this obligation, Parliament has enacted the *Canada Post Corporation Act* which establishes Canada Post as a Federal Crown Corporation, an agent of Her Majesty the Queen, to administer Canada's postal service on its behalf.

Section 3 of the *Mail Receptacles Regulations* SOR/83-743, promulgated pursuant to the *Canada Post Corporation Act*, provides authority for Canada Post to install Community Mailboxes (CMBs) on municipality-owned property. It provides as follows:

3. [Canada Post] may install, erect or relocate or cause to be installed, erected or relocated in any public place, including public roadway, any receptacle or device to be used for the collection, delivery or storage of mail.

While Canada Post has the exclusive jurisdiction over postal services in Canada and has the legal authority under the *Canada Post Corporation Act* and its Regulations to install devices for the delivery of mail in any public place, including a public roadway, we also work closely with municipal planning departments to determine suitable CMB locations based on factors such as safety, accessibility, and proximity. Having said that, Canada Post has never in its history paid any fees associated with its street furniture (including in the 30 plus years it has installed Community Mailboxes) to any municipality anywhere in Canada. It could not possibly do so and remain in operation, nor is there any legal authority for such fees.

Regards,
Andrew

Andrew Walasek
Manager, Municipal Engagement
Government Affairs
Canada Post Corporation
613-734-9317

From: dbrown@fort-frances.com [mailto:dbrown@fort-frances.com]
Sent: Thursday, April 09, 2015 3:36 PM
To: WALASEK, Andrew
Cc: klawson@fort-frances.com; mmccaig@fort-frances.com
Subject: RE: Health and Safety Notification 1 - 3rd Ave., Fort Frances, ON

Hi Andrew, where do I send the \$ 100 invoice per month fee to use the Town's ROW to locate your community mail boxes? Please provide contact information. Thanks

Doug Brown, P. Eng.
Operations & Facilities Manager
320 Portage Avenue, Fort Frances, Ontario
Town of Fort Frances
Work #-807-274-9893 Ext. 306
Cell # 807-275-9755

"WALASEK, Andrew" <
andrew.walasek@canadapost.postescanada.ca>

04/09/2015 01:08 PM

"dbrown@fort-frances.com" <dbrown@fort-frances.com>, "
To: klawson@fort-frances.com" <klawson@fort-frances.com>, "
mmccaig@fort-frances.com" <mmccaig@fort-frances.com>
cc
Subject: RE: Health and Safety Notification 1 - 3rd Ave., Fort Frances, ON
ct

Health and Safety Complaint – Notification 2
Letter Carrier Route 8, Fort Frances, ON

April 8, 2015

Mr. Roy Avis
Mayor
Town of Fort Frances
320 Portage Ave.
Fort Frances, ON P9A 3P9

**RE: Mail delivery to 205A, 205B, 205C, 209, 211, 217A, 217B, 223, 225, 233 237 3rd Street W.,
Fort Frances**

Dear Mayor Avis,

Further to the letter of November 27, 2014, I am writing to update you on the health and safety concern Canada Post has received from a delivery agent in Fort Frances.

This safety issue was raised last November on 12 addresses located between 205 and 237 3rd Street in Fort Frances. The safety issue was due to the increased traffic volumes and the lack of sidewalks in the area. Customers continued to receive door-to-door delivery while the assessment was taking place.

As a result of the assessment, 12 customers will be transitioned into community mailboxes located just off 3rd St. W. I shall advise once the delivery implementation date is known.

In the meantime if you have any questions, please feel free to contact me at 613-734-9317.

Sincerely,

Andrew Walasek
Manager, Municipal Engagement
Government Affairs
Canada Post Corporation
613-734-9317



Report

To: Mayor and Council
From: Faye Flatt, Municipal Planner
Date: 22 January 2015
Re: Canada Post Request for Community Mail Box – Cornwall Avenue

TOWN OF FORT FRANCES
 PLANNING & DEVELOPMENT DIVISION
 Municipal Planner Report #2015-04

This report contains information and a recommendation relative to a request by Canada Post Corporation (CPC) to install a community mailbox in the road allowance south of Third St. W on Cornwall Avenue referred to the Planning & Development Executive Committee (PDEC) with input from the Operations & Facilities Executive Committee (OFEC). The request, prompted as a result of a CPC health and safety concern, is attached for reference.

A site inspection showed the concern, specifically the lack of sidewalk on the south side of Third St. W requiring the delivery personnel, in winter, to walk on the street in order to deliver to residents west of the mill office and east of the cemetery. Photos of the area are attached for reference.

PDEC considered and supported the request at its meeting held January 19th with no concerns expressed other than the installation should not generate any cost to the Town nor work for town forces. It was noted that there are currently two other locations within the municipality where CPC has a mailbox for area residents and the area is maintained by CPC contract.

In addition to the recommendation by PDEC that the request be supported provided it does not generate any cost nor additional work to the Town, OFEC also recommends that a fee of \$100 (plus all applicable taxes) be charged to CPC. A copy of the OFEC report is attached for reference.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Faye Flatt', written over a light blue horizontal line.

N. Faye Flatt, AMCT, ACST, CPT
 Municipal Planner

COUNCIL APPROVAL OF THIS REPORT WILL: Approve the request of Canada Post Corporation to install a Community Mail Box south of Third St. W. in the road allowance of Cornwall Avenue as recommended by PDEC on the condition that a fee of \$100 (plus applicable taxes) per month be paid to the Town of Fort Frances by Canada Post Corporation as recommended by OFEC



From anywhere... to anyone

JAN - 8 - 2015

Dear Mayor and Town Council,

I would like to formally request, on behalf of Canada Post Corporation, authorization to install a Community Mail Box (CMB) on the property between 205 and the historical site at 165 3rd St W. The detailed sketch is attached to show the exact location.

The reason for the request and the change in delivery mode is due to a health and safety problem report that was submitted by the delivery agent.

The report suggested that the traffic density was too high on this block of road to allow the LC to safely walk on the road to deliver to each address. The LC is forced to walk on the road in the absence of a sidewalk per Canada Post policy.

Upon receipt of the safety problem report Canada Post conducted a detailed audit. There are threshold holds based on the width of the lanes and number of cars present in the lane during a 15 minute period.

In this specific case with a lane width between 4 and 4.5 meters and the maximum posted speed limit of 50km the maximum number of cars present in the lane is 50. The results of the audit showed 80 cars. This is well above the maximum.

At this point Canada Post started a search for alternate methods of delivery. Including relocating customers to PO boxes located in the local post office at 301 Scott Street. This was dismissed very quickly as it was deemed too disruptive. The other option considered and decided on was to move the customers into a CMB. The goal is to have the CMB in the most convenient, and least disruptive location possible.

After having the Delivery Planning Officer fly in to survey the surrounding area we came up with this location specified above and detailed in the drawing attached.

Canada Post has been made aware of a potential dangers scenario. Canada Post is aware of this issue and we are required to search for ways to minimize or eliminate the danger. While changing the delivery method to CMB is not our only option, it is the least disruptive to our customers and your constituents.

With all this in mind I hope you will accept and approve the installation of the CMB at the location specified in the attached document.

Sincerely,

Chris Ruby
Delivery Planning Officer
Canada Post Corporation

| CMB site localization form | | | | CANADA POST CANADA | |
|---|---|---------------------------------|---|--|-------------------------------------|
| Site description | | Site configuration | | Letter carrier measurements (reserved for CPC) | |
| Site number: | P9A0051 | Project type: | Other | Is the back of the site facing the street? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | |
| Minipark reference No.: | | Number of compartments: | 15 | LC footage distance: | XX ft |
| City/territory: | Fort Frances | Direction of face: | W | Mail mobile LC distance: | XX ft |
| Location: | Adjacent to 205 Third St W | Installation type: | A-Gravel shoulder | Unable to measure: | <input checked="" type="checkbox"/> |
| Private property: | <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | Is the back of the CMB exposed? | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | Notes: Install 1.8m from edge of drive, gravel access, across drive of 205 Third Street, 5m from Entrance Only Sign. | |
| Site picture and mapping information | | | | | |
| | | | | | |
| ITMS ON141126-170:Fort Frances. | | | | | |
| GPS coordinates: | | DSO name:Chris Ruby | DSO telephone number:519-257-8568 | Date:Dec 4, 2014 | |

AERIAL VIEW



Municipal Planner Report 2015-04
Re: Canada Post Corp. Request for Community Mail Box (Cornwall Ave)
23 January 2015
Page 5

WINTER:



SUMMER VIEW



January 15, 2015

Report To: Planning & Development Executive Committee

From: Operations & Facilities Executive Committee

SUBJECT: Request from Canada Post – for permission to Install a Community Mail Box on Cornwall Avenue ROW near 205 – 3rd Street West

The Operations & Facilities Executive committee was to provide input to the lead executive committee, the Planning & Development Executive committee in regards to granting permission to Canada Post Corporation for the installation of a Community Mail Box within the Cornwall Avenue – Road allowance. The request from Canada Post corporation is outlined in the letter received by the Town on January 8, 2015 from Chris Ruby, Delivery Planning Officer. See attached copy of the letter.

The administration and operational staff of the O & F division have no concerns with the proposed location of the Community Mail Box and it is their understanding that the Town will not perform any additional operational tasks, such as removing the snow windrow in front of the box on a regular basis. This Community Mail box will be similar to the mail box installed along Kaitlyn Drive.

The Operations & Facilities Executive Committee reviewed the request from Canada Post Corporation to install a Community Mail Box within the Cornwall Avenue – Road allowance at the January 21, 2015 O & F Executive committee meeting.

At this time the O & F executive committee can support granting permission to Canada Post Corporation to install a Community Mail Box within the Cornwall Avenue – Road allowance with the understanding that the Town will not incur any additional operational expenses and that a \$100 (plus all applicable taxes) fee per month is charged to Canada Post.

Respectfully submitted,

Paul Ryan, Chairman
Operations & Facilities Executive Committee

2015JanuaryCommunityMailBoxCornwallAvenue

Proposed Site of Canada Post Community Mailbox



March 24, 2015

Ministry of the Environment
808 Robertson St
PO Box 5150
Kenora ON
P9N 1X9

Attention: Ms. Trina Rawn
District Manager - Kenora Area Office / Thunder Bay District Office

Dear Ms. Rawn:

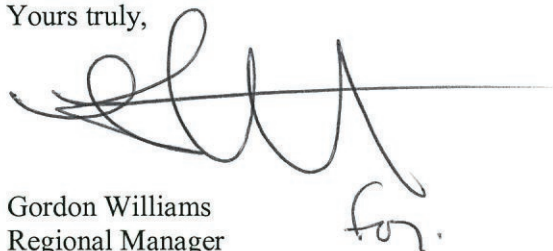
Re: 2014 Performance Report for Fort Frances Sewage Treatment Plant

Attached is the 2014 Performance Report for the **Fort Frances Sewage Treatment Plant** located in the Town of Fort Frances. This report has been completed in accordance with Condition No. 4 (4) cited in *Certificate of Approval Number 3-0049-96-006* dated April 16 1999 and issued to the Town of Fort Frances.

This report was prepared by the Ontario Clean Water Agency on behalf of the Town of Fort Frances based on the information kept on record by OCWA at the Fort Frances Sewage Treatment Plant location; and the report covers the period from January 1 to December 31, 2014.

Should you have any questions or comments in regards to this annual report, please do not hesitate to contact David Hoffman at 807-854-1141 ext 5.

Yours truly,



Gordon Williams
Regional Manager
Ontario Clean Water Agency
Northern Region

Copy to: Doug Herr – Fort Frances Environmental and Facilities Superintendent
Larry Wachter- Operations Manager
Operations Staff – Fort Frances Sewage Treatment Plant

2014 Annual Report

Fort Frances

Wastewater Treatment Plant

Prepared by the Ontario Clean Water Agency



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

**The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
2014 Annual Report**

Introduction

In accordance with the Certificate of Approval Number 3-0049-96-006 section 4.4, the Town of Fort Frances Wastewater Treatment Plant is required to prepare an annual summary. The 2014 annual facility performance report summarizes important information regarding the treatment quality of the effluent wastewater, analytical test results, relevant activities and maintenance operations of the Works.

Description of the Works

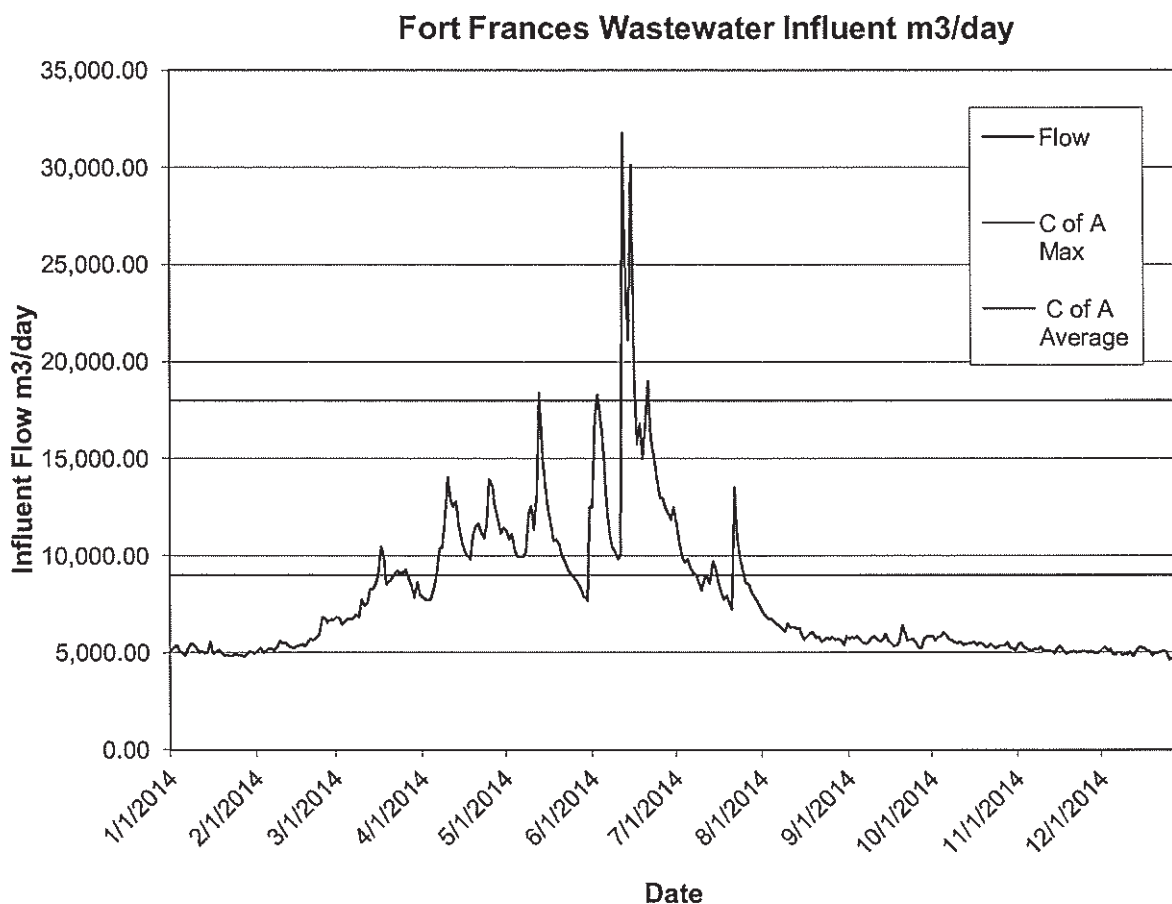
| | |
|--------------------|--|
| Capacity of Works | 9000 m ³ /day (average flow) Peak 18000 m ³ /day |
| Service Area | Town of Fort Frances and Couchiching Reserve |
| Service Population | 9000 |
| Effluent Receiver | Rainy River |
| Major Process | Secondary treatment facility complete with a phosphorus removal system; ultra violet disinfection; aerobic sludge stabilization and dewatering |

1. Summary and Comprehensive Interpretation of Data

| Flow Summary | 2010 | 2011 | 2012 | 2013 | 2014 | 5-yr avg. |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|------------------|
| Avg. Day m ³ /day | 7658 | 6872 | 5578 | 6326 | 7646 | 6816 |
| Design m ³ /day | 9000 | 9000 | 9000 | 9000 | 9000 | 9000 |
| Utilization (Avg. Day/ Design) | 85% | 76% | 62% | 70% | 85% | 76 % |
| Max Day m ³ /day | 21166 | 18288 | 8655 | 20375 | 21000* | 17897 |
| Max Day Factor | 2.8 | 2.7 | 1.6 | 3.2 | 2.7 | 2.6 |

* Estimated volume

The daily flow of influent into the Fort Frances Wastewater treatment plant is presented in the following graph.



The peak flow occurred on June 13, 14 and 15 2014. The peak flow through the treatment plant was 21000 m³/day. The flow was estimated on these days due to the river surcharging the parshall flume. The influent flows presented in the graph includes the volume bypassed at the treatment plant. In June 2014 there were two bypass events lasting a total of 7 days at the treatment plant.

The daily analytical and process data for the plant is attached as the Monthly Operations Summary. This data is summarized in the Annual Summary also attached to the report.

In the following table the Biological Oxygen Demand, Suspended Solids and Total Phosphorus are compared to the Certificate of Approval effluent concentrations and loadings as specified in section 1.3.

| Month | CBOD5 | | Suspended Solids | | Total Phosphorus | | E. Coli | pH | |
|--------------|-----------|-----------|------------------|-----------|------------------|-----------|----------|---------|---------|
| | Avg. Eff. | Avg. Load | Avg.Eff. | Avg. Load | Avg. Eff. | Avg. Load | Geo Mean | Monthly | Monthly |
| | CBOD | CBOD | S.S | S.S | T.P | T.P | Counts | Minimum | Maximum |
| | (mg/L) | (kg/day) | (mg/L) | (kg/day) | (mg/L) | (kg/day) | /100ml | | |
| January | 3.7 | 18.2 | 7.3 | 36.8 | 0.20 | 1.02 | 2.8 | 7.2 | 7.7 |
| February | 4.3 | 23.2 | 7.4 | 42.6 | 0.18 | 1.02 | 10.4 | 7.2 | 7.5 |
| March | 5.0 | 42.4 | 12.2 | 102.0 | 0.18 | 1.42 | 11.9 | 7.3 | 7.5 |
| April | 3.0 | 31.3 | 9.1 | 93.2 | 0.25 | 2.80 | 29.6 | 6.9 | 7.6 |
| May | 4.0 | 46.7 | 7.6 | 81.2 | 0.36 | 3.80 | 36 | 7.2 | 7.7 |
| June | 3.5 | 49.0 | 7.6 | 113.7 | 0.37 | 5.30 | 155.7 | 7.0 | 7.8 |
| July | 2.5 | 23.3 | 7.4 | 68.2 | 0.34 | 3.10 | 11.6 | 7.1 | 7.8 |
| August | 2.0 | 12.3 | 4.7 | 29.0 | 0.28 | 1.71 | 6.8 | 7.5 | 7.7 |
| September | 2.0 | 11.3 | 3.1 | 17.4 | 0.35 | 2.00 | 16.9 | 7.3 | 7.9 |
| October | 2.1 | 11.3 | 3.7 | 20.4 | 0.28 | 1.56 | 4.9 | 7.2 | 7.8 |
| November | 3.1 | 16.3 | 4.3 | 22.1 | 0.22 | 1.15 | 12.9 | 7.0 | 7.7 |
| December | 2.7 | 13.6 | 4.6 | 23.2 | 0.20 | 1.02 | 29.1 | 6.8 | 7.4 |
| Average | 3.2 | 24.9 | 6.6 | 54.2 | 0.27 | 2.16 | 27.4 | 7.1 | 7.7 |
| Max | 5.0 | 49.0 | 12.2 | 113.7 | 0.37 | 5.30 | 155.7 | 7.5 | 7.9 |
| C of A Limit | <25 | <225 | <25 | <225 | <1 | <9 | <200 | >6.0 | <9.5 |
| C of A Obj. | <15 | <135 | <15 | <135 | <1 | <9 | <150 | | |

The Certificate of Approval Limits for CBOD5 and suspended solids are 25 mg/l with an objective target of 15 mg/l and loading limits of less than 225 kg/day and objective of 135 kg/day. The levels for total phosphorus are less than 1 mg/l and a loading limit of 9 kg/day. In the reporting year 2014, CBOD₅, suspended solids and total phosphorus concentration limits and loading limits met both the Certificate of Approval limits and the objectives.

The Certificate of Approval states the pH of the effluent shall be maintained between 6.0 and 9.5, inclusive, at all times. The pH during this period was a high of 7.9 and a low of 6.8. The pH met the requirements of the Certificate of Approval in 2014.

The Certificate of Approval also requires the E-coli results to be less than 200 organisms per 100 ml and an objective of less than 150 organisms per 100 ml as a monthly geometric mean density. The effluent met the limit targets with a maximum monthly geometric mean density of 155.7 organisms per 100 ml. The objective level was not met in the month of June.

2. Effluent Quality Assurance or Control Measures

The effluent sample is a 24 hour composite sampled downstream of the UV disinfection system. The influent and effluent samplers are both Sigma units that take 200 ml samples at a 55 min interval.

The operators send weekly influent and effluent samples to ALS Laboratories in Thunder Bay. The effluent samples are analyzed for carbonaceous biochemical oxygen demand, total phosphorus, ammonia, nitrites and nitrates. E-coli are sampled from the effluent only. The influent samples are tested for carbonaceous biochemical oxygen demand and total phosphorus. The digester contents are analyzed on a quarterly basis.

Suspended solids are sampled and tested in house on both influent and effluent and total phosphorus is tested on the effluent. The plant operators perform in-house laboratory testing for several other process parameters to monitor plant performance.

3. Maintenance

The operators performed required routine maintenance through the 2014 period. Additional maintenance activities conducted during the year are as follows:

Treatment Plant:

- ☐ Thawed frozen sludge line
- ☐ Lightning arrestors were installed
- ☐ Installed and commissioned new digester recirculation pump
- ☐ The UPS for Delta V workstation was replaced
- ☐ Replaced a GBT control relay
- ☐ Cleaned and painted sodium hypochlorite platform
- ☐ Installed and gapped spare N impeller on RAS pump 2
- ☐ Replaced brushes polymer mixing motor
- ☐ Installed new UV intensity sensor
- ☐ Shoveled sand from clarifier 2 inlet channel
- ☐ Drained and inspected clarifier 2, placed cross collector chain back on idler, removed rags and shortened cross collector chain and long collector chain one link each side
- ☐ Shoveled sand from head works inlet channel
- ☐ Rotated wear bars grit snail
- ☐ Installed new pH electrode in lab
- ☐ Replaced belt GBT
- ☐ New hot water heater for polymer system
- ☐ Replaced current isolator UV bank B light intensity circuit
- ☐ Inspected clarifier 1, removed 1 link each side of long and cross collector chain
- ☐ Inspected aeration cell 1 and installed new recirculation pump

- ☐ Removed blower 2 sent for rebuild and reinstalled
- ☐ Contractors repaired head works air handlers
- ☐ Repaired alum line heat trace
- ☐ Added insulation to digester doghouse
- ☐ Altered sludge piping in sludge tent for new container
- ☐ Removed debris from aeration cells outlet channel
- ☐ Drain and inspect aeration cell 2
- ☐ Installed old spare recirculation pump in aeration cell 2 and sent recirculation pump sent out for repair

Pump Stations:

- ☐ Installed new genset batteries Fifth St. and White Pine lift stations
- ☐ Replaced batteries in UPS at Boundary Road lift station
- ☐ Replaced the UPS at Boundary Road lift station
- ☐ Replaced the analog output card in the PLC at Central Avenue lift station to correct pump 2 speed control trouble
- ☐ Removed grease from wet wells at Boundary Road and Church Street lift stations
- ☐ replace radio communication antenna and upgraded to wireless technology
- ☐ Replaced the sump pump in Central Avenue lift station dry well
- ☐ Replaced 1 check valve at Boundary Road lift station
- ☐ Block heater was replaced on White Pine genset
- ☐ Asselin removed debris from Fifth St lift station wet well
- ☐ Replaced the inlet and outlet isolation valves as well as the check valve on pump 2 at White Pine lift station
- ☐ Replaced battery in Fifth Street lift station PLC power supply
- ☐ A new pressure transducer was installed and commissioned to replace the bubbler level control system at White Pine lift station

4. Operational issues

The Fort Frances WWTP met the overall required compliance criterion for this facility in 2014. The flow to the treatment plant is limited by the vortex valve located in Manhole #8 and is rated at 25000 m³/day. The UV disinfection system is rated at a maximum flow of 18000 m³/day.

There was no community complaints received during the period of this report.

The new digester recirculation pump was installed and commissioned successfully. Although the tank could be filled to normal level it took some time before preferred temperature and digestion could be achieved.

Several water breaks in town caused leaking sewers or manholes to transport large volumes of grit and very cold water to the wastewater plant. Volatile solids percentages in aeration tanks and waste sludge fell to all time low levels basically over night as a result indicating high inorganics. It also became necessary to more than double the kilograms of solids wasted to digesters each day.

The long term wear from all this grit to the pumps and clarifier chains will reduce the life expectancy of this equipment. Physical removal of some of this material from tanks, channels and lift stations was necessary when water breaks were repaired and run-off season was over but did persist for several months.

Digestion efficiency was be impacted negatively for some time considering the low volatile percentage of extremely high volumes of waste sludge that was sent to the digesters the second half of March and early April. Volatile solids percentages in aeration tanks and waste sludge did not return to normal levels until three weeks into the month of April. The flooding in June further impacted the normal operation of the digesters.

The average daily flow for June was 14,683.4 m³/day, 16 days of which were estimated because the river was surcharging the parshall flume. This represents 163% of the design average flow.

Total treated flow for the month was 440,501 m³. Two bypass events totaled 33,807 m³.

High river levels compromised the integrity of the regular effluent sample point necessitating that grab samples be taken of the effluent June 16-23. A failed cross collector in clarifier 2 was repaired once the river level and extreme flows had subsided to a reasonable level.

An inspection of the grit system and mechanical bar screen was done with company reps on site. The report suggested tighter gaps on the sides and the base of the screen.

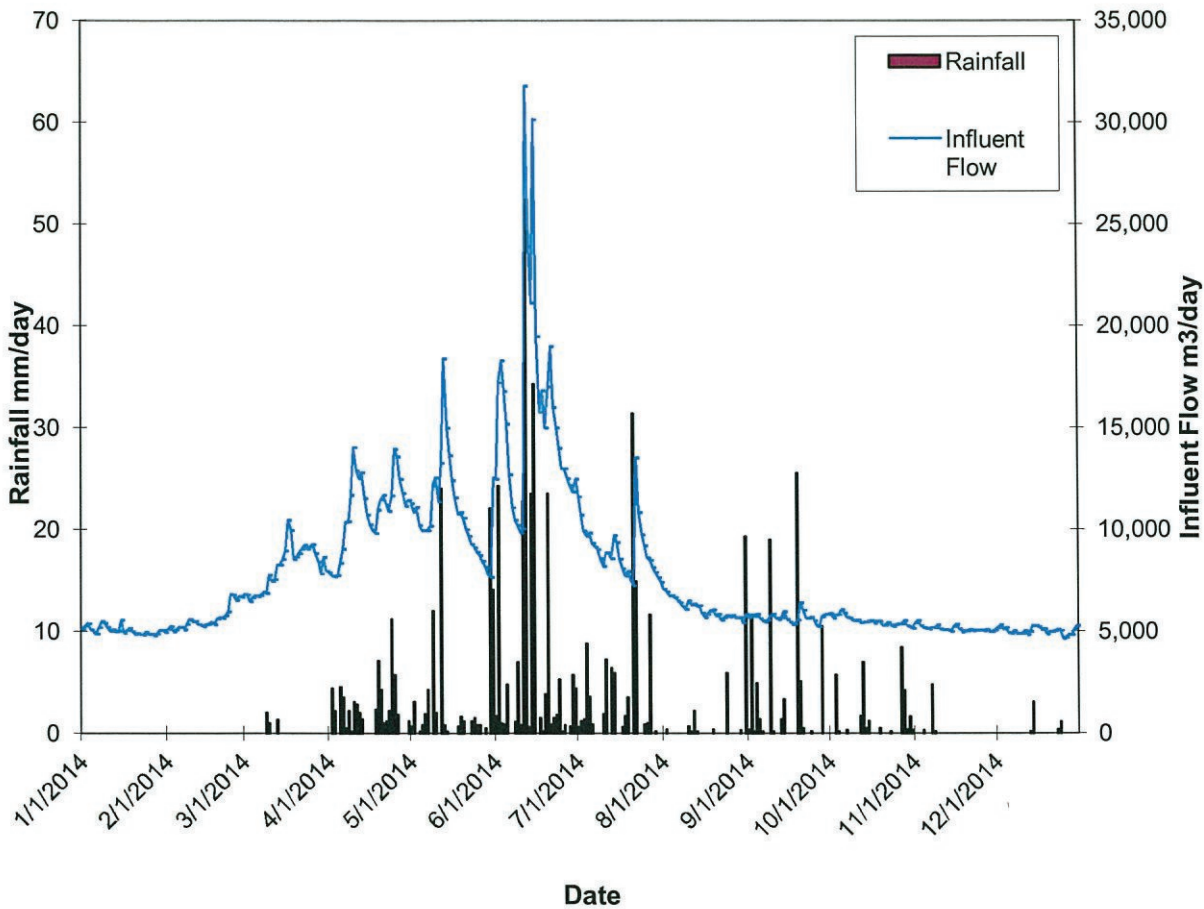
Inspection of clarifier 1 confirmed that all of the clarifier chain is recommended for replacement next year.

In October, both hard drives failed in the main SCADA computer and were replaced on warranty. A failed Delta V IO card was replaced as part of this service.

The sludge haulage/transportation contract with Hammond Landscaping came to an end in November. A new contract with Asselin Transportation and Storage Limited was negotiated. Asselin Transportation and Storage Limited is hauling the sludge to the Town of Fort Frances landfill site to dewater before landfill disposal. The Town of Fort Frances has contracted Associate Engineering to investigate various sludge dewatering technologies to allow for the hauled sludge to meet the MOE criteria for landfill disposal without further drying.

A graph of the influent flows and rainfall as recorded at the Fort Frances Airport Environment Canada is included illustrating several rainfall events closely correlating to influent flow spikes. There were a small number of rainfall data gaps in the Environment Canada database; these were supplemented by alternate sources. The highest rainfall event occurred on June 12, 2014 with a recorded rainfall amount of 58 mm.

Rainfall vs influent Flow 2014



5. Sludge Generation and Disposal

A local contractor hauled the aerobically digested sludge from the treatment plant to a certified site operated by the contractor. The sludge was processed in drying beds for use as an organic soil conditioner at a sod farm. This arrangement ended in November 2014. The sludge is now hauled by a new local contractor for further drying and disposal at the Town of Fort Frances landfill site.

Sludge Volume Hauled in 2014

| Month | Total Volume(m3) |
|--------------|-------------------|
| January | 143.5 |
| February | 129.8 |
| March | 217.9 |
| April | 198.3 |
| May | 243.5 |
| June | 286.8 |
| July | 184.7 |
| August | 131.6 |
| September | 151.2 |
| October | 296.4 |
| November | 157.8 |
| December | 192.0 |
| Total | 2336.2 |

There was 2336.2 m³ of sludge generated in 2014 with an average of 194.7 m³ per month. The sludge volume figures and sludge analytical sample results for 2014 are appended to this report.

There are no additional changes to the sludge handling methods or disposal for the Fort Frances Wastewater Treatment Plant expected in the coming year.

6. Calibrations

The owner shall maintain a continuous flow-measuring device to measure the flow rate within an accuracy of +/- 5% of actual rate of flow within the range of 10% to 100% of the full-scale reading of the measuring devices.

In 2014, calibration of the plant bypass weir and effluent parshall flume was completed on July 25 2014; results attached to this report. Both flow measuring devices passed the calibration testing for 2014.

2014 Annual Summary Report

| Month | Sewage Flows Year 2014 | | | | | | Usage | Sludge | Removal Efficiency | |
|-----------|------------------------|--------------|---------------|--------------|--------------|----------|------------------|---------------|--------------------|------------------|
| | Avg. Day Flow | Max Day Flow | Total Treated | Total ByPass | Total Volume | Total ML | % Plant Capacity | Volume Hauled | CBOD5 | Suspended Solids |
| | m3 | m3 | Volume ML | Volume ML | Volume ML | ML | | M3 | | Total Phosphorus |
| January | 5057.6 | 5552 | 156785 | | 156785 | 156785 | 56% | 143.5 | | |
| February | 5630.1 | 6812 | 157644 | | 157644 | 157644 | 63% | 129.8 | | |
| March | 8118.8 | 10455 | 251682 | | 251682 | 251682 | 90% | 217.9 | | |
| April | 10927.7 | 14036 | 327830 | | 327830 | 327830 | 121% | 198.3 | | |
| May | 10855.8 | 18381 | 336530 | | 336530 | 336530 | 121% | 243.5 | | |
| June | 14683.4 | 21000 | 440501 | 33807.4 | 474308.4 | 474308.4 | 163% | 286.8 | | |
| July | 9034.0 | 13527 | 280055 | | 280055 | 280055 | 100% | 187.4 | | |
| August | 6098.7 | 7079 | 189059 | | 189059 | 189059 | 68% | 131.6 | | |
| September | 5668.8 | 6401 | 170064 | | 170064 | 170064 | 63% | 151.2 | | |
| October | 5508.6 | 6069 | 170767 | | 170767 | 170767 | 61% | 296.4 | | |
| November | 5130.0 | 5522 | 153900 | | 153900 | 153900 | 57% | 157.8 | | |
| December | 5036.2 | 5514 | 156123 | | 156123 | 156123 | 56% | 192.0 | | |
| Sum | | | | 33807.4 | 282474.4 | 282474.4 | | 2336.2 | | |
| Average | 7646 | | 232578 | | 235396 | 235396 | 85% | 194.7 | | |
| Max | | 21000 | 440501 | | 474308.4 | 474308.4 | | | | |
| C of A | 9000 | 18000 | | | | | | | | |

| Month | CBOD5 | | | | Suspended Solids | | | | Total Phosphorus | | | | E. Coli | | pH | |
|-----------|---------------------------|-----------------------------|-------------------------------|---------------------------|-----------------------------|-------------------------------|---------------------------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|------------------------------|--------------------|--------------------|----|--|
| | Avg Raw CBOD (mg/L) | Avg. Eff. CBOD (mg/L) | Avg. Load CBOD (kg/day) | Avg Raw S.S. (mg/L) | Avg. Eff. S.S. (mg/L) | Avg. Load S.S. (kg/day) | Avg Raw T.P. (mg/L) | Avg. Eff. T.P. (mg/L) | Avg. Load T.P. (kg/day) | Avg. Eff. T.P. (mg/L) | Avg. Load T.P. (kg/day) | Geo Mean Counts /100ml | Monthly Minimum | Monthly Maximum | | |
| | | | | | | | | | | | | | | | | |
| January | 76.0 | 3.7 | 18.2 | 147.0 | 7.3 | 36.8 | 2.2 | 0.20 | 1.02 | 0.20 | 1.02 | 2.8 | 7.2 | 7.7 | | |
| February | 88.3 | 4.3 | 23.2 | 146.9 | 7.4 | 42.6 | 2.6 | 0.18 | 1.02 | 0.18 | 1.02 | 10.4 | 7.2 | 7.5 | | |
| March | 49.8 | 5.0 | 42.4 | 183.0 | 12.2 | 102.0 | 1.6 | 0.18 | 1.42 | 0.18 | 1.42 | 11.9 | 7.3 | 7.5 | | |
| April | 40.6 | 3.0 | 31.3 | 92.5 | 9.1 | 93.2 | 1.2 | 0.25 | 2.80 | 0.25 | 2.80 | 29.6 | 6.9 | 7.6 | | |
| May | 36.3 | 4.0 | 46.7 | 78.6 | 7.6 | 81.2 | 1.1 | 0.36 | 3.80 | 0.36 | 3.80 | 36.0 | 7.2 | 7.7 | | |
| June | 23.8 | 3.5 | 49.0 | 85.4 | 7.6 | 113.7 | 0.8 | 0.37 | 5.30 | 0.37 | 5.30 | 155.7 | 7.0 | 7.8 | | |
| July | 39.2 | 2.5 | 23.3 | 107.5 | 7.4 | 68.2 | 1.3 | 0.34 | 3.10 | 0.34 | 3.10 | 11.6 | 7.1 | 7.8 | | |
| August | 60.8 | 2.0 | 12.3 | 148.3 | 4.7 | 29.0 | 1.9 | 0.28 | 1.71 | 0.28 | 1.71 | 6.8 | 7.5 | 7.7 | | |
| September | 68.0 | 2.0 | 11.3 | 130.0 | 3.1 | 17.4 | 2.1 | 0.35 | 2.00 | 0.35 | 2.00 | 16.9 | 7.3 | 7.9 | | |
| October | 67.5 | 2.1 | 11.3 | 131.8 | 3.7 | 20.4 | 2.1 | 0.28 | 1.56 | 0.28 | 1.56 | 4.9 | 7.2 | 7.8 | | |
| November | 84.8 | 3.1 | 16.3 | 139.3 | 4.3 | 22.1 | 2.3 | 0.22 | 1.15 | 0.22 | 1.15 | 12.9 | 7.0 | 7.7 | | |
| December | 84.4 | 2.7 | 13.6 | 138.5 | 4.6 | 23.2 | 2.4 | 0.20 | 1.02 | 0.20 | 1.02 | 29.1 | 6.8 | 7.4 | | |
| Average | 60.0 | 3.2 | 24.9 | 127.4 | 6.6 | 54.2 | 1.8 | 0.27 | 2.16 | 0.27 | 2.16 | 27.4 | 7.1 | 7.7 | | |
| Max | 88.3 | 5 | 49.0 | 183.0 | 12.2 | 113.7 | 2.6 | 0.37 | 5.30 | 0.37 | 5.30 | 155.7 | 7.5 | 7.9 | | |
| C of A | | 25 | 225 | | 25 | 225 | | 1 | 9 | | 9 | 200 | 6.0 | 9.5 | | |

Monthly Operations Summary Report

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | Bypass Volume (m3) | | | |
|-----------|------------|----------------------|--------------|-------------------------|----------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|-----------------|-------------------------|-------------------------|--------------|--------------------|-----------------|------|-----------------------|
| | Day | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N(mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | | Temperature (C) | pH | E. Coll. (cfu/100 mL) |
| 1/1/2014 | 5,120.00 | | | 122 | 5,120.00 | 83 | | | | | | 0.16 | | 6.4 | 9.5 | 7.3 | | |
| 1/2/2014 | 5,281.00 | | | 163 | 5,281.00 | 90 | | | | | | 0.19 | | 5.2 | 9.5 | 7.3 | | |
| 1/3/2014 | 5,391.00 | | | 188 | 5,391.00 | 89 | | | | | | 0.18 | | 4 | 9.5 | 7.3 | | |
| 1/4/2014 | 5,094.00 | | | 147 | 5,094.00 | 83 | | | | | | 0.21 | | 4.4 | 9 | 7.2 | | |
| 1/5/2014 | 4,981.00 | | | 169 | 4,981.00 | 85 | | | | | | 0.21 | | 9.6 | 9 | 7.4 | | |
| 1/6/2014 | 4,883.00 | | | 137 | 4,883.00 | 90 | | | | | | 0.14 | 4.1 | 4.1 | 9 | 7.4 | | |
| 1/7/2014 | 5,202.00 | 72 | 2.26 | 157 | 5,202.00 | 86 | 2.7 | 0.323 | 0.569 | 4.43 | | 0.17 | | 9.6 | 9 | 7.6 | 4 | |
| 1/8/2014 | 5,486.00 | | | 192 | 5,486.00 | 87 | | | | | | 0.13 | | 6.8 | 9 | 7.4 | | |
| 1/9/2014 | 5,414.00 | | | 145 | 5,414.00 | 91 | | | | | | 0.16 | | 9.6 | 9.5 | 7.4 | | |
| 1/10/2014 | 5,220.00 | | | 153 | 5,220.00 | 92 | | | | | | 0.19 | | 7.2 | 9.5 | 7.4 | | |
| 1/11/2014 | 5,010.00 | | | 138 | 5,010.00 | 82 | | | | | | 0.16 | | 4.8 | 9.5 | 7.5 | | |
| 1/12/2014 | 5,085.00 | | | 141 | 5,085.00 | 83 | | | | | | 0.23 | | 10.4 | 9.5 | 7.6 | | |
| 1/13/2014 | 4,983.00 | 67 | 2.17 | 129 | 4,983.00 | 85 | 4.6 | 0.877 | 0.712 | 4.45 | | 0.19 | | 8.4 | 9.5 | 7.7 | 1 | |
| 1/14/2014 | 5,028.00 | | | 122 | 5,028.00 | 87 | | | | | | 0.15 | | 5.6 | 9.5 | 7.6 | | |
| 1/15/2014 | 5,552.00 | | | 162 | 5,552.00 | 90 | | | | | | 0.22 | | 6.4 | 9 | 7.4 | | |
| 1/16/2014 | 4,938.00 | | | 143 | 4,938.00 | 86 | | | | | | 0.25 | | 5.2 | 9 | 7.5 | | |
| 1/17/2014 | 5,046.00 | | | 115 | 5,046.00 | 87 | | | | | | 0.21 | | 4.8 | 9 | 7.5 | | |
| 1/18/2014 | 5,148.00 | | | 182 | 5,148.00 | 87 | | | | | | 0.18 | | 5.2 | 9 | 7.4 | | |
| 1/19/2014 | 4,991.00 | | | 138 | 4,991.00 | 81 | | | | | | 0.26 | | 12.8 | 9 | 7.4 | | |
| 1/20/2014 | 4,875.00 | 89 | 2.28 | 108 | 4,875.00 | 82 | 3.7 | 1.16 | 0.538 | 5.37 | | 0.13 | 9.4 | 9.4 | 8.5 | 7.5 | 4 | |
| 1/21/2014 | 4,890.00 | | | 119 | 4,890.00 | 83 | | | | | | 0.24 | | 4.3 | 9 | 7.4 | | |
| 1/22/2014 | 4,853.00 | | | 161 | 4,853.00 | 82 | | | | | | 0.39 | | 18 | 8.5 | 7.2 | | |
| 1/23/2014 | 4,837.00 | | | 140 | 4,837.00 | 76 | | | | | | 0.36 | | 20.8 | 8.5 | 7.4 | | |
| 1/24/2014 | 4,956.00 | | | 137 | 4,956.00 | 75 | | | | | | 0.31 | | 5.6 | 8.5 | 7.4 | | |
| 1/25/2014 | 4,874.00 | | | 155 | 4,874.00 | 85 | | | | | | 0.14 | | 6 | 8.5 | 7.5 | | |
| 1/26/2014 | 4,868.00 | | | 138 | 4,868.00 | 76 | | | | | | 0.29 | | 5.2 | 8.5 | 7.6 | | |
| 1/27/2014 | 4,815.00 | 76 | 2.09 | 109 | 4,815.00 | 81 | 3.9 | 2.41 | 0.551 | 4.4 | | 0.1 | | 5.2 | 8.5 | 7.6 | 4 | |
| 1/28/2014 | 4,885.00 | | | 130 | 4,885.00 | 81 | | | | | | 0.1 | | 6 | 8 | 7.5 | | |
| 1/29/2014 | 5,067.00 | | | 186 | 5,067.00 | 84 | | | | | | 0.19 | | 5.6 | 8.5 | 7.5 | | |
| 1/30/2014 | 5,051.00 | | | 194 | 5,051.00 | 75 | | | | | | 0.23 | | 5.6 | 8 | 7.4 | | |
| 1/31/2014 | 4,961.00 | | | 137 | 4,961.00 | 76 | | | | | | 0.21 | | 4 | 8 | 7.4 | | |
| Total | 156,785.00 | | | | 156,785.00 | | | | | | | | | | | | | 0.00 |
| Average | 5,057.58 | 76.00 | 2.20 | 147.00 | 5,057.58 | 83.87 | 3.73 | 1.19 | 0.59 | 4.66 | | 0.20 | 6.75 | 7.31 | 8.92 | 7.44 | 2.83 | 0.00 |
| Minimum | 4,815.00 | 67.00 | 2.09 | 108.00 | 4,815.00 | 75.00 | 2.70 | 0.32 | 0.54 | 4.40 | | 0.10 | 4.10 | 4.00 | 8.00 | 7.20 | 1.00 | 0.00 |
| Maximum | 5,552.00 | 89.00 | 2.28 | 194.00 | 5,552.00 | 92.00 | 4.60 | 2.41 | 0.71 | 5.37 | | 0.39 | 9.40 | 20.80 | 9.50 | 7.70 | 4.00 | 0.00 |
| Count | 31 | 4 | 4 | 31 | 31 | 31 | 4 | 4 | 4 | 4 | 4 | 31 | 2 | 31 | 31 | 31 | 4 | 0 |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | | | Bypass Volume (m3) |
|-----------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|-----------------|-------------------------|-------------------------|--------------|-----------------|------|-----------------------|--------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N(mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | pH | E. Coll. (cfu/100 mL) | |
| 2/1/2014 | 5,110.00 | | | 192 | 5,110.00 | 86 | | | | | 0.19 | | 5.2 | 8 | 7.4 | | |
| 2/2/2014 | 5,236.00 | | | 153 | 5,236.00 | 81 | | | | | 0.17 | | 5.6 | 8 | 7.4 | | |
| 2/3/2014 | 5,005.00 | | 3.49 | 129 | 5,005.00 | 74 | 5.9 | 1.49 | 0.856 | 4.13 | 0.22 | 13.5 | 13.6 | 8.5 | 7.5 | 12 | |
| 2/4/2014 | 5,084.00 | 82 | | 129 | 5,084.00 | 74 | | | | | 0.32 | | 8.8 | 8.5 | 7.2 | | |
| 2/5/2014 | 5,218.00 | | | 141 | 5,218.00 | 83 | | | | | 0.22 | | 5.2 | 8 | 7.4 | | |
| 2/6/2014 | 5,209.00 | | | 119 | 5,209.00 | 85 | | | | | 0.15 | | 6.8 | 8 | 7.5 | | |
| 2/7/2014 | 5,098.00 | | | 259 | 5,098.00 | 79 | | | | | 0.22 | | 6.4 | 8 | 7.3 | | |
| 2/8/2014 | 5,354.00 | | | 131 | 5,354.00 | 85 | | | | | 0.28 | | 10.8 | 8 | 7.3 | | |
| 2/9/2014 | 5,595.00 | | | 155 | 5,595.00 | 92 | | | | | 0.24 | | 9.2 | 8 | 7.4 | | |
| 2/10/2014 | 5,503.00 | 76 | 2.25 | 140 | 5,503.00 | 89 | 4.1 | 3.46 | 0.669 | 4.08 | 0.13 | | 6.4 | 8 | 7.4 | 15 | |
| 2/11/2014 | 5,499.00 | | | 130 | 5,499.00 | 91 | | | | | 0.26 | | 6 | 8 | 7.4 | | |
| 2/12/2014 | 5,354.00 | | | 137 | 5,354.00 | 85 | | | | | 0.09 | | 2.4 | 8 | 7.4 | | |
| 2/13/2014 | 5,320.00 | | | 124 | 5,320.00 | 84 | | | | | 0.13 | | 2.8 | 8 | 7.4 | | |
| 2/14/2014 | 5,249.00 | | | 122 | 5,249.00 | 85 | | | | | 0.18 | | 5.2 | 8 | 7.3 | | |
| 2/15/2014 | 5,335.00 | | | 119 | 5,335.00 | 91 | | | | | 0.15 | | 6.4 | 7.5 | 7.3 | | |
| 2/16/2014 | 5,369.00 | | | 141 | 5,369.00 | 94 | | | | | 0.12 | | 5.6 | 7.5 | 7.3 | | |
| 2/17/2014 | 5,454.00 | 65 | 2.01 | 112 | 5,454.00 | 86 | 3.4 | 3.19 | 0.257 | 4.43 | 0.14 | 7.8 | 7.8 | 8 | 7.4 | 3 | |
| 2/18/2014 | 5,353.00 | | | 140 | 5,353.00 | 86 | | | | | 0.07 | | 3.2 | 8 | 7.2 | | |
| 2/19/2014 | 5,607.00 | | | 130 | 5,607.00 | 96 | | | | | 0.12 | | 6.8 | 7.5 | 7.3 | | |
| 2/20/2014 | 5,693.00 | | | 148 | 5,693.00 | 93 | | | | | 0.12 | | 6.8 | 7.5 | 7.3 | | |
| 2/21/2014 | 5,658.00 | | | 202 | 5,658.00 | 82 | | | | | 0.19 | | 10.8 | 7 | 7.2 | | |
| 2/22/2014 | 5,791.00 | | | 121 | 5,791.00 | 90 | | | | | 0.14 | | 8.8 | 7 | 7.2 | | |
| 2/23/2014 | 5,981.00 | 130 | 2.79 | 289 | 5,981.00 | 104 | 3.7 | 4.13 | 0.19 | 3.69 | 0.14 | | 4 | 7 | 7.5 | 22 | |
| 2/24/2014 | 6,812.00 | | | 195 | 6,812.00 | 107 | | | | | 0.18 | | 12 | 7 | 7.5 | | |
| 2/25/2014 | 6,800.00 | | | 179 | 6,800.00 | 106 | | | | | 0.25 | | 14 | 7 | 7.2 | | |
| 2/26/2014 | 6,547.00 | | | 118 | 6,547.00 | 96 | | | | | 0.22 | | 11.6 | 7 | 7.4 | | |
| 2/27/2014 | 6,717.00 | | | 56 | 6,717.00 | 103 | | | | | 0.19 | | 10.8 | 7 | 7.3 | | |
| 2/28/2014 | 6,693.00 | | | 101 | 6,693.00 | 105 | | | | | 0.21 | | 5.2 | 7 | 7.3 | | |
| Total | 157,644.00 | | | | 157,644.00 | | | | | | | | | | | | 0.00 |
| Average | 5,630.14 | 88.25 | 2.64 | 146.86 | 89.71 | | 4.28 | 3.07 | 0.49 | 4.08 | 0.18 | 10.65 | 7.44 | 7.68 | 7.35 | 10.44 | 0.00 |
| Minimum | 5,005.00 | 65.00 | 2.01 | 56.00 | 74.00 | | 3.40 | 1.49 | 0.19 | 3.69 | 0.07 | 7.80 | 2.40 | 7.00 | 7.20 | 3.00 | 0.00 |
| Maximum | 6,812.00 | 130.00 | 3.49 | 289.00 | 107.00 | | 5.90 | 4.13 | 0.86 | 4.43 | 0.32 | 13.50 | 14.00 | 8.50 | 7.50 | 22.00 | 0.00 |
| Count | 28 | 4 | 4 | 28 | 28 | 28 | 4 | 4 | 4 | 4 | 28 | 2 | 28 | 28 | 28 | 4 | 0 |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | | | Bypass Volume (m3) |
|-----------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|-----------------|-------------------------|-------------------------|--------------|-----------------|------|-----------------------|--------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N(mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | pH | E. Coll. (cfu/100 mL) | |
| 3/1/2014 | 6,832.00 | | | 155 | 6,832.00 | 103 | | | | | 0.18 | | 9.2 | 7 | 7.3 | | |
| 3/2/2014 | 6,804.00 | | | 129 | 6,804.00 | 125 | | | | | 0.15 | | 8.8 | 7 | 7.3 | | |
| 3/3/2014 | 6,470.00 | 71 | 2.22 | 100 | 6,470.00 | 118 | | | | 3.2 | 0.26 | 10.6 | 16.8 | 7 | 7.3 | 9 | |
| 3/4/2014 | 6,671.00 | | | 104 | 6,671.00 | 96 | | | | | 0.18 | | 5.6 | 7 | 7.4 | | |
| 3/5/2014 | 6,770.00 | | | 155 | 6,770.00 | 105 | | | | | 0.35 | | 13.2 | 7 | 7.5 | | |
| 3/6/2014 | 6,727.00 | | | 114 | 6,727.00 | 105 | | | | | 0.19 | | 8 | 7 | 7.4 | | |
| 3/7/2014 | 6,794.00 | | | 92 | 6,794.00 | 100 | | | | | 0.26 | | 8.8 | 7 | 7.3 | | |
| 3/8/2014 | 6,945.00 | | | 114 | 6,945.00 | 116 | | | | | 0.18 | | 8.4 | 7 | 7.4 | | |
| 3/9/2014 | 6,872.00 | | | 115 | 6,872.00 | 115 | | | | | 0.21 | | 9.2 | 7 | 7.4 | | |
| 3/10/2014 | 7,751.00 | 52 | 1.54 | 164 | 7,751.00 | 155 | 5.5 | 4.12 | 0.081 | 2.96 | 0.11 | | 7.2 | 7 | 7.4 | | |
| 3/11/2014 | 7,467.00 | | | 119 | 7,467.00 | 107 | | | | | 0.13 | | 10.4 | 7 | 7.3 | 12 | |
| 3/12/2014 | 7,555.00 | | | 161 | 7,555.00 | 108 | | | | | 0.13 | | 7.6 | 7 | 7.3 | | |
| 3/13/2014 | 8,269.00 | | | 153 | 8,269.00 | 127 | | | | 3.2 | 0.15 | | 5.6 | 7 | 7.3 | | |
| 3/14/2014 | 8,271.00 | | | 96 | 8,271.00 | 114 | | | | | 0.18 | | 6.4 | 6 | 7.4 | | |
| 3/15/2014 | 8,549.00 | | | 113 | 8,549.00 | 123 | | | | | 0.14 | | 6.4 | 6 | 7.3 | | |
| 3/16/2014 | 8,962.00 | | | 385 | 8,962.00 | 129 | | | | | 0.14 | | 13.6 | 5 | 7.3 | | |
| 3/17/2014 | 10,455.00 | 23 | 1.33 | 272 | 10,455.00 | 152 | 2.9 | 4.43 | 0.071 | 2.56 | 0.17 | 16.2 | 16.2 | 5 | 7.3 | 17 | |
| 3/18/2014 | 9,964.00 | | | 264 | 9,964.00 | 156 | | | | | 0.15 | | 14.4 | 5 | 7.4 | | |
| 3/19/2014 | 8,537.00 | | | 155 | 8,537.00 | 127 | | | | | 0.15 | | 9.6 | 5 | 7.3 | | |
| 3/20/2014 | 8,686.00 | | | 171 | 8,686.00 | 126 | | | | | 0.13 | | 8.8 | 6 | 7.3 | | |
| 3/21/2014 | 8,832.00 | | | 336 | 8,832.00 | 131 | | | | | 0.17 | | 14.8 | 6 | 7.3 | | |
| 3/22/2014 | 9,051.00 | | | 304 | 9,051.00 | 147 | | | | | 0.18 | | 12.8 | 6 | 7.5 | | |
| 3/23/2014 | 9,242.00 | | | 250 | 9,242.00 | 135 | | | | | 0.17 | | 21.6 | 5 | 7.4 | | |
| 3/24/2014 | 9,060.00 | | | 348 | 9,060.00 | 131 | | | | | 0.23 | | 17.2 | 5 | 7.5 | | |
| 3/25/2014 | 9,173.00 | 53 | 1.48 | 320 | 9,173.00 | 134 | 7.2 | 4.81 | 0.077 | 2.72 | 0.16 | | 22.4 | 5 | 7.5 | | |
| 3/26/2014 | 9,268.00 | | | 278 | 9,268.00 | 137 | | | | | 0.15 | | 21.2 | 5 | 7.4 | 11 | |
| 3/27/2014 | 8,834.00 | | | 145 | 8,834.00 | 129 | | | | | 0.14 | | 13.2 | 5 | 7.4 | | |
| 3/28/2014 | 8,431.00 | | | 141 | 8,431.00 | 140 | | | | | 0.25 | | 20.4 | 5 | 7.3 | | |
| 3/29/2014 | 7,839.00 | | | 161 | 7,839.00 | 129 | | | | | 0.17 | | 16 | 6 | 7.3 | | |
| 3/30/2014 | 8,632.00 | | | 124 | 8,632.00 | 138 | | | | | 0.19 | | 14 | 6 | 7.4 | | |
| 3/31/2014 | 7,969.00 | | | 136 | 7,969.00 | 121 | | | | | 0.16 | | 11.6 | 6 | 7.5 | | |
| Total | 251,682.00 | | | | 251,682.00 | | | | | | | | | | | | 0.00 |
| Average | 8,118.77 | 49.75 | 1.64 | 183.03 | 8,118.77 | 125.13 | 5.03 | 4.49 | 0.10 | 2.93 | 0.18 | 13.40 | 12.24 | 6.24 | 7.37 | 11.92 | 0.00 |
| Minimum | 6,470.00 | 23.00 | 1.33 | 92.00 | 6,470.00 | 96.00 | 2.90 | 4.12 | 0.07 | 2.56 | 0.11 | 10.60 | 5.60 | 5.00 | 7.30 | 9.00 | 0.00 |
| Maximum | 10,455.00 | 71.00 | 2.22 | 385.00 | 10,455.00 | 156.00 | 7.20 | 4.81 | 0.16 | 3.20 | 0.35 | 16.20 | 22.40 | 7.00 | 7.50 | 17.00 | 0.00 |
| Count | 31 | 4 | 4 | 31 | 31 | 31 | 4 | 4 | 4 | 5 | 31 | 2 | 31 | 31 | 31 | 4 | 0 |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | Bypass Volume (m3) | | |
|-----------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|-----------------|-------------------------|-------------------------|--------------|-----------------|--------------------|--------|-----------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N(mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | | pH | E. Coll. (cfu/100 mL) |
| 4/1/2014 | 7,888.00 | | | 154 | 7,888.00 | 117 | | | | | 0.26 | | 12.4 | 6 | 7.5 | | |
| 4/2/2014 | 7,746.00 | 61 | 1.62 | 139 | 7,746.00 | 120 | 4.2 | 6.29 | 0.105 | 3.29 | 0.25 | 8.7 | 8.7 | 6 | 7.3 | 16 | |
| 4/3/2014 | 7,703.00 | | | 137 | 7,703.00 | 114 | | | | | 0.24 | | 26.4 | 6 | 7.3 | | |
| 4/4/2014 | 7,767.00 | | | 132 | 7,767.00 | 119 | | | | | 0.2 | | 3.6 | 6 | 7.2 | | |
| 4/5/2014 | 8,360.00 | | | 103 | 8,360.00 | 132 | | | | | 0.19 | | 12.4 | 6 | 7.1 | | |
| 4/6/2014 | 9,050.00 | | | 66 | 9,050.00 | 142 | | | | | 0.17 | | 4 | 6 | 7.2 | | |
| 4/7/2014 | 10,377.00 | 49 | 1.68 | 190 | 10,377.00 | 162 | 2.4 | 4.59 | 0.13 | 3.17 | 0.16 | | 3.6 | 6.5 | 7.2 | 31 | |
| 4/8/2014 | 10,404.00 | | | 110 | 10,404.00 | 147 | | | | | 0.24 | | 8 | 6 | 6.9 | | |
| 4/9/2014 | 11,698.00 | | | | 11,698.00 | 196 | | | | | 0.16 | | 5.6 | 6 | 7.4 | | |
| 4/10/2014 | 14,036.00 | | | 130 | 14,036.00 | 194 | | | | | 0.22 | | 8 | 6 | 7.5 | | |
| 4/11/2014 | 12,891.00 | | | 61 | 12,891.00 | 177 | | | | | 0.37 | | 22.8 | 6 | 7.2 | | |
| 4/12/2014 | 12,518.00 | | | 56 | 12,518.00 | 171 | | | | | 0.29 | | 10 | 5.5 | 7.3 | | |
| 4/13/2014 | 12,790.00 | | | 58 | 12,790.00 | 175 | | | | | 0.21 | | 9.2 | 6 | 7.4 | | |
| 4/14/2014 | 11,539.00 | 35 | 1.05 | 59 | 11,539.00 | 169 | 3.7 | 5.85 | 0.043 | 0.691 | 0.2 | 11.7 | 14 | 6 | 7.6 | 5 | |
| 4/15/2014 | 10,731.00 | | | 72 | 10,731.00 | 155 | | | | | 0.2 | | 7.2 | 6 | 7.5 | | |
| 4/16/2014 | 10,238.00 | | | 85 | 10,238.00 | 150 | | | | | 0.21 | | 7.6 | 6 | 7.5 | | |
| 4/17/2014 | 9,983.00 | | | 77 | 9,983.00 | 151 | | | | | 0.18 | | 5.6 | 6 | 7.5 | | |
| 4/18/2014 | 9,823.00 | | | 81 | 9,823.00 | 139 | | | | | 0.15 | | 7.6 | 6 | 7.4 | | |
| 4/19/2014 | 10,960.00 | | | 93 | 10,960.00 | 156 | | | | | 0.17 | | 4.4 | 6 | 7.5 | | |
| 4/20/2014 | 11,455.00 | | | 101 | 11,455.00 | 159 | | | | | 0.14 | | 3.6 | 6 | 7.5 | | |
| 4/21/2014 | 11,686.00 | 25 | 0.86 | 70 | 11,686.00 | 161 | 2 | 4.99 | 0.878 | 0.722 | 0.12 | | 4 | 6 | 7.5 | 37 | |
| 4/22/2014 | 11,214.00 | | | 106 | 11,214.00 | 164 | | | | | 0.28 | | 9.2 | 6.5 | 7.3 | | |
| 4/23/2014 | 10,911.00 | | | 89 | 10,911.00 | 160 | | | | | 0.33 | | 8 | 6 | 7.4 | | |
| 4/24/2014 | 11,660.00 | | | 79 | 11,660.00 | 183 | | | | | 0.43 | | 4.4 | 6 | 7.4 | | |
| 4/25/2014 | 13,947.00 | | | 96 | 13,947.00 | 217 | | | | | 0.45 | | 9.6 | 6 | 7.5 | | |
| 4/26/2014 | 13,579.00 | | | 73 | 13,579.00 | 192 | | | | | 0.31 | | 10.8 | 6 | 7.6 | | |
| 4/27/2014 | 12,484.00 | | | 55 | 12,484.00 | 179 | | | | | 0.32 | | 5.6 | 6 | 7.6 | | |
| 4/28/2014 | 11,793.00 | 33 | 0.925 | 71 | 11,793.00 | 206 | 2.8 | 4.91 | 0.263 | 1.35 | 0.24 | 6.9 | 6.9 | 6.5 | 7.5 | 248 | |
| 4/29/2014 | 11,156.00 | | | 63 | 11,156.00 | 164 | | | | | 0.4 | | 3.2 | 6.5 | 7.6 | | |
| 4/30/2014 | 11,443.00 | | | 76 | 11,443.00 | 168 | | | | | 0.42 | | 11.6 | 6.5 | 7.4 | | |
| Total | 327,830.00 | | | | 327,830.00 | | | | | | | | | | | | 0.00 |
| Average | 10,927.67 | 40.60 | 1.23 | 92.48 | 10,927.67 | 161.30 | 3.02 | 5.33 | 0.28 | 1.84 | 0.25 | 9.10 | 8.60 | 6.07 | 7.39 | 29.61 | 0.00 |
| Minimum | 7,703.00 | 25.00 | 0.86 | 55.00 | 7,703.00 | 114.00 | 2.00 | 4.59 | 0.04 | 0.69 | 0.12 | 6.90 | 3.20 | 5.50 | 6.90 | 5.00 | 0.00 |
| Maximum | 14,036.00 | 61.00 | 1.68 | 190.00 | 14,036.00 | 217.00 | 4.20 | 6.29 | 0.88 | 3.29 | 0.45 | 11.70 | 26.40 | 6.50 | 7.60 | 248.00 | 0.00 |
| Count | 30 | 5 | 5 | 29 | 30 | 30 | 5 | 5 | 5 | 5 | 30 | 3 | 30 | 30 | 30 | 5 | 0 |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | | | Bypass Volume (m3) |
|-----------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|-----------------|-------------------------|-------------------------|--------------|-----------------|------|-----------------------|--------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N(mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | pH | E. Coll. (cfu/100 mL) | |
| 5/1/2014 | 11,290.00 | | | 70 | 11,290.00 | 165 | | | | | 0.24 | | 8 | 7 | 7.6 | | |
| 5/2/2014 | 10,863.00 | | | 80 | 10,863.00 | 155 | | | | | 0.24 | | 7.2 | 7 | 7.4 | | |
| 5/3/2014 | 11,106.00 | | | 48 | 11,106.00 | 160 | | | | | 0.26 | | 4.4 | 7 | 7.6 | | |
| 5/4/2014 | 10,220.00 | 39 | 1.14 | 65 | 10,220.00 | 143 | 2.9 | 4.7 | 0.129 | 1.47 | 0.28 | | 7.6 | 7 | 7.6 | 19 | |
| 5/5/2014 | 9,973.00 | | | 73 | 9,973.00 | 147 | | | | | 0.23 | | 4.4 | 7 | 7.5 | | |
| 5/6/2014 | 9,968.00 | | | 84 | 9,968.00 | 145 | | | | | 0.18 | | 4.4 | 7 | 7.2 | | |
| 5/7/2014 | 9,957.00 | | | 81 | 9,957.00 | 149 | | | | | 0.31 | | 14.8 | 7 | 7.4 | | |
| 5/8/2014 | 10,190.00 | | | 73 | 10,190.00 | 146 | | | | | 0.44 | | 4 | 7 | 7.4 | | |
| 5/9/2014 | 12,163.00 | | | 77 | 12,163.00 | 179 | | | | | 0.41 | | 4.4 | 7 | 7.4 | | |
| 5/10/2014 | 12,553.00 | | | 86 | 12,553.00 | 176 | | | | | 0.37 | | 4.8 | 7 | 7.3 | | |
| 5/11/2014 | 11,369.00 | | | 96 | 11,369.00 | 159 | | | | | 0.42 | | 6.4 | 7 | 7.4 | | |
| 5/12/2014 | 13,271.00 | | | 137 | 13,271.00 | 253 | | | | | 0.29 | | 7.6 | 7 | 7.4 | | |
| 5/13/2014 | 18,381.00 | | | 70 | 18,381.00 | 261 | | | | | 0.27 | | 6 | 7 | 7.5 | | |
| 5/14/2014 | 14,989.00 | 27 | 0.971 | 76 | 14,989.00 | 200 | 5.6 | 0.06 | 0.138 | 2.73 | 0.31 | 11.7 | 11.7 | 7 | 7.5 | 146 | |
| 5/15/2014 | 13,631.00 | | | 76 | 13,631.00 | 190 | | | | | 0.25 | | 4.8 | 7 | 7.6 | | |
| 5/16/2014 | 12,415.00 | | | 63 | 12,415.00 | 175 | | | | | 0.32 | | 9.6 | 7 | 7.5 | | |
| 5/17/2014 | 11,564.00 | | | 55 | 11,564.00 | 167 | | | | | 0.38 | | 7.6 | 7 | 7.5 | | |
| 5/18/2014 | 10,786.00 | | | 60 | 10,786.00 | 156 | | | | | 0.59 | | 8.8 | 7 | 7.6 | | |
| 5/19/2014 | 10,836.00 | 34 | 0.988 | 64 | 10,836.00 | 169 | 4.1 | 3.64 | 0.123 | 3.03 | 0.47 | | 9.6 | 7.5 | 7.7 | | |
| 5/20/2014 | 10,575.00 | | | 102 | 10,575.00 | 150 | | | | | 0.46 | | 6.4 | 7 | 7.5 | 38 | |
| 5/21/2014 | 10,010.00 | | | 58 | 10,010.00 | 142 | | | | | 0.52 | | 6.4 | 7.5 | 7.7 | | |
| 5/22/2014 | 9,686.00 | | | 74 | 9,686.00 | 143 | | | | | 0.22 | | 4.8 | 7 | 7.5 | | |
| 5/23/2014 | 9,286.00 | | | 94 | 9,286.00 | 141 | | | | | 0.27 | | 3.6 | 7 | 7.5 | | |
| 5/24/2014 | 9,112.00 | | | 63 | 9,112.00 | 139 | | | | | 0.29 | | 8 | 7.5 | 7.6 | | |
| 5/25/2014 | 8,906.00 | | | 48 | 8,906.00 | 129 | | | | | 0.31 | | 4.4 | 7.5 | 7.6 | | |
| 5/26/2014 | 8,743.00 | 45 | 1.3 | 57 | 8,743.00 | 145 | 3.3 | 6.66 | 0.42 | 1.86 | 0.27 | 6 | 6 | 7.5 | 7.5 | 16 | |
| 5/27/2014 | 8,461.00 | | | 96 | 8,461.00 | 164 | | | | | 0.49 | | 13.2 | 8 | 7.2 | | |
| 5/28/2014 | 8,181.00 | | | 86 | 8,181.00 | 130 | | | | | 0.42 | | 8.8 | 8 | 7.2 | | |
| 5/29/2014 | 7,838.00 | | | 98 | 7,838.00 | 120 | | | | | 0.45 | | 14 | 8 | 7.3 | | |
| 5/30/2014 | 7,677.00 | | | 155 | 7,677.00 | 121 | | | | | 0.58 | | 8.4 | 8.5 | 7.4 | | |
| 5/31/2014 | 12,530.00 | | | 73 | 12,530.00 | 169 | | | | | 0.49 | | 11.2 | 8.5 | 7.4 | | |
| Total | 336,530.00 | | | | 336,530.00 | | 3.98 | 3.77 | 0.20 | 2.27 | 0.36 | 8.85 | 7.55 | 7.27 | 7.47 | 36.04 | 0.00 |
| Average | 10,855.81 | 36.25 | 1.10 | 78.65 | 10,855.81 | 160.90 | 2.90 | 0.06 | 0.12 | 1.47 | 0.18 | 6.00 | 3.60 | 7.00 | 7.20 | 16.00 | 0.00 |
| Minimum | 7,677.00 | 27.00 | 0.97 | 48.00 | 7,677.00 | 120.00 | 5.60 | 6.66 | 0.42 | 3.03 | 0.59 | 11.70 | 14.80 | 8.50 | 7.70 | 146.00 | 0.00 |
| Maximum | 18,381.00 | 45.00 | 1.30 | 155.00 | 18,381.00 | 261.00 | 5.60 | 6.66 | 0.42 | 3.03 | 0.59 | 11.70 | 14.80 | 8.50 | 7.70 | 146.00 | 0.00 |
| Count | 31 | 4 | 4 | 31 | 31 | 31 | 4 | 4 | 4 | 4 | 31 | 2 | 31 | 31 | 31 | 4 | 0 |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | | | E. Coll. (cfu/100 mL) | Bypass Volume (m3) |
|-----------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|-----------------|-------------------------|-------------------------|--------------|-----------------|------|-----------|-----------------------|--------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N(mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | pH | | | |
| 6/1/2014 | 12,482.00 | 30 | 0.904 | 65 | 12,482.00 | 164 | 4 | 4.05 | 0.165 | 1.86 | 0.58 | | 9.2 | 9 | 7.4 | 980 | 12579 | |
| 6/2/2014 | 17,214.00 | | | 78 | 17,214.00 | 260 | | | | 0.44 | | 6.4 | 9 | 7.5 | | | | |
| 6/3/2014 | 18,289.00 | | | 53 | 18,289.00 | 252 | | | | 0.4 | | 9.6 | 9 | 7.4 | | | | |
| 6/4/2014 | 16,790.00 | | | 74 | 16,790.00 | 227 | | | | 0.26 | | 6.4 | 9 | 7.4 | | | | |
| 6/5/2014 | 15,191.00 | | | 60 | 15,191.00 | 198 | | | | 0.24 | | 5.2 | 9 | 7.5 | | | | |
| 6/6/2014 | 12,692.00 | | | 71 | 12,692.00 | 176 | | | | 0.26 | | 6 | 9 | 7.5 | | | | |
| 6/7/2014 | 11,083.00 | | | 63 | 11,083.00 | 147 | | | | 0.32 | | 10 | 9 | 7.4 | | | | |
| 6/8/2014 | 10,463.00 | | | 107 | 10,463.00 | 161 | | | | 0.44 | | 13.6 | 9 | 7.6 | | | | |
| 6/9/2014 | 10,211.00 | 34 | 1.07 | 91 | 10,211.00 | 147 | 3.2 | 5.22 | 0.178 | 2.22 | 0.33 | 9.8 | 11.6 | 9 | 7.6 | | | |
| 6/10/2014 | 9,837.00 | | | 77 | 9,837.00 | 142 | | | | 0.42 | | 7.2 | 10.5 | 10 | 7.4 | | | |
| 6/11/2014 | 10,043.00 | | | 113 | 10,043.00 | 149 | | | | 0.49 | | 7.2 | 10.5 | 10.5 | 7.2 | 261 | 137 | |
| 6/12/2014 | 31,779.00 | | | 66 | 19,200.00 | | | | | 0.27 | | 6.4 | 10.5 | 10 | 7.3 | | | |
| 6/13/2014 | 23,891.00 | | | 62 | 21,000.00 | | | | | 0.27 | | 10 | 10 | 7.4 | | | | |
| 6/14/2014 | 21,137.00 | | | 675 | 21,000.00 | | | | | 0.36 | | 14.4 | 10 | 7.5 | | | | |
| 6/15/2014 | 30,141.00 | 6 | 0.471 | 54 | 21,000.00 | | 2.4 | 0.414 | 0.173 | 3.81 | 0.41 | 16.4 | 10.5 | 7.3 | | | | |
| 6/16/2014 | 19,480.00 | | | 44 | 13,000.00 | | | | | 0.26 | | 1.2 | 10 | 7.2 | | | | |
| 6/17/2014 | 15,767.00 | | | 34 | 14,000.00 | | | | | 0.2 | | 2.8 | 10 | 7.7 | | | | |
| 6/18/2014 | 16,812.00 | | | 46 | 16,000.00 | | | | | 0.43 | | 3.6 | 10 | 7.8 | | | | |
| 6/19/2014 | 15,000.00 | | | 47 | 15,000.00 | | | | | 0.41 | | 6.8 | 10 | 7 | | | | |
| 6/20/2014 | 17,000.00 | | | 61 | 17,000.00 | | | | | 0.36 | | 4 | 10 | 7 | | | | |
| 6/21/2014 | 19,000.00 | | | 55 | 19,000.00 | | | | | 0.23 | | 4.4 | 10.5 | 7.4 | 41 | 812 | | |
| 6/22/2014 | 16,000.00 | | | 50 | 16,000.00 | | | | | 0.38 | | 4.4 | 10 | 7.5 | | | | |
| 6/23/2014 | 15,000.00 | 25 | 0.661 | 42 | 15,000.00 | | 4.2 | 4.12 | 0.19 | 2.48 | 0.37 | 8.62 | 10 | 10.5 | | | 7.5 | |
| 6/24/2014 | 14,000.00 | | | 46 | 14,000.00 | | | | | 0.47 | | 12 | 10.5 | 7.2 | | | | |
| 6/25/2014 | 13,000.00 | | | 61 | 13,000.00 | | | | | 0.36 | | 6.8 | 11 | 7.5 | | | | |
| 6/26/2014 | 13,000.00 | | | 78 | 13,000.00 | | | | | 0.59 | | 7.2 | 11 | 7.1 | | | | |
| 6/27/2014 | 12,500.00 | | | 75 | 12,500.00 | | | | | 0.48 | | 7.2 | 11.5 | 7.4 | | | | |
| 6/28/2014 | 12,167.00 | | | 64 | 12,167.00 | 165 | | | | 0.31 | | 4.4 | 11.5 | 7.6 | | | | |
| 6/29/2014 | 11,858.00 | | | 68 | 11,858.00 | 164 | | | | 0.37 | | 6.8 | 11.5 | 7.6 | | | | |
| 6/30/2014 | 12,481.00 | | | 83 | 12,481.00 | 172 | | | | | | | | | | | | |
| Total | 474,308.00 | | | | 440,501.00 | | | | | | | | | | | 33,807.00 | | |
| Average | 15,810.27 | 23.75 | 0.78 | 85.43 | 14,683.37 | 180.29 | 3.45 | 3.45 | 0.18 | 2.59 | 0.37 | 9.21 | 7.61 | 10.05 | 7.40 | 155.67 | 0.00 | |
| Minimum | 9,837.00 | 6.00 | 0.47 | 34.00 | 9,837.00 | 142.00 | 2.40 | 0.41 | 0.17 | 1.86 | 0.20 | 8.62 | 1.20 | 9.00 | 7.00 | 41.00 | 137.00 | |
| Maximum | 31,779.00 | 34.00 | 1.07 | 675.00 | 21,000.00 | 260.00 | 4.20 | 5.22 | 0.19 | 3.81 | 0.59 | 9.80 | 16.40 | 11.50 | 7.80 | 980.00 | 12,579.00 | |
| Count | 30 | 4 | 4 | 30 | 30 | 14 | 4 | 4 | 4 | 4 | 30 | 2 | 30 | 30 | 30 | 4 | 7 | |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | | | Bypass Volume (m3) |
|-----------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|-----------------|-------------------------|-------------------------|--------------|-----------------|------|-----------------------|--------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N(mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | pH | E. Coll. (cfu/100 mL) | |
| 7/1/2014 | 11,613.00 | 34 | 1.11 | 85 | 11,613.00 | 154 | 2.4 | 3.88 | 0.186 | 2.19 | 0.39 | | 6.4 | 12 | 7.6 | 7 | |
| 7/2/2014 | 10,727.00 | | | 76 | 10,727.00 | 144 | | | | | 0.41 | | 5.2 | 12 | 7.5 | | |
| 7/3/2014 | 9,934.00 | | | 74 | 9,934.00 | 139 | | | | | 0.37 | | 8 | 12 | 7.5 | | |
| 7/4/2014 | 9,668.00 | | | 107 | 9,668.00 | 136 | | | | | 0.31 | | 14.4 | 12 | 7.6 | | |
| 7/5/2014 | 9,826.00 | | | 84 | 9,826.00 | 134 | | | | | 0.34 | | 10.8 | 12 | 7.5 | | |
| 7/6/2014 | 9,323.00 | | | 65 | 9,323.00 | 128 | | | | | 0.37 | | 13.2 | 12.5 | 7.5 | 5 | |
| 7/7/2014 | 9,143.00 | 19 | 1.31 | 101 | 9,143.00 | 130 | 3.4 | 3.19 | 0.224 | 3.67 | 0.3 | | 9.6 | 12.5 | 7.6 | | |
| 7/8/2014 | 9,020.00 | | | 90 | 9,020.00 | 129 | | | | | 0.26 | | 6 | 12.5 | 7.5 | | |
| 7/9/2014 | 8,589.00 | | | 87 | 8,589.00 | 127 | | | | | 0.25 | | 4.8 | 12.5 | 7.5 | | |
| 7/10/2014 | 8,210.00 | | | 151 | 8,210.00 | 124 | | | | | 0.29 | | 5.6 | 13 | 7.5 | | |
| 7/11/2014 | 8,850.00 | | | 61 | 8,850.00 | 137 | | | | | 0.24 | | 7.2 | 13 | 7.6 | 47 | |
| 7/12/2014 | 8,872.00 | | | 121 | 8,872.00 | 124 | | | | | 0.26 | | 8.4 | 13 | 7.6 | | |
| 7/13/2014 | 8,570.00 | | | 87 | 8,570.00 | 121 | | | | | 0.41 | | 3.5 | 13 | 7.4 | | |
| 7/14/2014 | 9,703.00 | | | 166 | 9,703.00 | 138 | | | | | 0.43 | | 9.2 | 13 | 7.5 | | |
| 7/15/2014 | 9,378.00 | 51 | 1.39 | 155 | 9,378.00 | 140 | 2.8 | 0.77 | 0.147 | 5.63 | 0.36 | | 9.6 | 13 | 7.6 | | |
| 7/16/2014 | 8,560.00 | | | 171 | 8,560.00 | 123 | | | | | 0.31 | | 5.2 | 13 | 7.5 | 13 | |
| 7/17/2014 | 8,082.00 | | | 151 | 8,082.00 | 117 | | | | | 0.43 | | 6.4 | 13 | 7.1 | | |
| 7/18/2014 | 7,736.00 | | | 191 | 7,736.00 | 112 | | | | | 0.28 | | 4.8 | 13.5 | 7.1 | | |
| 7/19/2014 | 7,952.00 | | | 126 | 7,952.00 | 117 | | | | | 0.4 | | 7.2 | 13.5 | 7.2 | | |
| 7/20/2014 | 7,515.00 | 40 | 1.38 | 97 | 7,515.00 | 108 | 2 | 0.107 | 0.02 | 5.04 | 0.28 | 5.8 | 5.6 | 13.5 | 7.3 | | |
| 7/21/2014 | 7,255.00 | | | 156 | 7,255.00 | 110 | | | | | 0.35 | | 4 | 14 | 7.2 | 10 | |
| 7/22/2014 | 13,527.00 | | | 96 | 13,527.00 | 193 | | | | | 0.53 | | 9.6 | 14 | 7.4 | | |
| 7/23/2014 | 10,847.00 | | | 71 | 10,847.00 | 150 | | | | | 0.44 | | 8 | 14 | 7.1 | | |
| 7/24/2014 | 9,745.00 | | | 88 | 9,745.00 | 135 | | | | | 0.39 | | 7.2 | 14 | 7.6 | | |
| 7/25/2014 | 9,199.00 | | | 70 | 9,199.00 | 130 | | | | | 0.26 | | 9.2 | 14 | 7.8 | | |
| 7/26/2014 | 8,605.00 | | | 76 | 8,605.00 | 123 | | | | | 0.3 | | 6.4 | 14 | 7.8 | 10 | |
| 7/27/2014 | 8,503.00 | | | 87 | 8,503.00 | 121 | | | | | 0.34 | | 5.2 | 14 | 7.7 | | |
| 7/28/2014 | 8,131.00 | 52 | 1.44 | 94 | 8,131.00 | 125 | 2 | 0.308 | 0.128 | 7.13 | 0.31 | | 5.2 | 14.5 | 7.6 | | |
| 7/29/2014 | 7,901.00 | | | 125 | 7,901.00 | 114 | | | | | 0.45 | | 12 | 14.5 | 7.7 | | |
| 7/30/2014 | 7,652.00 | | | 115 | 7,652.00 | 115 | | | | | 0.32 | | 5.6 | 14.5 | 7.7 | | |
| 7/31/2014 | 7,419.00 | | | 115 | 7,419.00 | 110 | | | | | 0.18 | | 6.4 | 14.5 | 7.7 | | |
| Total | 280,055.00 | | | | 280,055.00 | 129.29 | 2.52 | 1.65 | 0.14 | 4.73 | 0.34 | 5.80 | 7.42 | 13.24 | 7.50 | 11.64 | 0.00 |
| Average | 9,034.03 | 39.20 | 1.33 | 107.47 | 9,034.03 | 108.00 | 2.00 | 0.11 | 0.02 | 2.19 | 0.18 | 5.80 | 3.50 | 12.00 | 7.10 | 5.00 | 0.00 |
| Minimum | 7,255.00 | 19.00 | 1.11 | 61.00 | 7,255.00 | 193.00 | 3.40 | 3.88 | 0.22 | 7.13 | 0.53 | 5.80 | 14.40 | 14.50 | 7.80 | 47.00 | 0.00 |
| Maximum | 13,527.00 | 52.00 | 1.44 | 191.00 | 13,527.00 | 193.00 | 5 | 5 | 5 | 5 | 31 | 1 | 31 | 31 | 31 | 5 | 0 |
| Count | 31 | 5 | 5 | 30 | 31 | 31 | 5 | 5 | 5 | 5 | 31 | 1 | 31 | 31 | 31 | 5 | 0 |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | | | Bypass Volume (m3) |
|-----------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|-----------------|-------------------------|-------------------------|--------------|-----------------|------|-----------------------|--------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N(mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | pH | E. Coll. (cfu/100 mL) | |
| 8/1/2014 | 7,079.00 | | | 155 | 7,079.00 | 108 | | | | | 0.33 | | 6.4 | 14.5 | 7.7 | | |
| 8/2/2014 | 6,938.00 | | | 172 | 6,938.00 | 102 | | | | | 0.36 | | 5.2 | 14.5 | 7.6 | | |
| 8/3/2014 | 6,763.00 | | | 187 | 6,763.00 | 99 | | | | | 0.32 | | 7.2 | 14.5 | 7.7 | | |
| 8/4/2014 | 6,746.00 | | | 127 | 6,746.00 | 99 | | | | | 0.42 | 13.6 | 14 | 14.5 | 7.7 | | |
| 8/5/2014 | 6,670.00 | 55 | 1.8 | 91 | 6,670.00 | 102 | 2 | 0.052 | 0.024 | 6.23 | 0.21 | | 7.2 | 15 | 7.7 | 8 | |
| 8/6/2014 | 6,495.00 | | | 71 | 6,495.00 | 99 | | | | | 0.26 | | 4 | 15 | 7.6 | | |
| 8/7/2014 | 6,410.00 | | | 121 | 6,410.00 | 97 | | | | | 0.28 | | 2.4 | 15 | 7.6 | | |
| 8/8/2014 | 6,235.00 | | | 138 | 6,235.00 | 96 | | | | | 0.35 | | 3.6 | 15 | 7.7 | | |
| 8/9/2014 | 6,085.00 | | | 136 | 6,085.00 | 95 | | | | | 0.38 | | 2.8 | 15.5 | 7.6 | | |
| 8/10/2014 | 6,513.00 | | | 153 | 6,513.00 | 99 | | | | | 0.21 | | 3.2 | 15.5 | 7.6 | | |
| 8/11/2014 | 6,302.00 | 62 | 1.88 | 142 | 6,302.00 | 95 | 2 | 0.034 | 0.02 | 6.47 | 0.48 | | 2.8 | 15.5 | 7.7 | 22 | |
| 8/12/2014 | 6,348.00 | | | 214 | 6,348.00 | 100 | | | | | 0.25 | | 6.4 | 15.5 | 7.6 | | |
| 8/13/2014 | 6,254.00 | | | 163 | 6,254.00 | 96 | | | | | 0.26 | | 4.4 | 15.5 | 7.5 | | |
| 8/14/2014 | 6,266.00 | | | 136 | 6,266.00 | 99 | | | | | 0.33 | | 4 | 15.5 | 7.5 | | |
| 8/15/2014 | 5,897.00 | | | 150 | 5,897.00 | 93 | | | | | 0.23 | | 8 | 16 | 7.7 | | |
| 8/16/2014 | 5,680.00 | | | 132 | 5,680.00 | 95 | | | | | 0.18 | | 6 | 16 | 7.7 | | |
| 8/17/2014 | 5,841.00 | 69 | 1.96 | 128 | 5,841.00 | 90 | 2 | 0.108 | 0.02 | 6.27 | 0.16 | 3.1 | 4.8 | 16 | 7.7 | 1 | |
| 8/18/2014 | 6,011.00 | | | 135 | 6,011.00 | 92 | | | | | 0.15 | | 3.6 | 16 | 7.6 | | |
| 8/19/2014 | 6,068.00 | | | 114 | 6,068.00 | 93 | | | | | 0.16 | | 1.2 | 16 | 7.5 | | |
| 8/20/2014 | 5,770.00 | | | 160 | 5,770.00 | 89 | | | | | 0.3 | | 3.6 | 16 | 7.5 | | |
| 8/21/2014 | 5,842.00 | | | 148 | 5,842.00 | 92 | | | | | 0.31 | | 5.2 | 16 | 7.6 | | |
| 8/22/2014 | 5,573.00 | | | 136 | 5,573.00 | 86 | | | | | 0.27 | | 4 | 15.5 | 7.5 | | |
| 8/23/2014 | 5,675.00 | | | 137 | 5,675.00 | 88 | | | | | 0.24 | | 4.4 | 15.5 | 7.6 | | |
| 8/24/2014 | 5,783.00 | | | 147 | 5,783.00 | 94 | | | | | 0.27 | | 2 | 16 | 7.5 | | |
| 8/25/2014 | 5,716.00 | 57 | 1.85 | 118 | 5,716.00 | 86 | 2 | 0.065 | 0.02 | 6.73 | 0.21 | | 3.6 | 16 | 7.6 | 12 | |
| 8/26/2014 | 5,796.00 | | | 178 | 5,796.00 | 91 | | | | | 0.23 | | 3.5 | 16 | 7.7 | | |
| 8/27/2014 | 5,668.00 | | | 151 | 5,668.00 | 92 | | | | | 0.2 | | 6.4 | 16 | 7.6 | | |
| 8/28/2014 | 5,696.00 | | | 215 | 5,696.00 | 90 | | | | | 0.39 | | 3.2 | 16.5 | 7.6 | | |
| 8/29/2014 | 5,688.00 | | | 202 | 5,688.00 | 88 | | | | | 0.28 | | 3.6 | 16.5 | 7.6 | | |
| 8/30/2014 | 5,419.00 | | | 191 | 5,419.00 | 91 | | | | | 0.35 | | 3.6 | 16 | 7.5 | | |
| 8/31/2014 | 5,832.00 | | | | 5,832.00 | 129 | | | | | | | | | | | |
| Total | 189,059.00 | | | | 189,059.00 | 95.65 | 2.00 | 0.06 | 0.02 | 6.43 | 0.28 | 8.35 | 4.68 | 15.57 | 7.61 | 6.78 | 0.00 |
| Average | 6,098.68 | 60.75 | 1.87 | 148.27 | 6,098.68 | 86.00 | 2.00 | 0.03 | 0.02 | 6.23 | 0.15 | 3.10 | 1.20 | 14.50 | 7.50 | 1.00 | 0.00 |
| Minimum | 5,419.00 | 55.00 | 1.80 | 71.00 | 5,419.00 | 86.00 | 2.00 | 0.03 | 0.02 | 6.23 | 0.15 | 3.10 | 1.20 | 14.50 | 7.50 | 1.00 | 0.00 |
| Maximum | 7,079.00 | 69.00 | 1.96 | 215.00 | 7,079.00 | 129.00 | 2.00 | 0.11 | 0.02 | 6.73 | 0.48 | 13.60 | 14.00 | 16.50 | 7.70 | 22.00 | 0.00 |
| Count | 31 | 4 | 4 | 30 | 31 | 31 | 4 | 4 | 4 | 4 | 30 | 2 | 30 | 30 | 30 | 4 | 0 |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | | | |
|-----------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|------------------|-------------------------|-------------------------|--------------|-----------------|------|-----------------------|--------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N (mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | pH | E. Coll. (cfu/100 mL) | Bypass Volume (m3) |
| 9/1/2014 | 5,698.00 | | | 149 | 5,698.00 | 92 | 2 | 0.263 | 0.116 | 7.88 | 0.32 | 2.7 | 3.2 | 16 | 7.5 | | |
| 9/2/2014 | 5,802.00 | | | 186 | 5,802.00 | 99 | | | | | 0.36 | | 3.6 | 16.5 | 7.4 | 61 | |
| 9/3/2014 | 5,759.00 | | | 153 | 5,759.00 | 94 | | | | | 0.26 | | 4 | 16.5 | 7.6 | | |
| 9/4/2014 | 5,852.00 | | | 136 | 5,852.00 | 100 | | | | | 0.26 | | 4 | 16.5 | 7.5 | | |
| 9/5/2014 | 5,642.00 | | | 135 | 5,642.00 | 93 | | | | | 0.25 | | 2.4 | 16 | 7.7 | | |
| 9/6/2014 | 5,518.00 | | | 102 | 5,518.00 | 88 | 2 | 0.156 | 0.028 | 5.87 | 0.28 | | 2 | 16.5 | 7.5 | | |
| 9/7/2014 | 5,463.00 | 66 | 2.02 | 160 | 5,463.00 | 91 | | | | | 0.46 | | 2.8 | 16.5 | 7.3 | 6 | |
| 9/8/2014 | 5,561.00 | | | 143 | 5,561.00 | 99 | | | | | 0.33 | | 3.4 | 16 | 7.6 | | |
| 9/9/2014 | 5,776.00 | | | 132 | 5,776.00 | 99 | | | | | 0.38 | | 3.2 | 16 | 7.7 | | |
| 9/10/2014 | 5,851.00 | | | 147 | 5,851.00 | 154 | | | | | 0.33 | | 3.6 | 16 | 7.6 | | |
| 9/11/2014 | 5,667.00 | | | 137 | 5,667.00 | 124 | | | | | 0.31 | | 3.5 | 16 | 7.7 | | |
| 9/12/2014 | 5,603.00 | | | 127 | 5,603.00 | 93 | | | | | 0.27 | | 4 | 16 | 7.7 | | |
| 9/13/2014 | 5,675.00 | | | 114 | 5,675.00 | 96 | | | | | 0.39 | | 6 | 16 | 7.5 | | |
| 9/14/2014 | 5,980.00 | | | 226 | 5,980.00 | 92 | 2 | 0.097 | 0.074 | 4.76 | 0.28 | 3.8 | 2.4 | 16 | 7.7 | | |
| 9/15/2014 | 5,595.00 | 73 | 2.11 | 111 | 5,595.00 | 98 | | | | | 0.23 | | 4.4 | 16 | 7.6 | 144 | |
| 9/16/2014 | 5,462.00 | | | 126 | 5,462.00 | 91 | | | | | 0.53 | | 7.6 | 16 | 7.5 | | |
| 9/17/2014 | 5,345.00 | | | 130 | 5,345.00 | 86 | | | | | 0.41 | | 2.4 | 16 | 7.5 | | |
| 9/18/2014 | 5,376.00 | | | 158 | 5,376.00 | 107 | | | | | 0.42 | | 2 | 16 | 7.4 | | |
| 9/19/2014 | 5,561.00 | | | 104 | 5,561.00 | 144 | | | | | 0.48 | | 3.2 | 16 | 7.3 | | |
| 9/20/2014 | 6,401.00 | | | 105 | 6,401.00 | 145 | | | | | 0.41 | | 2 | 16 | 7.5 | | |
| 9/21/2014 | 6,051.00 | | | 113 | 6,051.00 | 101 | | | | | 0.29 | | 2 | 16 | 7.7 | | |
| 9/22/2014 | 5,645.00 | | | 95 | 5,645.00 | 104 | 2 | 1.01 | 0.23 | 5.76 | 0.42 | | 2 | 16.5 | 7.5 | | |
| 9/23/2014 | 5,659.00 | 63 | 1.8 | 104 | 5,659.00 | 103 | | | | | 0.42 | | 3.6 | 16.5 | 7.5 | 13 | |
| 9/24/2014 | 5,696.00 | | | 113 | 5,696.00 | 92 | | | | | 0.27 | | 3.6 | 16.5 | 7.9 | | |
| 9/25/2014 | 5,530.00 | | | 82 | 5,530.00 | 91 | | | | | 0.36 | | 2 | 16.5 | 7.8 | | |
| 9/26/2014 | 5,275.00 | | | 90 | 5,275.00 | 97 | | | | | 0.4 | | 1.6 | 16.5 | 7.6 | | |
| 9/27/2014 | 5,228.00 | | | 111 | 5,228.00 | 95 | | | | | 0.41 | | 1.2 | 16 | 7.7 | | |
| 9/28/2014 | 5,727.00 | | | 139 | 5,727.00 | 96 | 2 | 0.486 | 0.147 | 6.4 | 0.39 | 2.3 | 0.4 | 16 | 7.4 | 2 | |
| 9/29/2014 | 5,830.00 | 70 | 2.38 | 143 | 5,830.00 | 95 | | | | | 0.31 | | 2.8 | 16.5 | 7.4 | | |
| 9/30/2014 | 5,836.00 | | | | 5,836.00 | 100 | | | | | | | | | | | |
| Total | 170,064.00 | | | | 170,064.00 | | | | | | | | | | | | 0.00 |
| Average | 5,668.80 | 68.00 | 2.08 | 130.03 | 5,668.80 | 101.73 | 2.00 | 0.40 | 0.12 | 6.13 | 0.35 | 2.93 | 3.07 | 16.19 | 7.56 | 16.88 | 0.00 |
| Minimum | 5,228.00 | 63.00 | 1.80 | 82.00 | 5,228.00 | 86.00 | 2.00 | 0.10 | 0.03 | 4.76 | 0.23 | 2.30 | 0.40 | 16.00 | 7.30 | 2.00 | 0.00 |
| Maximum | 6,401.00 | 73.00 | 2.38 | 226.00 | 6,401.00 | 154.00 | 2.00 | 1.01 | 0.23 | 7.88 | 0.53 | 3.80 | 7.60 | 16.50 | 7.90 | 144.00 | 0.00 |
| Count | 30 | 4 | 4 | 29 | 30 | 30 | 5 | 5 | 5 | 5 | 29 | 3 | 29 | 29 | 29 | 5 | 0 |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | Final Effluent | | Bypass Volume (m3) |
|------------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|------------------|-------------------------|-------------------------|--------------|-----------------|----------------|-----------------------|--------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N (mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | PH | E. Coll. (cfu/100 mL) | |
| 10/1/2014 | 5,877.00 | | | 145 | 5,877.00 | 100 | | | | | 0.33 | | 1.2 | 16 | 7.3 | | |
| 10/2/2014 | 5,652.00 | | | 122 | 5,652.00 | 94 | | | | | 0.31 | | 0.4 | 16 | 7.4 | | |
| 10/3/2014 | 5,815.00 | | | 137 | 5,815.00 | 99 | | | | | 0.32 | | 2 | 16 | 7.4 | | |
| 10/4/2014 | 5,826.00 | | | 147 | 5,826.00 | 101 | | | | | 0.35 | | 2 | 16 | 7.4 | | |
| 10/5/2014 | 6,069.00 | | | 136 | 6,069.00 | 99 | | | | | 0.35 | | 3.6 | 15.5 | 7.5 | | |
| 10/6/2014 | 5,896.00 | | | 106 | 5,896.00 | 102 | 2 | 0.697 | 0.147 | 6.45 | 0.22 | | 3.2 | 15.5 | 7.5 | | |
| 10/7/2014 | 5,700.00 | 54 | 1.79 | 138 | 5,700.00 | 94 | | | | | 0.27 | | 0.4 | 15.5 | 7.4 | 14 | |
| 10/8/2014 | 5,656.00 | | | 233 | 5,656.00 | 93 | | | | | 0.37 | | 6.8 | 15.5 | 7.2 | | |
| 10/9/2014 | 5,562.00 | | | 170 | 5,562.00 | 98 | | | | | 0.49 | | 4 | 15.5 | 7.2 | | |
| 10/10/2014 | 5,513.00 | | | 136 | 5,513.00 | 94 | | | | | 0.24 | | 2.4 | 15 | 7.3 | | |
| 10/11/2014 | 5,567.00 | | | 134 | 5,567.00 | 97 | | | | | 0.3 | | 7.2 | 15 | 7.3 | | |
| 10/12/2014 | 5,424.00 | | | | 5,424.00 | 90 | | | | | | | | | | | |
| 10/13/2014 | 5,450.00 | | | | 5,450.00 | 95 | 2 | 0.581 | 0.145 | 5.05 | 0.27 | 4.2 | 4.2 | 15.5 | 7.5 | 6 | |
| 10/14/2014 | 5,477.00 | 70 | 2.18 | 121 | 5,477.00 | 93 | | | | | 0.3 | | 4.8 | 15.5 | 7.5 | | |
| 10/15/2014 | 5,499.00 | | | 118 | 5,499.00 | 90 | | | | | 0.37 | | 4.4 | 15.5 | 7.3 | | |
| 10/16/2014 | 5,526.00 | | | 125 | 5,526.00 | 90 | | | | | 0.16 | | 6 | 15 | 7.4 | | |
| 10/17/2014 | 5,414.00 | | | 124 | 5,414.00 | 92 | | | | | 0.19 | | 8.8 | 15 | 7.4 | | |
| 10/18/2014 | 5,497.00 | | | 119 | 5,497.00 | 93 | | | | | 0.18 | | 1.2 | 15 | 7.8 | | |
| 10/19/2014 | 5,489.00 | | | 114 | 5,489.00 | 91 | | | | | 0.16 | | 1.6 | 15 | 7.5 | 1 | |
| 10/20/2014 | 5,314.00 | 68 | 2.1 | 112 | 5,314.00 | 90 | 2.2 | 0.593 | 0.02 | 0.03 | 0.3 | | 9.6 | 15 | 7.5 | | |
| 10/21/2014 | 5,303.00 | | | 91 | 5,303.00 | 89 | | | | | 0.27 | | 5.2 | 15 | 7.5 | | |
| 10/22/2014 | 5,428.00 | | | 114 | 5,428.00 | 90 | | | | | 0.24 | | 2.8 | 14.5 | 7.5 | | |
| 10/23/2014 | 5,298.00 | | | 133 | 5,298.00 | 91 | | | | | 0.29 | | 3.6 | 15 | 7.4 | | |
| 10/24/2014 | 5,253.00 | | | 148 | 5,253.00 | 86 | | | | | 0.29 | | 2 | 15 | 7.4 | | |
| 10/25/2014 | 5,335.00 | | | 127 | 5,335.00 | 94 | | | | | 0.25 | | 4 | 15 | 7.5 | | |
| 10/26/2014 | 5,384.00 | | | 149 | 5,384.00 | 94 | | | | | 0.25 | | 2 | 15 | 7.4 | | |
| 10/27/2014 | 5,374.00 | 78 | 2.17 | 111 | 5,374.00 | 91 | 2 | 0.136 | 0.04 | 7.15 | 0.27 | 2 | 4.4 | 15 | 7.4 | 7 | |
| 10/28/2014 | 5,529.00 | | | 125 | 5,529.00 | 93 | | | | | 0.25 | | 1.6 | 14.5 | 7.7 | | |
| 10/29/2014 | 5,270.00 | | | 139 | 5,270.00 | 91 | | | | | 0.2 | | 4 | 14 | 7.5 | | |
| 10/30/2014 | 5,224.00 | | | 125 | 5,224.00 | 93 | | | | | 0.26 | | 4.4 | 14 | 7.5 | | |
| 10/31/2014 | 5,156.00 | | | 124 | 5,156.00 | 91 | | | | | 0.37 | | | | | | |
| Total | 170,767.00 | | | | 170,767.00 | 93.48 | 2.05 | 0.50 | 0.09 | 4.67 | 0.28 | 3.10 | 3.72 | 15.17 | 7.43 | 4.92 | 0.00 |
| Average | 5,508.61 | 67.50 | 2.06 | 131.83 | 5,508.61 | 86.00 | 2.00 | 0.14 | 0.02 | 0.03 | 0.16 | 2.00 | 0.40 | 14.00 | 7.20 | 1.00 | 0.00 |
| Minimum | 5,156.00 | 54.00 | 1.79 | 91.00 | 5,156.00 | 102.00 | 2.20 | 0.70 | 0.15 | 7.15 | 0.49 | 4.20 | 9.60 | 16.00 | 7.80 | 14.00 | 0.00 |
| Maximum | 6,069.00 | 78.00 | 2.18 | 233.00 | 6,069.00 | 31 | 4 | 4 | 4 | 4 | 29 | 2 | 29 | 29 | 29 | 4 | 0 |
| Count | 31 | 4 | 4 | 29 | 31 | 31 | 4 | 4 | 4 | 4 | 29 | 2 | 29 | 29 | 29 | 4 | 0 |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | Bypass Volume (m3) | | |
|------------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|-----------------|-------------------------|-------------------------|--------------|-----------------|--------------------|-------|-----------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N(mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | | pH | E. Coll. (cfu/100 mL) |
| 11/1/2014 | 5,426.00 | | | 117 | 5,426.00 | 95 | | | | | 0.22 | | 1.2 | 14 | 7.4 | | |
| 11/2/2014 | 5,522.00 | | | 143 | 5,522.00 | 94 | | | | | 0.15 | | 2 | 14 | 7.4 | | |
| 11/3/2014 | 5,274.00 | 85 | 2.4 | 155 | 5,274.00 | 96 | | 0.075 | 0.04 | 7.53 | 0.25 | | 2.4 | 14.5 | 7.6 | 7 | |
| 11/4/2014 | 5,195.00 | | | 115 | 5,195.00 | 100 | | | | | 0.22 | | 2 | 14 | 7.4 | | |
| 11/5/2014 | 5,150.00 | | | 138 | 5,150.00 | 93 | | | | | 0.18 | | 3.2 | 14 | 7.5 | | |
| 11/6/2014 | 5,115.00 | | | 146 | 5,115.00 | 94 | | | | | 0.2 | | 4 | 14 | 7.5 | | |
| 11/7/2014 | 5,198.00 | | | 115 | 5,198.00 | 91 | | | | | 0.19 | | 4.4 | 14 | 7.5 | | |
| 11/8/2014 | 5,172.00 | | | 112 | 5,172.00 | 91 | | | | | 0.24 | | 4.8 | 13.5 | 7.5 | | |
| 11/9/2014 | 5,315.00 | | | 110 | 5,315.00 | 93 | | | | | 0.31 | | 4 | 13.5 | 7.5 | | |
| 11/10/2014 | 5,126.00 | | | | 5,126.00 | 87 | | | | | | | | | | | |
| 11/11/2014 | 5,099.00 | 89 | 2.22 | 175 | 5,099.00 | 87 | 4.2 | 0.185 | 0.04 | 6.37 | 0.23 | 3.6 | 6.8 | 13 | 7.5 | 6 | |
| 11/12/2014 | 5,104.00 | | | 229 | 5,104.00 | 88 | | | | | 0.21 | | 3.6 | 13 | 7.5 | | |
| 11/13/2014 | 5,066.00 | | | 137 | 5,066.00 | 88 | | | | | 0.29 | | 4.8 | 13 | 7.3 | | |
| 11/14/2014 | 4,986.00 | | | 135 | 4,986.00 | 86 | | | | | 0.21 | | 2.8 | 13 | 7.1 | | |
| 11/15/2014 | 5,239.00 | | | 166 | 5,239.00 | 94 | | | | | 0.25 | | 3.2 | 13 | 7.2 | | |
| 11/16/2014 | 5,335.00 | 94 | 2.44 | 194 | 5,335.00 | 88 | 4.3 | 0.118 | 0.045 | 5.1 | 0.17 | | 5.2 | 13 | 7.4 | 12 | |
| 11/17/2014 | 5,124.00 | | | 135 | 5,124.00 | 88 | | | | | 0.43 | | 4.8 | 13 | 7.2 | | |
| 11/18/2014 | 4,958.00 | | | 115 | 4,958.00 | 89 | | | | | 0.22 | | 4.4 | 12.5 | 7.2 | | |
| 11/19/2014 | 5,029.00 | | | 131 | 5,029.00 | 137 | | | | | 0.34 | | 5.2 | 12.5 | 7 | | |
| 11/20/2014 | 5,035.00 | | | 154 | 5,035.00 | 90 | | | | | 0.27 | | 4.8 | 12.5 | 7.1 | | |
| 11/21/2014 | 5,085.00 | | | 128 | 5,085.00 | 96 | | | | | 0.14 | | 5.6 | 12.5 | 7.1 | | |
| 11/22/2014 | 5,013.00 | | | 142 | 5,013.00 | 91 | | | | | 0.14 | | 4.4 | 12.5 | 7.1 | | |
| 11/23/2014 | 5,045.00 | | | 90 | 5,045.00 | 88 | | | | | 0.16 | | 4.8 | 12.5 | 7.7 | | |
| 11/24/2014 | 5,069.00 | 71 | 2.13 | 112 | 5,069.00 | 83 | 2 | 0.227 | 0.04 | 6.55 | 0.12 | 4.2 | 4 | 12 | 7.4 | 55 | |
| 11/25/2014 | 5,065.00 | | | 193 | 5,065.00 | 91 | | | | | 0.2 | | 4.8 | 12 | 7.2 | | |
| 11/26/2014 | 5,022.00 | | | 130 | 5,022.00 | 90 | | | | | 0.33 | | 10.4 | 11.5 | 7.1 | | |
| 11/27/2014 | 5,085.00 | | | 128 | 5,085.00 | 90 | | | | | 0.26 | | 4.8 | 11.5 | 7 | | |
| 11/28/2014 | 5,006.00 | | | 122 | 5,006.00 | 86 | | | | | 0.23 | | 4.4 | 11.5 | 7.1 | | |
| 11/29/2014 | 4,989.00 | | | 131 | 4,989.00 | 88 | | | | | 0.16 | | 5.6 | 11.5 | 7.1 | | |
| 11/30/2014 | 5,053.00 | | | 142 | 5,053.00 | 89 | | | | | 0.16 | | 3.2 | 11 | 7.5 | | |
| Total | 153,900.00 | | | | 153,900.00 | 92.03 | 3.13 | 0.15 | 0.04 | 6.39 | 0.22 | 3.90 | 4.33 | 12.84 | 7.31 | 12.90 | 0.00 |
| Average | 5,130.00 | 84.75 | 2.30 | 139.31 | 5,130.00 | 83.00 | 2.00 | 0.08 | 0.04 | 5.10 | 0.12 | 3.60 | 1.20 | 11.00 | 7.00 | 6.00 | 0.00 |
| Minimum | 4,958.00 | 71.00 | 2.13 | 90.00 | 4,958.00 | 83.00 | 2.00 | 0.08 | 0.04 | 5.10 | 0.12 | 3.60 | 1.20 | 11.00 | 7.00 | 6.00 | 0.00 |
| Maximum | 5,522.00 | 94.00 | 2.44 | 229.00 | 5,522.00 | 137.00 | 4.30 | 0.23 | 0.05 | 7.53 | 0.43 | 4.20 | 10.40 | 14.50 | 7.70 | 55.00 | 0.00 |
| Count | 30 | 4 | 4 | 29 | 30 | 30 | 4 | 4 | 4 | 4 | 29 | 2 | 29 | 29 | 29 | 4 | 0 |

Fort Frances Wastewater Treatment Plant
Monthly Operations Summary

| 2014 | Raw Sewage | | | | Final Effluent | | | | | | | | | | | | Bypass Volume (m3) |
|------------|----------------------|--------------|-------------------------|--------------|-----------------------------|-----------------------------|--------------|-----------------------|--------------------|-----------------|-------------------------|-------------------------|--------------|-----------------|------|-----------------------|--------------------|
| | Raw Flow: Sum (m3/d) | CBOD5 (mg/L) | Total Phosphorus (mg/L) | SS (mg/L) IH | Final Eff. Flow: Sum (m3/d) | Final Eff. Flow: Max. (L/s) | CBOD5 (mg/L) | NH3 + NH4 as N (mg/L) | Nitrite - N (mg/L) | Nitrate-N(mg/L) | Total Phosphorus (mg/L) | Suspended Solids (mg/L) | SS (mg/L) IH | Temperature (C) | pH | E. Coll. (cfu/100 mL) | |
| 12/1/2014 | 5,179.00 | 65 | 2.13 | 98 | 5,179.00 | 95 | 2 | 0.292 | 0.08 | 5.94 | 0.18 | | 2.8 | 11.5 | 7.1 | | |
| 12/2/2014 | 5,320.00 | | | 143 | 5,320.00 | 92 | | | | | 0.23 | | 5.6 | 11.5 | 7.3 | 37 | |
| 12/3/2014 | 5,119.00 | | | 122 | 5,119.00 | 93 | | | | | 0.16 | | 2.8 | 11 | 7.4 | | |
| 12/4/2014 | 5,176.00 | | | 151 | 5,176.00 | 94 | | | | | 0.24 | | 8.8 | 11 | 7.3 | | |
| 12/5/2014 | 4,920.00 | | | 146 | 4,920.00 | 86 | | | | | 0.21 | | 4 | 11 | 7.3 | | |
| 12/6/2014 | 4,907.00 | | | 103 | 4,907.00 | 86 | | | | | 0.17 | | 4.8 | 11 | 7.4 | | |
| 12/7/2014 | 5,032.00 | | | 114 | 5,032.00 | 85 | | | | | 0.24 | | 6.4 | 11 | 7.4 | | |
| 12/8/2014 | 4,888.00 | | | 161 | 4,888.00 | 88 | | | | | 0.22 | | 3.6 | 11 | 7.3 | | |
| 12/9/2014 | 4,903.00 | 83 | 2.81 | 137 | 4,903.00 | 87 | | 0.097 | 0.05 | 5.69 | 0.2 | 3.1 | 3.6 | 11 | 7.3 | 12 | |
| 12/10/2014 | 4,901.00 | | | 152 | 4,901.00 | 90 | | | | | 0.29 | | 3.6 | 11 | 7.1 | | |
| 12/11/2014 | 5,034.00 | | | 151 | 5,034.00 | 88 | | | | | 0.21 | | 4.8 | 11 | 7.2 | | |
| 12/12/2014 | 4,830.00 | | | 141 | 4,830.00 | 79 | | | | | 0.16 | | 2.8 | 11 | 7 | | |
| 12/13/2014 | 5,004.00 | | | 131 | 5,004.00 | 87 | | | | | 0.16 | | 2.4 | 11 | 7.3 | | |
| 12/14/2014 | 5,284.00 | | | 150 | 5,284.00 | 86 | | | | | 0.16 | | 3.6 | 11 | 7.3 | | |
| 12/15/2014 | 5,290.00 | 89 | 2.33 | 126 | 5,290.00 | 93 | 2 | 0.169 | 0.162 | 5.02 | 0.16 | | 2.8 | 10.5 | 7.2 | 23 | |
| 12/16/2014 | 5,211.00 | | | 130 | 5,211.00 | 90 | | | | | 0.16 | | 3.6 | 10.5 | 7.1 | | |
| 12/17/2014 | 5,097.00 | | | 189 | 5,097.00 | 93 | | | | | 0.24 | | 9.2 | 10.5 | 7 | | |
| 12/18/2014 | 5,109.00 | | | 125 | 5,109.00 | 93 | | | | | 0.33 | | 4 | 10.5 | 6.8 | | |
| 12/19/2014 | 4,861.00 | | | 143 | 4,861.00 | 83 | | | | | 0.18 | | 2.4 | 10.5 | 6.9 | | |
| 12/20/2014 | 5,007.00 | | | 162 | 5,007.00 | 85 | | | | | 0.25 | | 4.4 | 10.5 | 7.1 | | |
| 12/21/2014 | 4,987.00 | 83 | 2.16 | 137 | 4,987.00 | 84 | 3.1 | 0.168 | 0.111 | 3.96 | 0.22 | 4.9 | 4 | 10.5 | 6.8 | 26 | |
| 12/22/2014 | 5,033.00 | | | 178 | 5,033.00 | 87 | | | | | 0.26 | | 5.6 | 11 | 7 | | |
| 12/23/2014 | 5,091.00 | | | 145 | 5,091.00 | 90 | | | | | 0.17 | | 5.6 | 10.5 | 7.2 | | |
| 12/24/2014 | 5,045.00 | | | | 5,045.00 | 93 | | | | | | | | 10.5 | | | |
| 12/25/2014 | 4,640.00 | | | 128 | 4,640.00 | 78 | | | | | 0.16 | | 3.2 | 10 | 7.1 | | |
| 12/26/2014 | 4,709.00 | | | 91 | 4,709.00 | 85 | | | | | | | | 10 | | | |
| 12/27/2014 | 4,833.00 | | | 158 | 4,833.00 | 86 | | | | | | | 4.8 | 9.5 | 7.2 | 79 | |
| 12/28/2014 | 4,837.00 | 102 | 2.56 | 138 | 4,837.00 | 92 | 3.7 | 0.433 | 0.237 | 4.71 | 0.12 | | 5.6 | 10 | 7 | | |
| 12/29/2014 | 5,086.00 | | | 138 | 5,086.00 | 89 | | | | | 0.11 | | 8.8 | 9.5 | 7.2 | | |
| 12/30/2014 | 5,276.00 | | | 128 | 5,276.00 | 92 | | | | | 0.26 | | | | | | |
| 12/31/2014 | 5,514.00 | | | | 5,514.00 | 89 | | | | | | | | | | | |
| Total | 156,123.00 | | | | 156,123.00 | 88.23 | 2.70 | 0.23 | 0.13 | 5.06 | 0.20 | 4.00 | 4.58 | 10.67 | 7.16 | 29.13 | 0.00 |
| Average | 5,036.23 | 84.40 | 2.40 | 138.50 | 5,036.23 | 78.00 | 2.00 | 0.10 | 0.05 | 3.96 | 0.11 | 3.10 | 2.40 | 9.50 | 6.80 | 12.00 | 0.00 |
| Minimum | 4,640.00 | 65.00 | 2.13 | 91.00 | 4,640.00 | 95.00 | 3.70 | 0.43 | 0.24 | 5.94 | 0.33 | 4.90 | 9.20 | 11.50 | 7.40 | 79.00 | 0.00 |
| Maximum | 5,514.00 | 102.00 | 2.81 | 189.00 | 5,514.00 | 31 | 4 | 5 | 5 | 5 | 27 | 2 | 27 | 29 | 27 | 5 | 0 |
| Count | 31 | 5 | 5 | 28 | 31 | 31 | 4 | 5 | 5 | 5 | 27 | 2 | 27 | 29 | 27 | 5 | 0 |

Biosolids Quality Report



Ontario Clean Water Agency
Monthly Process Data Report

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d_monthlyprocessrep

Municipality: Township of Fort Frances
Facility: [1103] - Fort Frances WWT
Works: [110000258] - Fort Frances WWT
Classification: Class 3 Wastewater Treatment
Receiver: Rainy River

Period: 01/01/2014 to 12/31/2014
Served Population: 9,500
Total Design Capacity(m³/day): 0

| | Jan/2014 | Feb/2014 | Mar/2014 | Apr/2014 | May/2014 | Jun/2014 | Jul/2014 | Aug/2014 | Sep/2014 | Oct/2014 | Nov/2014 | Dec/2014 | <-- Summary --> |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------------|
| Biosolids Utilization\Biosolids quality - Liquid - Biosolids Sludge Quality | | | | | | | | | | | | | |
| Hauled Vol. (m ³) | | | | | | | | | | | | | |
| Sum | 143.3 | 129.8 | 217.9 | 199.3 | 243.3 | 285.8 | 187.4 | 131.6 | 151.3 | 296.4 | 157.8 | 192.0 | 2,336.2 |
| E Coli (cfu/g) | | | | | | | | | | | | | |
| Avg | 60,700.0 | | | 16,900.0 | | | 3,400.0 | | | 11,900.0 | | | 23,225.0 |
| TKN (mg/L) | | | | | | | | | | | | | |
| Avg | 4.4 | | | 4.61 | | | 3.11 | | | | | | 4.04 |
| TS (mg/L) | | | | | | | | | | | | | |
| Avg | 12.8 | | | | | | 12.125 | | | | | | 12.28 |
| Sludge/Biosolids Handling\In-House Result - Biosolids Sludge Quality | | | | | | | | | | | | | |
| TS (mg/L) - IH | | | | | | | | | | | | | |
| Avg | 9.157 | 9.262 | 9.824 | 12.364 | 12.928 | 13.605 | 12.083 | 11.422 | 10.077 | 9.683 | 8.848 | 8.347 | 10.72 |
| Biosolids Utilization\Biosolids quality - Liquid - Biosolids Sludge Quality | | | | | | | | | | | | | |
| NH3 + NH4 as N (mg/L) | | | | | | | | | | | | | |
| Avg | 358.0 | | | 1,820.0 | | | 322.0 | | | | | | 833.333 |
| Nitrate-N (mg/L) | | | | | | | | | | | | | |
| Avg | 20.0 | | | 44.0 | | | 8.0 | | | | | | 24.0 |
| Nitrite-N (mg/L) | | | | | | | | | | | | | |
| Avg | 4.65 | | | 1.5 | | | 1.6 | | | | | | 2.583 |
| Total Phosphorus (mg/L) | | | | | | | | | | | | | |
| Avg | 18,500.0 | | | 14,400.0 | | | | | | | | | 16,450.0 |
| Biosolids Utilization\Biosolids quality - Liquid - Raw Sewage | | | | | | | | | | | | | |
| Moisture (%) | | | | | | | | | | | | | |
| Avg | 91.2 | | | 87.8 | | | 86.4 | | | 88.95 | | | 88.66 |
| Biosolids Utilization\Biosolids quality - Liquid - Biosolids Sludge Quality | | | | | | | | | | | | | |
| Aluminum:Al in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 24,200.0 | | | 26,600.0 | | | 31,800.0 | | | 33,600.0 | | | 29,050.0 |
| Antimony (Sb) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 0.95 | | | 1.07 | | | 1.3 | | | 0.97 | | | 1.073 |
| Arsenic (As) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 6.55 | | | 6.72 | | | 13.4 | | | 10.8 | | | 9.418 |
| Barium (Ba) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 250.0 | | | 230.0 | | | 515.0 | | | 387.0 | | | 345.5 |
| Beryllium (Be) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 0.13 | | | 0.28 | | | 0.43 | | | 0.21 | | | 0.263 |



Ontario Clean Water Agency Monthly Process Data Report

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Municipality: Township of Fort Frances
Facility: [1103] - Fort Frances WWT
Works: [11000258] - Fort Frances WWT
Classification: Class 3 Wastewater Treatment
Receiver: Rainy River

Period: 01/01/2014 to 12/31/2014
Served Population: 9,500
Total Design Capacity(m³/day): 0

| | Jan/2014 | Feb/2014 | Mar/2014 | Apr/2014 | May/2014 | Jun/2014 | Jul/2014 | Aug/2014 | Sep/2014 | Oct/2014 | Nov/2014 | Dec/2014 | <-- Summary --> |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------------|
| Biosolids Utilization\Biosolids quality - Liquid - Biosolids Sludge Quality | | | | | | | | | | | | | |
| Bismuth (Bi) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 13.8 | | | 14.2 | | | 13.5 | | | 18.2 | | | 14.925 |
| Boron (B) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 12.0 | | | 10.0 | | | 14.0 | | | 19.0 | | | 13.75 |
| Cadmium (Cd) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 0.607 | | | 0.555 | | | 0.738 | | | 0.708 | | | 0.652 |
| Calcium (Ca) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 18,000.0 | | | 18,900.0 | | | 30,800.0 | | | 25,300.0 | | | 23,750.0 |
| Chromium (Cr) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 34.5 | | | 43.0 | | | 35.0 | | | 21.0 | | | 33.375 |
| Cobalt (Co) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 1.92 | | | 3.07 | | | 4.88 | | | 3.16 | | | 3.403 |
| Copper (Cu) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 311.0 | | | 289.0 | | | 295.0 | | | 312.0 | | | 301.75 |
| Iron (Fe) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 19,500.0 | | | 20,500.0 | | | 31,000.0 | | | 26,700.0 | | | 24,425.0 |
| Lead (Pb) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 17.5 | | | 17.6 | | | 19.4 | | | 26.2 | | | 20.3 |
| Magnesium (Mg) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 4,930.0 | | | 7,750.0 | | | 10,800.0 | | | 6,510.0 | | | 7,497.5 |
| Manganese (Mn) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 973.0 | | | 627.0 | | | 2,140.0 | | | 1,130.0 | | | 1,217.5 |
| Mercury (Hg) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 1.04 | | | 0.65 | | | 1.18 | | | 1.22 | | | 1.023 |
| Molybdenum (Mo) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 4.0 | | | 3.65 | | | 4.31 | | | 5.91 | | | 4.468 |
| Nickel (Ni) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 11.2 | | | 13.9 | | | 16.5 | | | 17.2 | | | 15.2 |
| Phosphorus (mg/kg) | | | | | | | | | | | | | |
| Avg | 18,500.0 | | | 14,400.0 | | | 19,800.0 | | | 19,800.0 | | | 18,125.0 |
| Potassium (K) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 4,570.0 | | | 2,340.0 | | | 1,690.0 | | | 1,700.0 | | | 2,575.0 |
| Selenium; Se in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 1.99 | | | 2.51 | | | 3.51 | | | 4.8 | | | 3.228 |



Ontario Clean Water Agency
Monthly Process Data Report

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Municipality: Township of Fort Frances
Facility: [1103] - Fort Frances WWT
Works: [110000258] - Fort Frances WWT
Classification: Class 3 Wastewater Treatment
Receiver: Rainy River

Period: 01/01/2014 to 12/31/2014
Served Population: 9,500
Total Design Capacity(m³/day): 0

| | Jan/2014 | Feb/2014 | Mar/2014 | Apr/2014 | May/2014 | Jun/2014 | Jul/2014 | Aug/2014 | Sep/2014 | Oct/2014 | Nov/2014 | Dec/2014 | Summary --> |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|
| Biosolids Utilization\Biosolids quality - Liquid - Biosolids Sludge Quality | | | | | | | | | | | | | |
| Silver (Ag) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 2.11 | | | 1.14 | | | 1.91 | | | 1.29 | | | 1.588 |
| Sodium (Na) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 837.0 | | | 545.0 | | | 521.0 | | | 674.0 | | | 644.25 |
| Strontium (Sr) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 51.8 | | | 51.3 | | | 82.9 | | | 76.2 | | | 65.55 |
| Thallium (Tl) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 0.1 | | | 0.1 | | | 0.13 | | | 0.1 | | | 0.108 |
| Tin (Sn) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 12.3 | | | 11.2 | | | 13.0 | | | 13.5 | | | 12.5 |
| Titanium (Ti) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 111.0 | | | 133.0 | | | 170.0 | | | 116.0 | | | 132.5 |
| Uranium (U) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 2.65 | | | 2.88 | | | 2.38 | | | 3.16 | | | 2.77 |
| Vanadium (V) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 16.4 | | | 27.7 | | | 33.4 | | | 16.0 | | | 23.375 |
| Zinc: Zn in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 368.0 | | | 361.0 | | | 323.0 | | | 414.0 | | | 366.5 |

Note: ? Calculation not verifiable. At least one result reported as < and at least one result reported >.



Ontario Clean Water Agency
Biosolids Quality Report - Liquid
Digester Type: AEROBIC
Geometric Mean E. Coli

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d_bqr_aerobic_04_rpt

Facility: [1103] - Fort Frances WWT
Works: [110000258] - Fort Frances WWT
Period: 01/01/2014 to 12/31/2014

| E. coli Sample 1 | E. coli Sample 2 | E. coli Sample 3 | E. coli Sample 4 | Geometric Mean E. Coli (based on last 4 samples) cfu/g |
|------------------|------------------|------------------|------------------|--|
| 01/21/2014 | 04/08/2014 | 07/21/2014 | 10/14/2014 | |
| 60,700.0 | 16,900.0 | 3,400.0 | 11,900.0 | 14,273.33 |



Ontario Clean Water Agency Monthly Process Data Report

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d_monthlyprocessrep

Municipality: Township of Fort Frances
Facility: [1103] - Fort Frances WWT
Works: [110000258] - Fort Frances WWT
Classification: Class 3 Wastewater Treatment
Receiver: Rainy River

Period: 01/01/2014 to 12/31/2014
Served Population: 9,500
Total Design Capacity(m³/day): 0

| | Jan/2014 | Feb/2014 | Mar/2014 | Apr/2014 | May/2014 | Jun/2014 | Jul/2014 | Aug/2014 | Sep/2014 | Oct/2014 | Nov/2014 | Dec/2014 | <-- Summary --> |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------------|
| Biosolids Utilization/Biosolids quality - Liquid - Biosolids Sludge Quality | | | | | | | | | | | | | |
| Hauled Vol. (m ³) | | | | | | | | | | | | | |
| Sum | 143.5 | 129.8 | 217.9 | 198.3 | 243.5 | 286.8 | 187.4 | 131.6 | 151.2 | 296.4 | 157.8 | 192.0 | 2,336.2 |
| E Coll (cft/g) | | | | | | | | | | | | | |
| Avg | 60,700.0 | | | 16,900.0 | | | 3,400.0 | | | 11,900.0 | | | 23,225.0 |
| TKN (mg/L) | | | | | | | | | | | | | |
| Avg | 4.4 | | | 4.61 | | | 3.11 | | | 3.43 | | | 3.888 |
| TS (mg/L) | | | | | | | | | | | | | |
| Avg | 12.8 | | | | | | 12.125 | | | | | | 12.28 |
| Sludge/Biosolids Handling/In-House Result - Biosolids Sludge Quality | | | | | | | | | | | | | |
| TS (mg/L) - IH | | | | | | | | | | | | | |
| Avg | 9.157 | 9.262 | 9.824 | 12.384 | 12.929 | 13.605 | 12.083 | 11.422 | 10.077 | 9.663 | 8.846 | 8.347 | 10.72 |
| Biosolids Utilization/Biosolids quality - Liquid - Biosolids Sludge Quality | | | | | | | | | | | | | |
| NH3 + NH4 as N (mg/L) | | | | | | | | | | | | | |
| Avg | 358.0 | | | 1,820.0 | | | 322.0 | | | 2,220.0 | | | 1,180.0 |
| Nitrate-N (mg/L) | | | | | | | | | | | | | |
| Avg | 20.0 | | | 44.0 | | | 8.0 | | < | 4.0 | | < | 19.0 |
| Nitrite-N (mg/L) | | | | | | | | | | | | | |
| Avg | 4.65 | | | 1.5 | | | 1.6 | | < | 0.8 | | < | 2.138 |
| Total Phosphorus (mg/L) | | | | | | | | | | | | | |
| Avg | 18,500.0 | | | 14,400.0 | | | | | | 19,800.0 | | | 17,566.667 |
| Biosolids Utilization/Biosolids quality - Liquid - Raw Sewage | | | | | | | | | | | | | |
| Moisture (%) | | | | | | | | | | | | | |
| Avg | 91.2 | | | 87.8 | | | 86.4 | | | 88.95 | | | 88.66 |
| Biosolids Utilization/Biosolids quality - Liquid - Biosolids Sludge Quality | | | | | | | | | | | | | |
| Aluminum:Al in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 24,200.0 | | | 26,600.0 | | | 31,800.0 | | | 33,600.0 | | | 29,050.0 |
| Antimony (Sb) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 0.95 | | | 1.07 | | | 1.3 | | | 0.97 | | | 1.073 |
| Arsenic (As) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 6.95 | | | 6.72 | | | 13.4 | | | 10.6 | | | 9.418 |
| Barium (Ba) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 250.0 | | | 230.0 | | | 515.0 | | | 387.0 | | | 345.5 |
| Beryllium (Be) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 0.13 | | | 0.28 | | | 0.43 | | | 0.21 | | | 0.263 |



Ontario Clean Water Agency Monthly Process Data Report

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Printed on: 2/9/2015
d_monthlyprocessrep

Municipality: Township of Fort Frances
Facility: [1103] - Fort Frances WWT
Works: [110000258] - Fort Frances WWT
Classification: Class 3 Wastewater Treatment
Receiver: Rainy River

Period: 01/01/2014 to 12/31/2014
Served Population: 9,500
Total Design Capacity(m³/day): 0

| | Jan/2014 | Feb/2014 | Mar/2014 | Apr/2014 | May/2014 | Jun/2014 | Jul/2014 | Aug/2014 | Sep/2014 | Oct/2014 | Nov/2014 | Dec/2014 | <-- Summary --> |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------------|
| Biosolids Utilization/Biosolids quality - Liquid - Biosolids Sludge Quality | | | | | | | | | | | | | |
| Bismuth (Bi) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 13.8 | | | 14.3 | | | 13.5 | | | 18.2 | | | 14,925 |
| Boron (B) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 12.0 | | | 10.0 | | | 14.0 | | | 19.0 | | | 13.75 |
| Cadmium (Cd) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 0.607 | | | 0.555 | | | 0.739 | | | 0.706 | | | 0.652 |
| Calcium (Ca) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 18,000.0 | | | 16,900.0 | | | 30,800.0 | | | 29,300.0 | | | 23,750.0 |
| Chromium (Cr) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 34.5 | | | 43.0 | | | 35.0 | | | 21.0 | | | 33,375 |
| Cobalt (Co) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 1.92 | | | 3.67 | | | 4.66 | | | 3.16 | | | 3,403 |
| Copper (Cu) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 311.0 | | | 288.0 | | | 295.0 | | | 312.0 | | | 301.75 |
| Iron (Fe) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 19,500.0 | | | 20,500.0 | | | 31,000.0 | | | 26,700.0 | | | 24,425.0 |
| Lead (Pb) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 17.8 | | | 17.8 | | | 19.4 | | | 26.2 | | | 20.3 |
| Magnesium (Mg) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 4,930.0 | | | 7,750.0 | | | 10,800.0 | | | 6,510.0 | | | 7,497.5 |
| Manganese (Mn) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 973.0 | | | 627.0 | | | 2,140.0 | | | 1,130.0 | | | 1,217.5 |
| Mercury (Hg) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 1.04 | | | 0.65 | | | 1.18 | | | 1.22 | | | 1,023 |
| Molybdenum (Mo) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 4.0 | | | 3.65 | | | 4.31 | | | 5.91 | | | 4,468 |
| Nickel (Ni) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 11.2 | | | 13.9 | | | 18.5 | | | 17.2 | | | 15.2 |
| Phosphorus (mg/kg) | | | | | | | | | | | | | |
| Avg | 18,500.0 | | | 14,400.0 | | | 19,800.0 | | | 19,800.0 | | | 18,125.0 |
| Potassium (K) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 4,570.0 | | | 2,340.0 | | | 1,690.0 | | | 1,700.0 | | | 2,575.0 |
| Selenium (Se) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 1.98 | | | 2.51 | | | 3.51 | | | 4.9 | | | 3,228 |



Ontario Clean Water Agency Monthly Process Data Report

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Printed on: 2/9/2015
d_monthlyprocessrep

Municipality: Township of Fort Frances
Facility: [1103] - Fort Frances WWT
Works: [110000258] - Fort Frances WWT
Classification: Class 3 Wastewater Treatment
Receiver: Rainy River

Period: 01/01/2014 to 12/31/2014
Served Population: 9,500
Total Design Capacity(m³/day): 0

| | Jan/2014 | Feb/2014 | Mar/2014 | Apr/2014 | May/2014 | Jun/2014 | Jul/2014 | Aug/2014 | Sep/2014 | Oct/2014 | Nov/2014 | Dec/2014 | <-- Summary --> |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------------|
| Biosolids Utilization/Biosolids quality - Liquid - Biosolids Sludge Quality | | | | | | | | | | | | | |
| Silver (Ag) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 2.11 | | | 1.14 | | | 1.81 | | | 1.29 | | | 1.588 |
| Sodium (Na) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 837.0 | | | 545.0 | | | 521.0 | | | 674.0 | | | 644.25 |
| Strontium (Sr) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 51.8 | | | 51.3 | | | 82.9 | | | 78.2 | | | 65.55 |
| Thallium (Tl) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 0.1 | | | 0.1 | | | 0.13 | | | 0.1 | | | 0.108 |
| Tin (Sn) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 12.3 | | | 11.2 | | | 13.0 | | | 13.5 | | | 12.5 |
| Titanium (Ti) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 111.0 | | | 133.0 | | | 170.0 | | | 116.0 | | | 132.5 |
| Uranium (U) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 2.65 | | | 2.86 | | | 2.39 | | | 3.16 | | | 2.77 |
| Vanadium (V) in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 16.4 | | | 27.7 | | | 33.4 | | | 18.0 | | | 23.375 |
| Zinc: Zn in Sludge (mg/kg) | | | | | | | | | | | | | |
| Avg | 358.0 | | | 351.0 | | | 323.0 | | | 414.0 | | | 366.5 |

Note: ? Calculation not verifiable. At least one result reported as < and at least one result reported >.

Flow Meter Calibrations

Instrument Verification Certificate

Ontario Clean Water Agency, 200 McIlrvine Road, Fort Frances ON

Test Date: Data measured June 24 and July 16, 2014

Device: Miltronics OCM III ST 25C TS-2, Identifier 120296126 HM,

For: Plant Final Effluent flow as measured by 12 inch Parshal flume

Detail:

- 1) Final Effluent water level of 297 mm was measured in stilling well on July 16.

Calculated flow rate 108.9 L/s Indicated flow rate 110 L/s Error 1.0%

- 2) Final Effluent water level of 561 mm was measured in stilling well on June 24.

Calculated flow rate 286.7 L/sec Indicated flow rate 284 L/s Error -1.0%

Note: For the Parshal flume: flow rate $Q \text{ (ft}^3/\text{s)} = 4(\text{Head in ft})^{1.522}$

Conversion for flow in (ft^3/s) to flow in L/s is 28.31 L/ft³

Summary:

The error in measured values for final effluent flow rate is within the required range of +/- 5%.



Geoff Pearce

July 27, 2014

Instrument Verification Certificate

Ontario Clean Water Agency, 200 McIlrvine Road, Fort Frances ON

Test Date: July 25, 2014

Device: Miltronics Multiranger plus XPS 10, Identifier 04-235-96-432 MU,

For: Plant Influent Bypass Overflow Level as measured in Man Hole #8

Detail:

- 1) Influent water level of 1.8 m was simulated with a fixture in manhole #8.

Bypass warning alarm was activated

- 2) Influent level of 1.945m was simulated with a fixture in manhole #8.

Bypass alarm was activated and bypass flow was present.

- 3) Bypass level of 1.983m was simulated with a fixture in manhole #8.

Indicated value of overflow level was 1.981m, -0.10% error.

- 4) Bypass level of 2.020m was simulated with a fixture in manhole #8.

Indicated value of overflow level was 2.017m, -0.15% error.

Summary:

The bypass level warning alarm and bypass active alarm function as expected.

The error in measured values for influent is within the required range of +/- 5%.



Geoff Pearce

July 27, 2014

April 9, 2015

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

Attention: Mr. Doug Herr
Environmental and Facilities Superintendent

Dear Doug:

**Re: Fort Frances Wastewater Treatment Facility
March 2015 Monthly Report**

As per the operating agreement, the attached document is the March 2015 monthly report for the Fort Frances Wastewater Treatment Facility.

The report highlights the influent and effluent quality and the process parameters. Additionally, the routine operation and maintenance activities conducted by the operators are summarized.

If you have any questions regarding this report do not hesitate to contact Mr. Larry Wachter – Operations Manager.

Yours truly,



Kelly Cunningham
Senior Operator

For Larry Wachter
Operations Manager

**The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
March 2015 Monthly Operations Report**

INTRODUCTION

In accordance with the Agreement between the Ontario Clean Water Agency (Operating Authority) and the Town of Fort Frances, the Fort Frances Sewage Treatment Plant is required to prepare a monthly report. This document covers the reporting month of March 2015; the facility performance report summarizes important information regarding the quality of the effluent, wastewater, analytical test results, maintenance operations, and relevant activities of the WWTP.

DESCRIPTION OF WORKS

| | |
|--------------------|--|
| Capacity of Works | 9000 m ³ /day (average flow) |
| Service Area | Town of Fort Frances and Couchiching Reserve |
| Service Population | 9000 |
| Effluent Receiver | Rainy River |
| Major Process | Secondary treatment facility complete with a phosphorus removal system; ultra violet disinfection; aerobic sludge stabilization and dewatering |

The Fort Frances Sewage Treatment Plant received and operates its operation under *Certificate of Approval Number 3-0049-96-006*, in accordance with Section 53 of the Ontario Water Resources Act. The Certificate of Approval outlines the terms and conditions and the report captures these terms and conditions in the following sections.

LABORATORY

ALS Laboratory Group – Thunder Bay is contracted to conduct the required analytical tests of the influent (raw) and effluent samples; weekly requirement.

MARCH 2015 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 | 3.5 mg/L | 25 mg/L | 15 mg/L | 19.6 kg/d | 225 kg/d | 135 kg/d |
| Suspended Solids | 8.0 mg/L | 25 mg/L | 15 mg/L | 45.1 kg/d | 225 kg/d | 135 kg/d |
| Total Phosphorus | 0.23 mg/L | 1.0 mg/L | 1.0 mg/L | 1.3 kg/d | 9 kg/d | 9 kg/d |
| Ammonia as N | 4.22 mg/L | | | | | |
| Nitrite as N | 0.14 mg/L | | | | | |
| Nitrate as N | 3.49 mg/L | | | | | |
| Total Cl ₂ Residual | | <0.01 mg/L (when in use) | | | | |
| E-Coli | | 14.8 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 6.8 to 7.5; average pH was 7.1 | | |
| Temperature degrees C | | | | Temperatures ranged from 7.0 – 7.5 average temperature of effluent at 7.2 | | |

Compliance criteria are mandatory requirements of the C of A and performance objectives are a goal to be achieved using best reasonable efforts.

WASTEWATER LIQUID PROCESS

The average daily flow for March was 5,608.6 m³/day. This represents 62% of the design average flow. Total treated flow for the month was 173,865 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 Certificate of Approval.

INVENTORY

| Chemical | End of Month Status | Units |
|--------------|-------------------------------|------------------|
| Hypochlorite | 1000 +/-@ 7.0% + 615 @ 12% | Litres |
| Alum | 16.0 +/- @ 60 % | Cubic meters |
| Polymer | 14 Bags (350 kg) | Bags (25 kg/bag) |

MAINTENANCE

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

Treatment Plant:

- Alternated lead/lag pumps
- Adjusted fluidizing water to head cell and grit snail as needed
- Greased GBT, mechanical bar screen and grit snail. Lubricated drive chain on grit snail and bar screen
- Regular cleaning of head works EW basket strainer
- Greased all blowers
- Regular cleaning of seal water strainer TFP 9-5
- Removed debris from snail, teacup and headcell inlet
- Replaced belt and filters and greased bearings ASU 01
- Replaced filters, tensioned belt and greased bearings on ASU 02
- Changed oil in all blowers
- Repaired DO probe bracket cell 1
- Drained and inspected clarifier 1 and replaced cross collector shear pin
- Removed 1 link each side of clarifier 1 longitudinal collector chain
- Removed rag ball from sprocket of cross collector 1 as it was jammed
- Tensioned belt and aligned sheaves blower Removed rag ball from clarifier 2 inlet

Pump Stations:

- Ran gensets
- Changed seal water strainers
- Cleaned bar screens
- Replaced batteries on Central Avenue lift station gen set
- Pulled and cleaned pump 1 at Strachan lift station

OPERATIONAL ISSUES

The facility met all operational requirements for the month.

SLUDGE SUMMARY

The volume directed to the gravity belt thickener totaled 629.4 m³ for the month. Asselin Transportation and Storage Limited hauled a total of 244.8 m³ of thickened digested sludge (average 11.7m³/load) to the Town of Fort Frances landfill site.

COMPLAINTS

There were no complaints during the report period.

BY-PASS REPORT(S)

There were no bypass events in the report period.

COMMENTS

Plant power consumption for the month was 682 (x 180 multiplier) kWh.
The additional effluent testing necessary to meet the requirements of the Wastewater Systems Effluent Regulations is now a part of our regular sampling regimen.

REPORTS

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

| Month | Sewage Flows Year 2015 | | | | | Usage % Plant Capacity | Sludge Volume Hauled | Removal Efficiency | |
|-----------|------------------------|-----------------|------------------|-----------------|-----------------|------------------------------|----------------------------|--------------------|------------------|
| | Avg. Day Flow | Max Day Flow | Total Treated | Total ByPass | Total Volume | | | CBOD5 | |
| | m3 | m3 | Volume ML | Volume ML | ML | | | Suspended Solids | Total Phosphorus |
| January | 5205.2 | 5615 | 161362 | | 161362 | 58% | 133.6 | | |
| February | 5008.5 | 5247 | 140237 | | 140237 | 56% | 163.2 | | |
| March | 5608.6 | 6833 | 173865 | | 173865 | 62% | 244.8 | | |
| April | | | | | | 0% | | | |
| May | | | | | | 0% | | | |
| June | | | | | | 0% | | | |
| July | | | | | | 0% | | | |
| August | | | | | | 0% | | | |
| September | | | | | | 0% | | | |
| October | | | | | | 0% | | | |
| November | | | | | | 0% | | | |
| December | | | | | | 0% | | | |
| Sum | | | | 0 | 475464 | | 541.6 | | |
| Average | 5274 | | 158488 | | 158488 | 59% | 180.5 | | |
| Max | | 6833 | 173865 | | 173865 | | | | |
| C of A | 9000 | 18000 | | | | | | | |

| Month | CBOD5 | | | Suspended Solids | | | Total Phosphorus | | | E. Coli | | | pH | |
|-----------|---------------------------|-----------------------------|-------------------------------|---------------------------|-----------------------------|-------------------------------|---------------------------|-----------------------------|-------------------------------|------------------------------|--------------------|--------------------|----|--|
| | Avg Raw CBOD (mg/L) | Avg. Eff. CBOD (mg/L) | Avg. Load CBOD (kg/day) | Avg Raw S.S. (mg/L) | Avg. Eff. S.S. (mg/L) | Avg. Load S.S. (kg/day) | Avg Raw T.P. (mg/L) | Avg. Eff. T.P. (mg/L) | Avg. Load T.P. (kg/day) | Geo Mean Counts /100ml | Monthly Minimum | Monthly Maximum | | |
| | | | | | | | | | | | | | | |
| January | 84.5 | 2.6 | 13.6 | 151.9 | 6.0 | 31.0 | 2.5 | 0.23 | 1.18 | 17.8 | 6.8 | 7.6 | | |
| February | 87.0 | 3.1 | 15.3 | 136.4 | 6.4 | 32.1 | 2.2 | 0.22 | 1.12 | 8.3 | 6.9 | 7.5 | | |
| March | 62.8 | 3.5 | 19.6 | 127.6 | 8.0 | 45.1 | 1.9 | 0.23 | 1.29 | 14.8 | 6.8 | 7.5 | | |
| April | | | | | | | | | | | | | | |
| May | | | | | | | | | | | | | | |
| June | | | | | | | | | | | | | | |
| July | | | | | | | | | | | | | | |
| August | | | | | | | | | | | | | | |
| September | | | | | | | | | | | | | | |
| October | | | | | | | | | | | | | | |
| November | | | | | | | | | | | | | | |
| December | | | | | | | | | | | | | | |
| Average | 78.1 | 3.1 | 16.2 | 138.6 | 6.8 | 36.1 | 2.2 | 0.23 | 1.20 | 13.6 | 6.8 | 7.5 | | |
| Max | 87 | 3.5 | 19.6 | 151.9 | 8 | 45.1 | 2.5 | 0.23 | 1.29 | 17.8 | 6.9 | 7.6 | | |
| C of A | | 25 | 225 | | 25 | 225 | | 1 | 9 | 200 | 6.0 | 9.5 | | |