

TOWN OF FORT FRANCES

Operations and Facilities Executive Committee

AGENDA - August 9, 2017, 8:30 AM

MEETING - Civic Centre

Session #011

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1. <u>Call to Order</u>	
2. <u>Disclosure of pecuniary interest and the general nature thereof</u>	
3. <u>Approval of Previous Committee Minutes</u>	
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4. <u>Non-agenda Items</u>	
5. <u>New Business</u>	
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5.2 Annual Energy Consumption Report	12 - 19
5.3 2018 Intake of the Ontario Community Infrastructure Fund	20 - 21
5.4 June 2017 Drinking Water Systems Monthly Summary Report	22 - 29
6. <u>Outstanding Items</u>	
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9. Adjourn / Next Meeting Date

TOWN OF FORT FRANCES

MINUTES

SESSION NO. #010

July 5, 2017

The meeting of Operations & Facilities Executive Committee of the Town of Fort Frances was held in the Fort Frances Airport on July 5, 2017 from 8:30 a.m. to 9:21 a.m.

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

ALSO PRESENT: Mayor Roy Avis

1. Call to Order

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

2. Disclosure of pecuniary interest and the general nature thereof

None

3. Approval of Previous Committee Minutes

3.1 Minutes from the previous meeting on June 21, 2017 - the minutes were approved as circulated.

4. Non-agenda Items

Application for Funding Under the Municipal Commuter Cycling Program.

5. New Business

5.1 Removal of Traffic Control Signals - 2017 Budgetary Cost Reducing Strategy - this item was tabled in order to gather more information on costs to replace current controllers.

5.2 Award of Tender for MSHW Services to Host Household Hazardous Waste Events in Fort Frances - the administration report was approved as recommended.

5.3 May 2017 Drinking Water Systems Monthly Summary Report - the administration report was reviewed and was approved as circulated.

5.4 Request to Erect a Sign at the Sorting Gap Marina - recommended to Planning and Development Executive Committee to support the request as outlined in the report.

6. Information

6.1 Sewer and Water Data for 2017 - updated June 12, 2017 - the sewer and water data was reviewed and will be forwarded to Council as information only. No action required.

7. Non-agenda Items

7.1 Application for Funding Under the Municipal Commuter Cycling Program - the administration report was reviewed and was approved as recommended.

8. Adjourn / Next Meeting Date

The meeting was adjourned at 9:21 a.m.

Executive Committee Chair

T. Rob, Manager of Operations & Facilities

August 9, 2017

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities

RE: Easement Agreement with Alberton for provision of sewer and water to 45 Oakwood Road

On April 27, 2013 a letter was presented to Council by the owners of 45 Oakwood Road, the Friesen's, for the provision of municipal water and sewer services to their property. Council approved this request subject to a number of terms; there had to be a service agreement, easement agreement between the Town and Alberton, and the property owners were to pay for all materials, labour, legal costs associated with the installation and preparation of the agreements. Further once the work was completed, the account would be a non-resident water and sewer account. Since that time, the property owners have been working toward the completion of all required agreements with the completion of the easement agreement being the most difficult. The Town has included the works of installing the services in various road works tenders, most recently the tender for the 2017 road works awarded to Bay City Contractors.

In discussions with the Town's solicitor Mr. Wes Derksen, it is understood that the final draft easement agreement which is attached to this report is satisfactory to the Municipality of Alberton and their solicitor and further Mr. Derksen informs me that the same agreement will be presented to their council at the regularly scheduled meeting held August 9, 2017. It is also Mr. Derksen's understanding from Mr. Banman, the solicitor for the property owner that all other agreements have been signed, however those have not yet been returned to Mr. Derksen. It is anticipated that those other agreements will be forthcoming.

It is the recommendation of Administration that

1. The Easement Agreement between The Town of Fort Frances and Alberton be approved.
2. The Sewer and Water Agreement and Application for Sewer and Water be brought to Council when executed agreements are received from the Property Owners.
3. That an authorizing By-Law be prepared authorizing the Mayor and Clerk to execute the agreements on behalf of the Corporation.

Respectfully Submitted



Travis Rob, EIT

Council approval of this report will ensure that:

1. The Easement Agreement between The Town of Fort Frances and Alberton be approved.
2. The Sewer and Water Agreement and Application for Sewer and Water be brought to Council when executed agreements are received from the Property Owners.
3. That an authorizing By-Law be prepared authorizing the Mayor and Clerk to execute the agreements on behalf of the Corporation.

Manager of Operations and Facilities

THIS AGREEMENT made this 9th day of August, 2017,

BETWEEN:

THE CORPORATION OF THE TOWNSHIP OF ALBERTON
(herein also referred to as "Alberton")

OF THE FIRST PART

- and -

THE CORPORATION OF THE TOWN OF FORT FRANCES
(herein also referred to as the "Fort Frances")

OF THE SECOND PART

WHEREAS the *Municipal Act, 2001*, R.S.O. 2001, c.25, as amended (herein referred to as the "*Act*"), confers upon municipalities natural person powers which may be exercised within the spheres of jurisdiction identified therein, which the council of a municipality may exercise by by-law;

AND WHEREAS Section 19 of the *Act* authorizes a municipality to exercise its power to provide a municipal system to provide a service or thing in an area in another municipality if one of the purposes for so acting is for that municipality's own purposes and, in accordance with Section 19(2)(2), if the other municipality is a single-tier municipality and the service or thing is provided with its consent;

AND WHEREAS Oakwood Road (herein referred to as the "*Highway*") is a highway in the District of Rainy River, Province of Ontario, that forms part of a boundary road between Alberton and Fort Frances (herein collectively referred to as the "*Parties*");

AND WHEREAS George Plett Friesen, Katharina Friesen, Wade Adam Friesen, Phillip Plett Friesen, Henry Plett Friesen, Mary Friesen, and Travis Leigh Friesen (collectively referred to as the "*Owners*") are the registered owners, in fee simple, of certain lands and premises located in Alberton which:

- (a) has frontage on the west side of the Highway;
- (b) is municipally known as 45 Oakwood Road, Alberton; and
- (c) is legally described as Pcl 24839, Sec Rainy River; Pt Lt 1 River Range Crozier, Pt 1 & 2 on Plan 48R1422; Alberton (the "*Property*");

AND WHEREAS there are two multi-unit residential buildings located in and on the *Property* which contain a total of six single-family apartment-style dwelling units;

AND WHEREAS the *Property* is currently serviced by private non-municipal septic and well systems, which the Ministry of the Environment has deemed does not comply with servicing requirements for the current number of dwelling units thereon;

AND WHEREAS the *Owners* submitted to Alberton Council an Official Plan Amendment Application to permit the *Property* to be connected to and serviced by sanitary sewer and water service provided by Fort Frances ("*Sewer and Water Service*") for the sole benefit of the *Property*, and to allow construction and installation of certain infrastructure, works and things required for or directly pertaining to the provision of such *Sewer and Water Service* (collectively referred to as the "*Facilities*") for such purpose;

AND WHEREAS in order to allow the *Sewer and Water Service* to be provided to the *Property*, a portion of the *Facilities* is required to be located and constructed in, under and upon the portion of the *Highway* within Alberton (such portion of the *Facilities* located and constructed in, under, and upon the portion of the *Highway* within Alberton are herein collectively referred to as the "*Facilities Within Alberton*"), which will necessitate the granting of an easement (the "*Easement*") in the form attached hereto as Schedule 1 by Alberton to Fort Frances, and otherwise as Alberton requires as set out and provided for in this Agreement;

NOW THEREFORE in consideration of the mutual covenants and undertakings contained herein, the Parties hereby agree as follows:

1. Subject to the terms and conditions set out in this Agreement, Alberton:
 - (a) consents and agrees to Fort Frances providing *Sewer and Water Service* to and for the sole benefit of

the *Owners' Property* and to the construction of the *Facilities Within Alberton*, and such further and other things as may be necessary therefor, and this shall be and be deemed to constitute consent for the purposes of Section 19(2)(2) of the *Act*); and

- (b) grants to Fort Frances the *Easement* in the form set out in Schedule 1 attached to and forming part of this Agreement.

2. The Parties acknowledge and agree that:

- (a) The *Facilities Within Alberton* shall be comprised of water and sewer utility infrastructure owned by Fort Frances;
- (b) Fort Frances agrees that it shall indemnify, defend and save harmless Alberton from any liability, cost, demands, damages, expenses, claims and suits arising out of or in any way related to the obligations of Fort Frances to carry out its work or to otherwise meet its obligations provided for in this Agreement including the failure to perform such work adequately or at all, except to the extent that same is caused by the negligence or willful misconduct of Alberton. This indemnity shall survive the early termination or expiry of this Agreement;
- (c) Fort Frances shall be solely responsible and bear the costs for the *Facilities Within Alberton* located in and under the *Highway*, and their construction, installation, operation, inspection, and maintenance, except to the extent that same are caused by the negligence or willful misconduct of the Alberton and subject to any agreement between Fort Frances and the *Owners*;
- (d) as of the date of this Agreement, Alberton has no water, sewer, and/or utility infrastructure, and/or appurtenances thereto, located in, under or adjacent to the *Highway*; and
- (e) Each *Party* shall name the other *Party* as an Additional Insured under its liability insurance policy re the *Facilities Within Alberton* as evidenced by the provision by each to the other of a completed Certificate of Insurance (proof of Insurance).

3. Subject to paragraph 2 of this Agreement, but otherwise notwithstanding anything contained in this Agreement, the consents and agreements of Alberton herein are and shall be and remain on the basis that Fort Frances shall not be required or liable to pay to Alberton any taxes, fees, charges, costs or otherwise in respect of or relating to the provision of *Sewer and Water Service* to the *Owners' Property*, the *Easement*, the *Facilities*, or the *Facilities Within Alberton*.

4. The consents and agreements of Alberton herein are and shall be and remain on basis that, subject to paragraph 2 of this Agreement, Alberton shall not be required or liable to pay to Fort Frances any taxes, fees, charges, costs or otherwise of any nature or kind in respect of or in any way relating to the provision of *Sewer and Water Service* to the *Owners' Property*, the *Easement*, the *Facilities*, or the *Facilities Within Alberton*.

5. This Agreement shall be binding upon and enure to the benefit of the *Parties* and their respective heirs, estate trustees, administrators, successors and assigns.

6. This Agreement shall be construed with all changes in number and gender as may be required by the context.

IN WITNESS WHEREOF the *Parties* hereto have hereunto affixed their respective hands and seals on the day and year first above written.

SIGNED, SEALED AND DELIVERED

THE CORPORATION OF THE TOWNSHIP OF ALBERTON

Per: _____
Michael Hammond, Reeve

Per: _____
Dawn Hayes, CAO/Clerk-Treasurer

WE HAVE AUTHORITY TO BIND THE CORPORATION

(seal)

THE CORPORATION OF THE TOWN OF FORT FRANCES

Per: _____
Roy Avis, Mayor

Per: _____
Elizabeth Slomke, Clerk

(seal)

WE HAVE AUTHORITY TO BIND THE CORPORATION.

SCHEDULE 1

TRANSFER OF EASEMENT IN GROSS

THIS AGREEMENT made the 9th day of August, 2017, between The Corporation of the Township of Alberton (the "Transferor") and The Corporation of the Town of Fort Frances (the "Transferee").

WHEREAS the Transferor is the owner in fee simple of the lands and premises described in the Properties section of the Transfer Easement to which this Schedule is attached (the "Easement Lands").

IN CONSIDERATION of the sum of \$2.00 paid by the Transferee to the Transferor, and other good and valuable consideration, the receipt of which is hereby acknowledged, the Transferor grants to the Transferee, its employees, workmen, contractors, licencees, agents, estate trustees, heirs, successors, assigns, and other representatives, to be used and enjoyed as appurtenant to the Transferee's lands, the free, unencumbered, uninterrupted, and unobstructed perpetual rights, easements (in gross), rights of way, covenants, agreements, and privileges as herein set out in, through, under, over, across, along, and upon the Easement Lands:

1. to lay down, construct, bury, dig up, erect, maintain, operate, inspect, patrol, repair, replace, relocate, alter, upgrade, renew, reconstruct, make additions to, and/or remove, at any time and from time to time, storm sewers, sanitary sewers, watermain(s), drains, water lines, and for such other purposes and things as the Transferee may require relating thereto, together with and including all such equipment, installations, structures, markers, manholes, fixtures, things, and all appurtenances thereto as the Transferee may from time to time or at any time hereafter deem requisite (all or any of which works are herein called the "Facilities");
2. to enter on, to exit from, and to pass and repass at any and all times, free and unimpeded, in, over, along, upon, across, through, and under the Easement Lands, with or without vehicles, supplies, machinery, plant, material, and equipment of all purposes;
3. to conduct engineering, legal, and other surveys and do soil and other tests, in, on, and over the Easement Lands; and
4. the right to remove, clear, trim, sever, and fell, any buildings, structures, and/or obstructions such as trees, roots, brush, stumps, boulders, rock, and/or otherwise encountered during the course of construction or subsequent maintenance or otherwise of the Facilities.

The Transferee shall be responsible for any damage caused by it to the Easement Lands. When practical, the Transferee, after any of its activities, shall restore the Easement Lands appropriately.

Notwithstanding any rule or law or equity and even though any of the Facilities may become annexed or affixed to the Easement Lands, title to the Facilities shall nevertheless remain in the Transferee and the Facilities shall at any time, and from time to time, be removable in whole or in part by the Transferee, its successors and assigns.

This Agreement may be signed and/or amended by facsimile or electronic transmission, and any amendments, signatures, initials, and otherwise done by or via facsimile or electronic transmission shall be good and valid as if original.

This Agreement shall be interpreted under and be governed by the laws of the Province of Ontario.

The parties hereto agree that all covenants and conditions contained in this Agreement shall be severable, and that should any covenant or condition in this Agreement be declared invalid or unenforceable by a court of competent jurisdiction, the remaining covenants and conditions and the remainder of the Agreement shall remain valid and not terminate thereby.

This Agreement including all rights, privileges, and benefits herein contained shall extend to, be binding upon, and enure to the benefit of, the parties hereto and their respective heirs, estate trustees, administrators, successors, and assigns.

IN WITNESS WHEREOF the parties hereto have executed this Agreement under seal.

SIGNED, SEALED AND DELIVERED

The Corporation of the Township of Alberton

per _____, Reeve
*
per _____, Clerk-Treasurer

I/we have authority to bind the Corporation

The Corporation of the Town of Fort Frances

per _____ R. Avis, Mayor
*
per _____ E. Slomke, Clerk

I/we have authority to bind the Corporation

August 9, 2017

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities

RE: Annual Energy Consumption Report

Background

In 2011 the Ontario Government passed O. Reg. 397/11 Energy Conservation and Demand Management Plans outlining annual energy reporting and planning for Municipalities, municipal Service Boards, Universities and Colleges, Schools and Hospitals. This regulation outlined what facilities were to be reported on and the data that was to be reported. The first reporting year for energy consumption and greenhouse gas emission data was 2013 with data from 2011. The Town of Fort Frances has been submitting energy reports in accordance with the regulation since the initial submission deadline of July 1, 2013. On June 18, 2014 the Town of Fort Frances 5 Year Energy Conservation and Demand Management Plan was taken to the Operations and Facilities Executive Committee and then to Council on June 23 for approval and was submitted to the Ministry of Energy prior to the July 1, 2014 Deadline. In accordance with Chapter 3 of the Energy Conservation and Demand Management Plan, the following is an annual report of the energy consumption of the Town of Fort Frances

Upcoming Regulation milestones

The next deadlines for the Town to complete work under the regulation is July 1, 2019 where the Town has to update it's energy conservation and Demand Management Plan for the next 5 years including proposed energy saving projects, anticipated savings and costs.

Information

Due to the wealth of data, analysis available and required for the review of energy data, the following information contained in this report is a summary of the energy consumption and solar generation from the Town of Fort Frances Facilities. The data for the 2017 energy submission to the Ministry of Energy contains information for the 2015 year consumption. This report will encompass all data to the end of 2016.

Electrical

Spreadsheet #1 attached to this report is an overview of the 2011 base year for electrical consumption as well as 2013, 2014, 2015 and 2016 years. The items marked with an asterisk are all of the facilities that are heated solely or partially with electrical energy. There is a column showing the difference between the current year and base year consumption.

Natural Gas

Spreadsheet #2 attached to this report is an overview of the 2011 base year for natural gas consumption as well as 2013, 2014, 2015 and 2016 years. There is a column showing the heating degree days, as natural gas usage is largely driven by the outdoor air temperature. There are also columns showing the difference from the base year of 2011.

Solar

The 4 – 10kW solar installations have been online and generating power since late in 2011 under the Ontario Power Authority MicroFIT program. At the time of the Town's enrolment in the program, a 20 year contract to supply power via a rooftop solar generation system was signed for \$0.80 per kWh. There is no requirement to annually report on the solar generation to the Ministry of Energy, however traditionally an annual report to Council has been completed outlining the solar generation. Spreadsheet #3 attached to this report is an overview of the generation occurring at the solar sites.

Energy Conservation and Demand Management Plan Updates:

With the changes in positions which took place in 2016, the Town's Energy Conservation and Demand Management Plan requires an interim update as the plan appoints the Chief Building Official as the Corporate Energy Leader. This role will be taken care of by the Manager of Operations and Facilities. Attached to this report is the updated sections of the Town's Energy Conservation and Demand Management Plan.

Summary of Additional Energy Initiatives:

With the changes in position in 2016, a formal report was not brought through council, the required reporting to the Ministry was completed on time, and therefore there has been a lapse in updates to Council on Energy initiatives completed over the last two periods. Some of the initiatives completed were:

1. Installation of new energy efficient windows and ridged insulation at the Public Works garage (2015)
2. Application of rigid foam insulation along the Council Chambers at the Civic Centre. (2016)
3. Installation of a new high efficiency furnace and Air Conditioner at the Public Works garage. (2016)
4. Replacement of 6 - 1000W Halogen Rink Lights to 300W LED equivalent (installation in Fall 2017) at McIlrvine Rink

Conclusions and Recommendations

Although not every facility is seeing a reduction in consumption every year, due primarily to changes in weather patterns from year to year and the above data not being normalized to heating degree days, the overall trend in normalized consumption is downward showing that our energy initiatives are working. It is the recommendation of Administration that:

1. The annual energy consumption report be accepted and made available to the public per the Town's Energy Conservation and Demand Management Plan
2. The Town's Energy Conservation and Demand Management Plan be updated to reflect the Manager of Operations and Facilities as the Corporate Energy Leader.

Respectfully Submitted



Travis Rob, EIT

Council approval of this report will ensure that:

- 1. The annual energy consumption report be accepted and made available to the public per the Town's Energy Conservation and Demand Management Plan**
- 2. The Town's Energy Conservation and Demand Management Plan be updated to reflect the Manager of Operations and Facilities as the Corporate Energy Leader.**

Manager of Operations and Facilities

2017AugEnergyConsumptionReport

Spreadsheet #1 - Electrical Summary

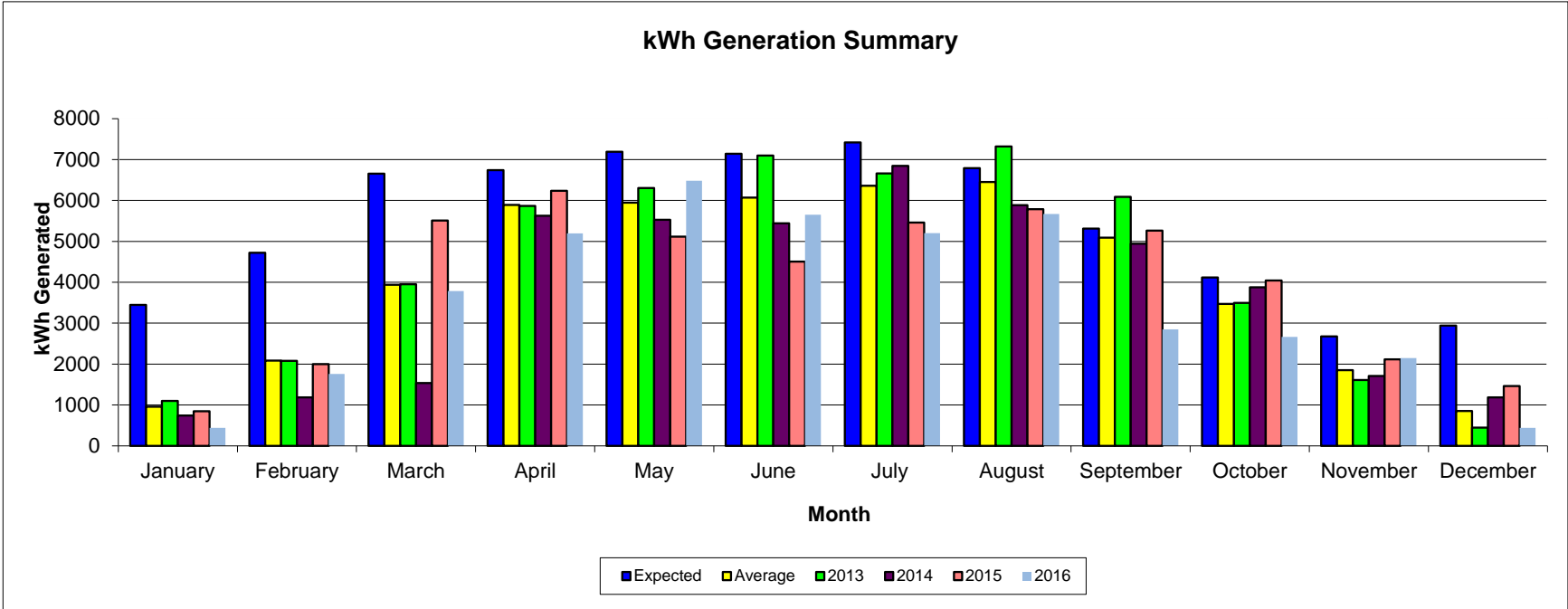
	2011 - Baseline		2013			2014			2015			2016		
	Total Consumption (kWh)	Total Cost (\$)	Total Consumption (kWh)	Total Cost (\$)	Difference From Baseline (kWh)	Total Consumption (kWh)	Total Cost (\$)	Difference From Baseline (kWh)	Total Consumption (kWh)	Total Cost (\$)	Difference From Baseline (kWh)	Total Consumption (kWh)	Total Cost (\$)	Difference From Baseline (kWh)
Museum	124518.26	\$ 12,934.16	100699.96	\$ 10,705.68	-23818.30	112252.42	\$ 13,211.48	-12265.84	97875.29	\$ 9,297.76	-26642.97	56,609.55	\$ 8,402.94	-67908.71
Memorial Sports Centre*	540324.47	\$ 57,434.30	407863.44	\$ 55,109.37	-132461.03	549459.27	\$ 59,273.96	9134.80	496898.10	\$ 40,005.61	-43426.37	84,730.17	\$ 12,758.59	-455594.30
Memorial Sports Centre A*	2060205.95	\$ 190,560.19	1726885.03	\$ 185,713.10	-333320.92	1777281.12	\$ 176,849.87	-282924.83	1739669.42	\$ 178,384.29	-320536.53	518,975.55	\$ 76,069.23	-1541230.40
Hallett	1658.65	\$ 526.18	1065.06	\$ 700.46	-593.59	1962.08	\$ 711.52	303.43	1076.30	\$ 686.39	-582.35	1,898,169.12	\$ 256,727.88	1896510.47
Sorting Gap*	46148.56	\$ 4,760.16	43538.22	\$ 4,465.30	-2610.34	37154.54	\$ 4,219.00	-8994.02	30387.48	\$ 3,233.66	-15761.08	661.19	\$ 706.80	-45487.37
Public Works	158900.90	\$ 14,990.98	122535.19	\$ 13,387.98	-36365.71	116251.40	\$ 14,240.39	-42649.50	141748.20	\$ 11,069.69	-17152.70	35,707.73	\$ 5,400.32	-123193.17
Fort Frances Cemetery*	83238.89	\$ 7,928.96	76616.41	\$ 8,309.41	-6622.48	77995.48	\$ 9,375.90	-5243.41	50595.11	\$ 3,215.20	-32643.78	84,786.69	\$ 13,693.01	1547.80
Riverview Cemetery*	49686.65	\$ 4,825.18	31618.49	\$ 3,635.19	-18068.16	33646.98	\$ 4,142.46	-16039.67	27702.62	\$ 2,420.52	-21984.03	52,363.08	\$ 8,183.98	2676.43
Civic Centre*	646061.57	\$ 65,147.27	600197.26	\$ 62,749.42	-45864.31	580279.63	\$ 60,071.65	-65781.94	486478.08	\$ 47,322.68	-159583.49	29,219.83	\$ 4,776.28	-616841.74
Dog Pound*	18384.91	\$ 1,996.22	19678.31	\$ 2,391.25	1293.40	18670.43	\$ 2,424.97	285.52	13230.96	\$ 1,061.61	-5153.95	480,698.64	\$ 68,841.26	462313.73
Sister Kennedy Centre 1	63938.02	\$ 6,242.01	68296.65	\$ 7,570.27	4358.63	64115.23	\$ 7,832.28	177.21	55623.61	\$ 6,508.83	-8314.41	8,099.45	\$ 1,737.34	-55838.57
Sister Kennedy Centre 2	1163.53	\$ 525.61	3108.74	\$ 877.63	1945.21	6112.61	\$ 1,112.43	4949.08	7480.28	\$ 1,294.80	6316.75	56,464.66	\$ 8,973.98	55301.13
East End Hall	10057.67	\$ 1,234.80	11759.80	\$ 1,667.04	1702.13	9885.26	\$ 1,626.42	-172.41	6448.06	\$ 1,092.92	-3609.61	5,359.47	\$ 1,377.37	-4698.20
Point Park Garage*	83.33	\$ 272.61	63.93	\$ 644.64	-19.40	84.90	\$ 104.17	1.57	77.90	\$ 609.95	-5.43	14,451.31	\$ 2,701.26	14367.98
Vanjura	1165.48	\$ 362.29	399.99	\$ 666.27	-765.49	0.00	\$ 511.02	-1165.48	160.00	\$ 615.17	-1005.48	164.91	\$ 645.01	-1000.57
Lions Park	16569.35	\$ 1,781.77	17625.06	\$ 2,362.53	1055.71	15845.93	\$ 2,286.96	-723.42	17468.91	\$ 2,592.13	899.56	79.99	\$ 623.22	-16489.36
Daycare	113506.77	\$ 11,745.12	94709.47	\$ 10,383.47	-18797.30	96037.27	\$ 12,568.89	-17469.50	91691.80	\$ 11,142.51	-21814.97	17,608.92	\$ 3,335.51	-95897.85
St. Frances Sports Fields	1285.15	\$ 499.34	1407.89	\$ 759.38	122.74	1912.91	\$ 707.00	627.76	1407.92	\$ 729.56	122.77	95,033.95	\$ 14,639.44	93748.80
McIrvine Road Rink	5209.86	\$ 834.06	6107.64	\$ 1,157.11	897.78	7064.73	\$ 1,193.60	1854.87	3615.78	\$ 784.76	-1594.08	988.92	\$ 751.75	-4220.94
North End Rink*	15840.60	\$ 1,779.04	13848.33	\$ 1,835.57	-1992.27	16078.42	\$ 2,132.63	237.82	14505.89	\$ 1,747.44	-1334.71	3,958.89	\$ 1,136.88	-11881.71
Water Tower	41851.34	\$ 4,109.87	42321.06	\$ 4,552.38	469.72	40897.03	\$ 4,732.46	-954.31	39497.07	\$ 4,144.92	-2354.27	9,196.43	\$ 1,871.57	-32654.91
Street Lights	1231535.63	\$ 126,968.35	1231535.64	\$ 130,121.47	0.01	414928.58	\$ 55,148.03	-816607.05	413000.36	\$ 66,502.27	-818535.27	414,303.24	\$ 80,315.27	-817232.39
Recycle Depot (2016 Baseline)									2345.61	\$ 854.09	2345.61	13,860.25	\$ 2,669.87	0.00
Tourist Info Building (2015 Baseline)						12624.42	\$ 1,571.19	12624.42	37483.13	\$ 4,769.37	0.00	31473.53	\$ 5,048.11	-6009.60
Airport	137086.6	\$ 18,967.77	111778.80	\$ 19,049.40	-25307.80	109195.45	\$ 20,179.22	-27891.15	98279.59	\$ 20,040.81	-38807.01	117,119.25	\$ 24,223.18	-19967.35
Sunny Cove Camp Office*	11477.88	\$ 2,183.56	4394.4149	\$ 1,168.49	-7083.47	4999.08	\$ 1,404.62	-6478.80	3580.21	\$ 1,136.42	-7897.67	3,923.32	\$ 1,318.07	-7554.56
Russell Hall*	7413	\$ 1,466.37	7645.0827	\$ 1,589.39	232.08	8500.2224	\$ 1,934.09	1087.22	8546.34	\$ 2,096.43	1133.34	10,037.23	\$ 2,718.40	2624.23
McGregor Hall*	2620	\$ 839.08	2507.2512	\$ 880.85	-112.75	1814.8592	\$ 870.63	-805.14	2596.21	\$ 955.87	-23.79	2,131.71	\$ 910.10	-488.29
Water Treatment Plant	813205.32	\$ 78,577.11	663507.37	\$ 76,177.58	-149697.95	663507.37	\$ 76,177.58	-149697.95	719917.20	\$ 73,505.82	-93288.12	715,771.08	\$ 103,838.30	-97434.24
Sewage Treatment Plant	1511377.58	\$ 143,636.77	1438388.10	\$ 141,756.40	-72989.48	1519960.15	\$ 150,273.08	8582.57	1476584.10	\$ 140,587.52	-34793.48	1,518,987.60	\$ 203,610.27	7610.02
Portage Avenue Storm Lift Station	8081.03	\$ 1,070.22	3028.63	\$ 882.86	-5052.40	6718.95	\$ 1,185.62	-1362.08	2941.08	\$ 769.26	-5139.95	3,142.53	\$ 1,031.29	-4938.50
Central Ave Lift Station	147238.84	\$ 13,833.05	147220.38	\$ 15,497.52	-18.46	158134.04	\$ 18,452.62	10895.20	128033.39	\$ 12,289.68	-19205.45	149,926.39	\$ 21,955.50	2687.55
5th Street Lift Station	44623.63	\$ 4,444.77	41577.57	\$ 4,268.54	-3046.06	48566.69	\$ 5,648.68	3943.06	40725.64	\$ 4,161.47	-3897.99	41,636.49	\$ 6,504.55	-2987.14
Minnie Avenue Lift Station	1698.56	\$ 564.47	1570.15	\$ 775.02	-128.41	2098.09	\$ 724.71	399.53	1627.52	\$ 751.13	-71.04	1,485.80	\$ 823.53	-212.76
White Pine Lift Station	29526.54	\$ 2,994.21	33733.32	\$ 3,716.11	4206.78	31736.37	\$ 3,783.44	2209.83	31360.61	\$ 3,272.09	1834.07	33,525.90	\$ 5,323.67	3999.36
Boundary Road Lift Station	5679.41	\$ 826.30	7546.27	\$ 1,343.50	1866.86	7417.24	\$ 1,266.24	1737.83	6871.12	\$ 1,256.49	1191.71	7,125.24	\$ 1,620.67	1445.83
Patcin Avenue Lift Station	2406.48	\$ 586.89	2371.16	\$ 847.89	-35.32	2734.51	\$ 789.06	328.03	2159.44	\$ 798.38	-247.04	2,399.88	\$ 949.33	-6.60
TOTAL:	7953770.41	\$ 787,449.04	7087150.07	\$ 777,718.47	-866620.3372	6555923.66	\$ 718,737.87	-1397846.752	6299690.34	\$ 661,707.50	-1691563.205	6520177.90	\$ 956,213.73	-1484935.894

Spreadsheet #2 - Gas Summary

	Base Year				Difference From Base Year				Difference From Base Year				Difference From Base Year				Difference From Base Year	
Facility	2011 Consumption	2011 Billing HDD	2013 Consumption	2013 Billing HDD	Consumption	HDD	2014 Consumption	2014 Billing HDD	Consumption	HDD	2015 Consumption	2015 Billing HDD	Consumption	HDD	2016 Consumption	2016 Billing HDD	Consumption	HDD
Museum	6470.454	6916.8	7761.205	7563.8	1290.751	647	10392.783	8138.1	3922.329	1221.3	1830.421	1851.4	-4640.033	-5065.4	6039.276	4905.7	-431.178	-2011.1
Sister Kennedy	7505.28	6179.8	8598.524	7497.7	1093.244	1317.9	5160.228	8176.9	-2345.052	1997.1	1685.767	1857.2	-5819.513	-4322.6	7268.827	4882.8	-236.453	-1297
Sister Kennedy Shop	3020.719	5337.5	3856.363	7497.7	835.644	2160.2	1219.509	8176.9	-1801.21	2839.4	287.406	1314.4	-2733.313	-4023.1	1222.462	5425.6	-1798.257	88.1
Mclrvine Rink	4256.96	6351.4	5603.44	7416.2	1346.48	1064.8	5739.27	8160.9	1482.31	1809.5	1654.557	1914.8	-2602.403	-4436.6	3667.385	4871.5	-589.575	-1479.9
Library	5889.056	6129.9	5708.24	7497.7	-180.816	1367.8	6055.965	8176.9	166.909	2047	706.575	1841.5	-5182.481	-4288.4	2570.377	4928.7	-3318.679	-1201.2
East End Hall	5794.478	6102.4	6208.963	7479.6	414.485	1377.2	6092.127	8261.3	297.649	2158.9	1218.426	1855.5	-4576.052	-4246.9	3346.499	5064.8	-2447.979	-1037.6
Water Treatment Plant	79918.157	6102.4	85843.378	7479.6	5925.221	1377.2	95145.697	8261.3	15227.54	2158.9	13986.86	1855.5	-65931.297	-4246.9	65096.759	5064.8	-14821.398	-1037.6
Sewage Treatment Plant 1	7432.953	6229.1	12047.951	6065.7	4614.998	-163.4	15169.122	8113.8	7736.169	1884.7	1018.136	1840.2	-6414.817	-4388.9	4342.381	4872	-3090.572	-1357.1
Water Tower	21500.484	6953.4	11004.776	7848.2	-10495.708	894.8	66924.399	8150	45423.915	1196.6	6484.361	6656.7	-15016.123	-296.7	3182.373	4872	-18318.111	-2081.4
Sewage Treatment Plant 2	36714.116	6229.1	61911.605	7439.2	25197.489	1210.1	67703.299	8113.8	30989.183	1884.7	15352.72	1840.2	-21361.396	-4388.9	39390.202	4872	2676.086	-1357.1
Public Works	26975.055	6145.1	40010.542	7490.9	13035.487	1345.8	42720.009	8263.9	15744.954	2118.8	4734.614	1901.7	-22240.441	-4243.4	17425.157	5057.4	-9549.898	-1087.7
Daycare	4606.651	6992.3	11180.03	7490.9	6573.379	498.6	19750.737	8294.6	15144.086	1302.3	6539.997	1869.3	1933.346	-5123	15196.942	5057.4	10590.291	-1934.9
Civic Centre	60047.804	6916.8	57672.149	7403.9	-2375.655	487.1	72120.788	8258.2	12072.984	1341.4	12228.766	1851.4	-47819.038	-5065.4	39565.453	4930.9	-20482.351	-1985.9
Memorial Sports Centre1	132342.865	6962.5	189608.307	7497.7	57265.442	535.2	200687.047	8176.9	68344.182	1214.4	60954.535	1841.5	-71388.33	-5121	128760.303	4928.7	-3582.562	-2033.8
Memorial Sports Centre2	57494.116	6129.9	81523.252	7497.7	24029.136	1367.8	95955.199	8176.9	38461.083	2047	16849.326	1841.5	-40644.79	-4288.4	45073.408	4928.7	-12420.708	-1201.2
TOTAL	459969.148	95678.4	588538.725	111166.5	128569.577	15488.1	710836.179	122900.4	250867.031	27222	145532.467	32132.8	-314436.681	-63545.6	382147.804	74663	-77821.344	-21015.4

Spreadsheet #3 - Solar Summary

	Expected	2013		2014		2015		2016		Average	kWh Total To Date	Revenue To Date
		kWh	Revenue	kWh	Revenue	kWh	Revenue	kWh	Revenue			
January	3444	1101	\$ 974.08	743	\$ 648.88	846	\$ 742.30	438	\$ 593.43	959.0	4795	\$ 4,295.23
February	4720	2082	\$ 1,863.09	1185	\$ 1,049.52	2001	\$ 1,789.02	1756	\$ 1,562.70	2084.8	10424	\$ 8,991.01
March	6658	3950	\$ 3,511.58	1535	\$ 1,742.81	5513	\$ 4,971.80	3787	\$ 3,407.62	3940.2	19701	\$ 18,065.27
April	6740	5865	\$ 5,291.50	5625	\$ 5,073.32	6237	\$ 5,627.94	5196	\$ 4,688.81	5894.6	29473	\$ 26,593.86
May	7192	6302	\$ 5,686.86	5527	\$ 4,984.49	5116	\$ 4,612.02	6482	\$ 5,849.98	5949.2	29746	\$ 26,836.29
June	7143	7099	\$ 6,409.14	5444	\$ 4,909.28	4506	\$ 4,113.21	5650	\$ 5,095.98	6073.2	30366	\$ 27,452.18
July	7417	6663	\$ 6,014.02	6844	\$ 6,178.04	5463	\$ 4,980.87	5201	\$ 4,689.05	6358.2	31791	\$ 28,743.96
August	6794	7323	\$ 6,612.14	5883	\$ 5,307.13	5790	\$ 5,222.83	5673	\$ 5,116.80	6450.8	32254	\$ 29,109.15
September	5312	6088	\$ 5,492.92	4941	\$ 4,453.44	5261	\$ 4,743.42	2849	\$ 2,557.54	5089.0	25445	\$ 22,938.47
October	4116	3497	\$ 3,144.79	3877	\$ 3,489.18	4042	\$ 3,641.43	2662	\$ 2,388.06	3471.8	17359	\$ 15,628.58
November	2675	1610	\$ 1,434.68	1707	\$ 1,522.58	2114	\$ 1,891.42	2144	\$ 1,900.87	1850.4	9252	\$ 8,245.63
December	2942	446	\$ 379.79	1185	\$ 742.30	1465	\$ 1,303.27	439	\$ 373.45	851.8	4259	\$ 3,431.22
TOTAL:	65153	52026	\$46,814.59	44496	\$40,100.97	48354	\$43,639.53	42277	\$38,224.29	48973	244865	\$ 220,330.85



Our Plan

The Town of Fort Frances is taking the development of an Energy Conservation and Demand Management Plan as an evolving tool to monitor and improve the overall condition and future maintenance of our corporate facilities.

Strategic Planning

Long-term Strategic Issues

Strategic level issues addressed in this plan are: energy policy development, development of skills and knowledge, organizing for energy management, managing energy information, communicating with our stakeholders, and investing in energy management measures.

Links With Other Municipal Plans and processes

The energy management plan will be integrated with the budget planning process, preventative maintenance planning, and the overall asset management plan.

Leadership

Energy Leader

The Town of Fort Frances has assigned the Manager of Operations and Facilities to be the corporate energy leader. He will have the overall responsibility and leadership for corporate energy management

Energy Team

The Fort Frances energy management team will consist of departmental employees as well as council members. The following are the current members of the energy management team:

- Chief Building Official, Facilities/Special Projects Coordinator
- Manager of Operations and Facilities

August 9, 2017

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities

RE: 2018 intake of the Ontario Community Infrastructure Fund

Over that last number of years the Provincial and Federal governments have been funding municipal infrastructure rehabilitation through the Ontario Community Infrastructure Fund (OCIF). This funding has two components, one being a formula based component where the Town receives funds based on a formula looking at population, value of current infrastructure, and median household income. In 2017 the Town will receive \$299,229.00 and in 2018 the Town will receive \$422,247.00. The second component is the Top Up component whereby the combined OCIF funding can be 80% of eligible project costs up to \$2,000,000.00. Over the last number of years the Town has been applying for the reconstruction of Colonization Road West from 1302 to Armstrong Place (2 bolt watermain) and Sinclair Avenue between Victoria Avenue and Armit Avenue. The applications have alternated between both projects, with no funding having been successfully secured for this work.

The OCIF program focuses on infrastructure works that address a pressing health and safety need and that meet the objectives of Town's Asset Management Plan. For the 2017 application, the inclusion of a sidewalk along Colonization Road was included in the project to bolster the health and safety component of the application, and still the Town was not successful. For 2018 the application intake has been moved from the fall to summer in an effort to award funding prior to years end, allowing for early tendering of works. Below is a listing of potential projects to submit for the 2018 funding.

Road Section	Issue	Pros	Cons
Sinclair Avenue	Hospital Service – Watermain break generally once per year	102 year old watermain that is heavily deteriorated servicing the Hospital	Very low volume road with no residents on the road and generally good surface condition
Colonization Road West (1302 to Armstrong Place)	2 bolt connections rotting away – repair generally once per year	Repair once per year, typically in the winter. Heavily deteriorated road surface due to number of patches	Infrastructure not old, just a poor type for soil conditions Sanitary in good condition.
Second Street (300 Block)	Heavily deteriorated water, sanitary sewer and road surface	Heavily deteriorated road section with extremely high traffic volumes and severely deteriorated sidewalk (tripping hazard)	Old road section with high volumes, however very little health and safety impact other than sidewalk.
Front Street (Crowe Ave to Minnie Ave)	Watermain looping and rehabilitation of Truck Route	Deteriorated road surface and need for water main looping to improve quality issues and fire flows	Little infrastructure within roadway. Town has done other things to loop area with great success.
8 th Street East (Minnie Ave to Mill Road)	No water supply fire protection issues undevelopable properties	Large amount of land currently undevelopable due to lack of fire protection and a number of	Low volume roadway with very few current structures at risk due to little property developed

		historical residents unprotected	currently.
Armit Avenue (400 Block)	101 year old watermain and heavily deteriorated road surface	Heavily deteriorated road surface, 100 year old water main 72 year old sanitary	No really urgent health and safety concern.
Third Street East (1200 Block)	Heavily deteriorated road surface	Heavily deteriorated road surface and history of sanitary main and watermain issues – Tendered in 2017	Not an urgent health and safety concern.

The installation of a water and sanitary sewer main along 8th Street from Mill Road to Minnie Avenue would include the looping of Williams Avenue watermain and tie in the service currently going to some of the houses down Minnie Avenue that traverses a number of private properties. This installation will resolve a serious fire protection issue within the Town by providing a fire hydrant at the intersection of 8th Street East and Minnie Avenue North. Further if the Town is successful in securing Connecting Link funding for the rehabilitation of the Mill Road Overpass, the intersection of Mill Road and 8th Street East will be excavated in 2018 for those works which would alleviate having to open an intersection twice in a short period.

After a review of the potential projects available and in comparison to the requirements of the OCIF funding; it is the recommendation of Administration that 8th Street East (Minnie Avenue to Mill Road) be selected as the project to apply to OCIF for funds to complete. Further that an application be completed and submitted to OCIF prior to the September 27, 2017 deadline.

Respectfully Submitted



Travis Rob, EIT

Council approval of this report will ensure:

- 1. That the reconstruction of 8th Street East from Minnie Avenue to Mill Road be selected for application to the 2018 intake of the Ontario Community Infrastructure Fund.**
- 2. That an application be completed and submitted prior to the September 27, 2017 deadline.**

Manager of Operations and Facilities

July 20, 2017

Report To: Mayor & Council

From: Travis Rob, Manager of Operations & Facilities

SUBJECT: June 2017 Drinking Water Systems Monthly Summary Report

Please find attached the June 2017 Summary Report on the drinking water systems, prepared by Randy White, Senior WTP Operator.

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

Respectfully submitted,
Operations & Facilities Division

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

Council approval of this report will accept the June 2017 report prior to it being made available to the general public.

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

03CouncilwaterreportMarch 2015

June, 2017

**Monthly Summary Report
Water Systems**

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

Dated: July 13, 2017

1) **Introduction:**

This report contains the major maintenance activities and operational events that occurred during the month of June 2017 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): 4 samples taken no adverse results

Water Treatment Plant (raw): 4 samples taken no adverse results

Water Distribution System: 16 samples taken where 25% of samples were tested for heterotrophic plate count (HPC) - no adverse results.

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

Water distribution samples taken at the following locations:

- | | | | |
|-----------------------|-----------------------|---------------------|--------------|
| 1. 1150 Portage Ave. | 2. 901 Wright Ave. | 3. 810 King's Hwy. | 4. W. Tower |
| 5. 740 Scott St. | 6. 1036 Victoria Ave. | 7. 901 Wright Ave. | 8. W. Tower |
| 9. 1036 Victoria Ave. | 10. 122 Scott St. | 11. 810 King's Hwy. | 12. W. Tower |
| 13. 1227 Fifth St. E. | 14. 1150 Portage Ave. | 15. 901 Wright Ave. | 16. W. Tower |

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:

June 01st - unloaded four (4) chlorine tonners and shipped back four (4) empties.
- cleaned top and bottom tanks on the poly unit.
- cleaned all four (4) check valves on the poly unit.

June 05th - cleaned the flumes and troughs on both clarifiers.
- worked on Reservoir No. 1 influent valve.

June 06th - equipment calibration be ClearTech.

June 15th - installed a new soda ash line from the pump to the contact chamber.

June 16th - took grab samples off filters.
- checked the calibration of the Distribution Chlorine Analyzer.

June 19th - ran standby generator for one (1) hour.

8) Water Complaints:

- Poor Pressure – 0 complaint:
- Water quality – 2 complaints:
 1. 902 Phair Ave. – yellowish water, flushed until clear.
 2. 1029 Williams Ave. – smell and taste concern, Town crew flushing (valve exercising). Flushed system until clear.

9) Other Miscellaneous Information:

June 01st - QMS meeting on internal audit.

June 05th - took weekly routine micro samples.

June 06th - received a bulk load of Aluminum Sulphate.

June 12th - took weekly routine micro samples.

June 15th - QMS management review meeting.

June 19th - took weekly routine micro samples.

June 20th - took micro samples at Sunny Cove Camp.

June 22nd - temp. water main – Nelson St. – micro samples – 1st set.

June 26th - took weekly routine micro samples.

- temp. water main – Nelson St. – micro samples – 2nd set.

- took micro samples at construction sites around town (valve replacements) – 1st set.

June 27th - took micro samples at construction sites around town (valve replacements) – 2nd set.

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

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

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

Monthly Report June 2017

Flow Data	JUNE	Units	2015		2016		2017	
		Day of the Month			Day of the Month		Day of the Month	
Total Raw Water	m ³		168110		165710		197910	
Raw Maximum Day	m ³	Saturday 13th	5950	Saturday 11th	6210	Sunday 11th	6890	
Raw Minimum Day	m ³	Monday 22nd	5270	Friday 03rd	4620	Saturday 03rd	6270	
Raw Average Daily Consumption	m ³		5600		5330		6600	
Total Treated Water	m ³		116430		120190		114210	
Treated Water Maximum Day Consumption	m ³	Thursday 18th	4560	Thursday 09th	5970	Wednesday 07th	4860	
Treated Water Minimum Day Consumption	m ³	Tuesday 09th	3390	Thursday 30th	3260	Sunday 18th	3150	
Treated Water Average Day Consumption	m ³		3880		3880		3810	
Daily Average Per Household Consumption Rate	m ³		1.026		1.026		1.007	
* Daily Average Per Person Consumption Rate	m ³		0.486		0.486		0.477	
Monthly Averages - Operating Parameters WTP:								
FAC Residual - Treated Water	mg/L		1.90		2.07		2.20	
Total Chlorine Residual - Treated Water	mg/L		2.29		2.45		2.41	
Aluminum Sulphate - Raw Water	mg/L		35.0		35.0		35.0	
Aluminum Sulphate - Treated Water Residual	mg/L		0.03		0.03		0.02	
Fluoride - Treated Water	mg/L		0.60		0.62		0.63	
Soda Ash - Raw Water	mg/L		35.0		35.0		35.0	
PH - Adjusted	mg/L		7.28		7.29		7.28	
Temperature	C		16.7		16.8		16.2	
Quantity of Chemical Used:	kg							
Aluminum Sulphate	kg		5883.9		5799.9		6926.9	
Polyelectrolyte	kg		75.0		100.0		62.5	
Chlorine Gas	kg		764.0		801.0		935.0	
Soda Ash - Used for PH Adjustment	kg		5883.9		5799.9		6926.9	
Fluoride	kg		385.0		493.0		651.0	

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

* Population is 7986

* Number of Households is 3783

Town of Fort Frances - Water treatment Plant - Water Works # 220000978
Monitoring Record
June 2017

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	Total	Average
		or Range																																
Flow rates																																		
Raw Water	10^3 M^3	17	6.61	6.47	6.27	6.47	6.84	6.60	6.55	6.59	6.67	6.71	6.89	6.33	6.58	6.29	6.70	6.66	6.53	6.65	6.77	6.62	6.59	6.68	6.70	6.32	6.66	6.82	6.59	6.59	6.61	6.55	197.91	6.60
Peak Instantaneous - Raw Water	L/s	n/a	75.76	75.87	76.19	76.17	76.26	76.97	76.84	77.19	78.20	78.14	77.70	77.20	77.36	78.06	77.87	77.83	77.80	77.80	77.75	77.81	77.32	77.49	77.40	77.26	77.33	77.53	77.34	76.94	76.99	77.14	2317.51	77.25
Treated Water	10^3 M^3	17	3.37	3.88	4.03	3.87	3.87	4.22	4.86	4.19	3.74	4.37	3.57	3.47	3.97	3.36	4.19	3.56	3.83	3.15	3.53	3.71	4.50	3.63	3.79	3.79	3.60	3.72	3.64	3.64	3.74	3.42	114.21	3.81
Peak Instantaneous - Treated Water	L/s	n/a	81.08	80.77	84.39	81.16	81.72	83.43	94.93	91.90	82.55	90.08	80.08	110.49	89.41		90.00	92.98	86.93	79.54	81.09	87.48	90.47	88.24	83.30	89.52	90.00	86.83	83.81	81.80	93.22	80.47	2517.67	86.82
BackWash Water	10^3 M^3	n/a	0.495	0.254	0.240				0.263	0.255	0.237		0.257	0.244	0.265	0.256	0.246	0.265			0.255	0.241	0.269	0.256	0.235	0.264		0.239	0.285		0.240	0.266	5.827	0.265
Fluoride Information																																		
Fluoride Residual - Treated Water	mg/l	0.5 to 0.8	0.63	0.60	0.64	0.65	0.61	0.58	0.61	0.69	0.71	0.70	0.71	0.69	0.63	0.61	0.57	0.57	0.58	0.61	0.58	0.60	0.65	0.62	0.59	0.65	0.66	0.68	0.65	0.64	0.58	0.62	18.91	0.63
Turbidity Information																																		
Raw Water	NTU	n/a	1.23	1.26	1.29	1.34	1.29	1.34	1.37	1.31	1.35	1.31	1.27	1.34	1.29	1.25	1.33	1.19	1.28	1.33	1.28	1.25	1.31	1.35	1.30	1.27	1.32	1.29	1.34	1.27	1.20	1.36	38.91	1.30
Settled Water	NTU	n/a	0.19	0.16	0.14	0.14	0.16	0.17	0.19	0.17	0.18	0.21	0.18	0.14	0.18	0.17	0.19	0.21	0.16	0.19	0.17	0.18	0.16	0.18	0.17	0.15	0.14	0.18	0.16	0.15	0.17	0.14	5.08	0.17
Treated Water	NTU	1	0.11	0.10	0.10	0.10	0.10	0.11	0.12	0.12	0.11	0.13	0.11	0.09	0.1	0.08	0.10	0.09	0.10	0.10	0.11	0.10	0.10	0.09	0.10	0.09	0.09	0.10	0.10	0.09	0.09	0.09	3.02	0.10
Other Operating Parameters																																		
pH - Treated Water	no units	6.5 to 8.5	7.29	7.32	7.29	7.26	7.30	7.37	7.32	7.30	7.27	7.31	7.19	7.22	7.15	7.17	7.11	7.17	7.22	7.21	7.24	7.23	7.27	7.30	7.13	7.18	7.24	7.51	7.50	7.44	7.47	7.36	218.34	7.28
pH - Settled water	no units	n/a	6.14	6.14	6.16	6.11	6.14	6.11	6.15	6.21	6.17	6.21	6.25	6.09	6.12	6.19	6.27	6.30	6.17	6.15	6.17	6.16	6.20	6.26	6.13	6.16	6.17	6.23	6.23	6.19	6.23	6.19	185.40	6.18
pH - Raw Water	no units	n/a	7.41	7.39	7.26	7.24	7.37	7.42	7.44	7.40	7.28	7.20	7.12	7.16	7.31	7.19	7.21	7.30	7.21	7.23	7.26	7.32	7.29	7.26	7.22	7.18	7.24	7.51	7.50	7.44	7.47	7.36	219.19	7.31
FAC - Treated Water	mg/l	0.2 to 4	2.20	2.30	2.28	2.30	2.24	2.66	2.30	2.31	2.16	1.97	1.95	2.16	2.20	2.20	2.22	1.99	1.95	2.00	2.11	2.18	2.30	2.32	2.24	2.24	2.20	2.30	2.24	2.20	2.04	2.04	63.85	2.20
Total Chlorine Residual Treated	mg/l	0.3 to 7	2.42	2.54	2.56	2.54	2.50	2.96	2.52	2.52	2.28	2.20	2.18	2.32	2.38	2.36	2.32	2.28	2.24	2.19	2.32	2.34	2.48	2.52	2.50	2.48	2.46	2.48	2.40	2.48	2.24	2.28	72.29	2.41
Temperature	C	15	13.0	13.0	13.0	13.0	14.0	14.00	14.0	16.0	19.0	19.0	16.0	16.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	486.0	16.2	
Fluoride used (Total Daily Consumption)	kg	n/a	25.0	23.0	23.0	23.0	25.0	22.00	22.0	21.0	21.0	21.0	21.0	19.0	20.0	20.0	20.0	19.0	18.0	17.0	23.0	24.0	23.0	23.0	23.0	22.0	23.0	23.0	22.0	22.0	21.0	651.0	21.7	
Chlorine used (Total Daily Consumption)	kg	n/a	31.0	31.0	29.0	30.0	32.00	31.0	31.0	31.0	32.0	32.0	32.0	29.0	31.0	30.0	31.0	31.0	31.0	32.0	32.0	32.0	32.0	31.0	32.0	30.0	32.0	33.0	32.0	30.0	31.0	31.0	935.0	31.2
Soda ash (Total Daily Consumption)	kg	n/a	231.4	226.5	219.5	226.5	239.4	231.0	229.3	230.7	233.5	234.9	241.2	221.6	230.3	220.2	234.5	233.1	228.6	232.8	237.0	231.7	230.7	233.8	234.5	221.2	233.1	238.7	230.7	230.7	231.4	229.3	6926.9	230.9
Soda Ash - Dosage	mg/l	n/a	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	1050.0	35.0
Alum residual - (Total Daily Consumption)	kg	n/a	231.4	226.5	219.5	226.5	239.4	231.0	229.3	230.7	233.5	234.9	241.2	221.6	230.3	220.2	234.5	233.1	228.6	232.8	237.0	231.7	230.7	233.8	234.5	221.2	233.1	238.7	230.7	230.7	231.4	229.3	6926.9	230.9
Alum residual - Dosage	mg/l	n/a	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	1050.0	35.0
Alum residual - Treated Water	mg/l	0.1	0.02	0.02	0.01	0.01		0.01	0.01	0.04	0.03	0.03	0.05	0.04	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.02	0.04	0.04	0.03	0.02	0.01	0.03	0.01	0.63	0.02
Poly bags added (25 kg bags)	kg		0.5														0.5							0.5				0.5		0.5			62.5	

August 9, 2017

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities

RE: Removal of Traffic Control Signals – 2017 Budgetary Cost Reducing Strategy – Report 2

At the July 5, 2017 meeting of the Operations and Facilities Executive Committee a traffic volume and traffic signal study was presented including recommendations, all of which is attached to this report. At that meeting the committee decided to table the recommendations to allow time for administration to put together a costing for the replacement of one traffic signal controller including required upgrades to meet accessibility requirements. This would provide some spare parts to support the out dated equipment currently installed throughout town.

The intersection of McIrvine Road and Kings Highway was used as the design intersection to replace the controller on as this intersection is a relatively simple intersection that could see the one of the biggest benefits of the installation of some smart technologies to allow east/west traffic to flow when there is no cross traffic queue. The below table outlines the cost associated for the replacement of one intersections traffic control signals.

- Replace existing controller and cabinet with new NEMA Cabinet - \$13,000.00
- Pedestrian Signal APS – Full Intersection - \$9000.00
- Autoscope Vision Video Detection – Full Intersection - \$30,000.00

The costs provided are for a simple controller similar to that currently installed as well as the optional addition of photo detection and other intelligent features to improve traffic flow, especially in the off peak times at certain intersections. Under new regulations spurring from the Accessibility for Ontarians with Disabilities Act, when upgrading traffic controllers, you have to bring the pedestrian signals up to compliance with the regulations. This will be accomplished with the APS addition noted above. FFPC would be completing the installation of the new controllers and provided that programming information could be sent to Econolite in advance and proper grounding is on site, it is anticipated that the installation of a simple controller cabinet would take 4 hours. Therefore the installation cost would start at \$650.00. Addition of video detection, the repair/replacement of any wiring or grounding, and any onsite programming required would be in addition to this. Also to note is that all prices are exclusive of HST and shipping and budgetary in nature, once direction is provided final quotations can be sought.

The Town of Fort Frances currently operates 12 signalized intersections, all with the exact same equipment that has not been supported by the manufacturer for a number of years. These controllers were all installed in 1998 and have a useful life of 12 years. Most municipalities plan for the replacement of their controllers on a 12 year cycle to avoid any disruptions to service, these units are almost 20 years old, placing the Town in a precarious position. In speaking with the manufacturer, these controllers are “unrepairable with replacement components no longer available”. The Town needs to start a phased replacement of all controllers over the next 2 years, or sooner, starting in 2018 to avoid a failure causing sustained down time and unbudgeted expenses.

Given the age of the traffic control infrastructure currently in the Town, the lack of available repair parts, and the intention of the proposal to remove one set of lights discussed during the budget deliberations, it is the recommendation of Administration that

1. Removal of one set of traffic control signals be completed as proposed in Report #1 dated July 5, 2017, more specifically:
 - a. Remove the traffic control signals at the intersection of Armit Avenue and Second Street and replace with 2 stop signs on Armit Avenue, north and south bound.
 - b. Extend the No Parking zone on Second Street back approximately 31m on the 400 block during the daytime hours to improve the sight lines at this intersection.
 - c. Engage the Rainy River District School Board to close the walk through in their fence midblock on Second Street to better direct school pedestrian traffic to the Crowe Avenue intersection to cross Second Street.
 - d. That the recommended parking and signage changes be brought forward to the Traffic Safety Committee for review and comment.
 - e. Make the required amendments to the Traffic Control By-Law for the removal of the signals, addition of the Stop Signs and changes to the parking requirements.
2. That the replacement of 6 traffic controllers be brought forward to the 2018 Capital Budget.

Respectfully Submitted



Travis Rob, EIT

Council approval of this report will ensure:

1. **Removal of one set of traffic control signals be completed as proposed in Report #1 dated July 5, 2017, more specifically:**
 - a. **Remove the traffic control signals at the intersection of Armit Avenue and Second Street and replace with 2 stop signs on Armit Avenue, north and south bound.**
 - b. **Extend the No Parking zone on Second Street back approximately 31m on the 400 block during the daytime hours to improve the sight lines at this intersection.**
 - c. **Engage the Rainy River District School Board to close the walk through in their fence midblock on Second Street to better direct school pedestrian traffic to the Crowe Avenue intersection to cross Second Street.**
 - d. **That the recommended parking and signage changes be brought forward to the Traffic Safety Committee for review and comment.**
 - e. **Make the required amendments to the Traffic Control By-Law for the removal of the signals, addition of the Stop Signs and changes to the parking requirements.**
2. **That the replacement of 6 traffic controllers be brought forward to the 2018 Capital Budget.**

Manager of Operations and Facilities

July 5, 2017

Report To: Mayor and Council

From: Travis Rob, Manager of Operations and Facilities

RE: Removal of Traffic Control Signals – 2017 Budgetary Cost Reducing Strategy

Background

Council will recall that in February of 2017 a number of cost reducing initiatives we presented to Council in an effort to balance the 2017 Operating Budget. One of these initiatives was the removal of one set of traffic control signals with the cost savings for 2017 estimated at \$668.00. This cost savings was a balance of energy and maintenance cost reductions with an annual savings over a full calendar year being \$1895.69. More than the energy or maintenance savings, the current Traffic Control systems is obsolete and parts are no longer available. The removal of one set of signals would provide repair parts to keep other intersections operating into the future. Without these spare parts, any number of incidents could result in any of the other signalized intersections being without signals regardless of traffic and pedestrian volumes.

During the month of June 2017 a study of Traffic Control signals within the Town of Fort Frances was completed. The study reviewed the following intersections:

Intersection 1: Armit Avenue and Second Street

Intersection 2: Crowe Avenue and Second Street

Intersection 3. Armit Avenue and Scott Street

Intersection 1 and 2 were proposed during the budget deliberations with intersection 3 being brought up in the public most during the same time. The other intersection that was noted was Second Street and Mowat Avenue, however due to the high volume of truck traffic negotiating that intersection, it was determined that the removal of the traffic signals on this intersection would cause too great of traffic delays and was therefore not studied. During the week of June 12, 2017 the Operations and Facilities Division staff conducted an 8 hour traffic and pedestrian count to form the basis of the evaluation of the justification of the study traffic signals. The completion of the 8 hour traffic count and subsequent evaluation of the results was completed in accordance with the Ontario Traffic Manual (OTM) Book 12 – Traffic Signals.

Study Methodology

To determine whether or not traffic signals are justified there are a number of tests to complete, these are summarized below:

Justification 1: Minimum Vehicle Volume – Calculation of vehicle volume over an 8 hour traffic count.

Justification 2: Delay to Cross Traffic – Calculation of vehicles and pedestrian volumes, not including right turn movements over an 8 hour traffic count.

Justification 3: Collision Experience – *This is related to an un-signalized intersection becoming signalized so was not considered during this evaluation.

Justification 4: Combination Justification – *This is only used when two of the above justifications are over 80% satisfied but not over 100% satisfied, therefore was not considered as part of this evaluation.

Justification 5: Pedestrian Volumes – Total pedestrian volume in an 8 hour count compared to traffic volume over the same period

Intersection 3 was over 100% justified on justification 1 therefore there was no benefit in completing the evaluation of the other justifications and this intersection is recommended to remain signalized. The attached spreadsheets outline the full calculations for the 3 applicable justifications for intersections 1 and 2 and justification 1 data for Intersection 3.

For Justification 5, the OTM has a table which equates a justification based on a comparison of the 8 hour traffic volume and pedestrian volume, see table below. Given the traffic and pedestrian volume, signals are not justified for these locations.

Table 20 - Pedestrian Volume Justification 5.

8 Hour Vehicular Volume V_8	Net 8 Hour Pedestrian Volume				
	< 200	200 - 275	276 - 475	476 - 1000	> 1000
< 1440	Not Justified	Not Justified	Not Justified	Not Justified	Not Justified
1440 - 2600	Not Justified	Not Justified	Not Justified	See Equation 1	Justified
2601 - 7000	Not Justified	Not Justified	See Equation 2	Justified	Justified
> 7000	Not Justified	See Equation 3	Justified	Justified	Justified

EQUATION 1: Justified If net 8 hour ped. vol. > $(1650 - (0.45V_8))$

EQUATION 2: Justified If net 8 hour ped. vol. > $(0.0001 V_8^2 - 0.146V_8 + 770)$

EQUATION 3: Justified If net 8 hour ped. vol. > $(340 - (.0094V_8))$

% Justification = $((\text{net 8 hour pedestrian volume}) / (\text{Equation 1, 2 or 3 as appropriate})) \times 100 \%$

This table represents a provincially standardized evaluation of pedestrian volumes for the purpose of justifying traffic signals.

Interpretation

Looking at Intersection 1 and 2, neither intersection shows justification for signals on any of the three tests completed therefore a review of the hour by hour traffic information was completed looking for trends that may not have been brought to light through the OTM calculations.

The intersection of Armit and Second sees some traffic queuing for the Robert Moore Kiss and Ride turning left off of Second Street. This movement would likely be improved with the removal of the traffic signals as there would not be a queue of vehicles at a red light that would have to get through the intersection before the turn could happen, the signals at Crowe would provide the relief to allow the vehicles to make the left turn off Second. There are some students that cross this street to access

residential areas in the 200, 300, and 400 blocks of Nelson Street, Church Street, Scott Street, First Street and Second Street. The primary traffic flow is east west on Second Street and other than the morning and afternoon school traffic, the pedestrian and Armit Avenue vehicular traffic is minimal.

The intersection of Church and Second sees the exiting of all of the busses onto Second Street from Robert Moore. In Justification 2, the traffic turning right is not considered as this traffic has the ability to turn right on a red light. In an 8 hour count the volume of traffic turning right at this intersection is 228 plus an additional 13 'trucks' (larger trucks, busses, motorhomes etc.). The Crowe Avenue intersection saw far more truck traffic than the Armit intersection over the 8 hour count specifically negotiating the turning movements from Crowe to Second and Second to Crowe. Further the pedestrian traffic at this intersection would be for students east of Crowe Avenue and south of Second Street, a much larger residential catchment area.

Recommendation

The Ontario Traffic Manual notes, in relation to removing traffic signals that "If under any circumstances the signal fails to meet any justification, then it should be considered a candidate for removal". Given the criticality of traffic signals at some intersections within the Town and the unavailability of repair parts, and further based on the numbers developed through the OTM Justifications, and the observations in the field of these intersections, Administration recommends the following:

1. Remove the traffic control signals at the intersection of Armit Avenue and Second Street and replace with 2 stop signs on Armit Avenue, north and south bound.
2. Extend the No Parking zone on Second Street back approximately 31m on the 400 block during the daytime hours to improve the sight lines at this intersection.
3. Engage the Rainy River District School Board to close the walk through in their fence midblock on Second Street to better direct school pedestrian traffic to the Crowe Avenue intersection to cross Second Street.
4. That the recommended parking and signage changes be brought forward to the Traffic Safety Committee for review and comment.
5. Make the required amendments to the Traffic Control By-Law for the removal of the signals, addition of the Stop Signs and changes to the parking requirements.

Respectfully Submitted



Travis Rob, EIT

Council approval of this report will agree with the recommendation of the Operations and Facilities Executive Committee to:

- 1. Remove the traffic control signals at the intersection of Armit Avenue and Second Street and replace with 2 stop signs on Armit Avenue, north and south bound.**
- 2. Extend the No Parking zone on Second Street back approximately 31m on the 400 block during the daytime hours to improve the sight lines at this intersection.**
- 3. Engage the Rainy River District School Board to close the walk through in their fence midblock on Second Street to better direct school pedestrian traffic to the Crowe Avenue intersection to cross Second Street.**
- 4. That the recommended parking and signage changes be brought forward to the Traffic Safety Committee for review and comment.**
- 5. Make the required amendments to the Traffic Control By-Law for the removal of the signals, addition of the Stop Signs and changes to the parking requirements.**

Manager of Operations and Facilities

2017JulyTrafficLightRemoval

Armit Avenue and Second Street

Justification	Guidance	Hour Ending								No of Hours w/ Compliance		Average Compliance %	8hr traffic Vol.
		8:00am	9:00am	12:00am	1:00pm	3:00pm	4:00pm	5:00pm	6:00pm	>100%	>80%		
1A	Total Traffic Volume Entering Intersection (vph) (2 way total)	319	593	463	441	433	549	496	504				3798
	Compliance % (=vol*100)/720)	44.31	82.36	64.31	61.25	60.14	76.25	68.89	70.00	8	7	65.94	
1B	Crossing Travffic Volume (vph) (2 way total)	68	148	105	105	115	143	131	88				903
	Compliance % (=vol*100)/170)	40.00	87.06	61.76	61.76	67.65	84.12	77.06	51.76	8	8	66.40	4701

Justification	Guidance	Hour Ending								No of Hours w/ Compliance		Average Compliance %
		8:00am	9:00am	12:00am	1:00pm	3:00pm	4:00pm	5:00pm	6:00pm	>100%	>80%	
2A	Total Traffic Volume Entering Intersection (vph) (2 way total)	313	585	455	419	424	538	488	492			
	Compliance % (=vol*100)/720)	43.47	81.25	63.19	58.19	58.89	74.72	67.78	68.33	8	7	64.48
2B	Crossing Travffic Volume (vph) (2 way total)	42	122	97	93	97	160	119	82			
	Compliance % (=vol*100)/170)	24.71	71.76	57.06	54.71	57.06	94.12	70.00	48.24	8	7	59.71

Justification	Guidance	Hour Ending								8hr Ped Volume
		8:00am	9:00am	12:00am	1:00pm	3:00pm	4:00pm	5:00pm	6:00pm	
5	Total No. of pedestrians entering the intersection	6	35	15	8	17	70	29	15	195

Crowe Avenue and Second Street

Justification	Guidance	Hour Ending								No of Hours w/ Compliance			8hr traffic Vol.
		8:00am	9:00am	12:00am	1:00pm	3:00pm	4:00pm	5:00pm	6:00pm	>100%	>80%		
1A	Total Traffic Volume Entering Intersection (vph) (2 way total)	331	546	422	404	440	497	501	237			Average Compliance %	3378
	Compliance % (=vol*100)/720)	45.97	75.83	58.61	56.11	61.11	69.03	69.58	32.92	8.00	8.00	58.65	
1B	Crossing Travffic Volume (vph) (2 way total)	76	108	81	96	65	94	65	66				651
	Compliance % (=vol*100)/170)	44.71	63.53	47.65	56.47	38.24	55.29	38.24	38.82	8.00	8.00	47.87	4029

Justification	Guidance	Hour Ending								No of Hours w/ Compliance		
		8:00am	9:00am	12:00am	1:00pm	3:00pm	4:00pm	5:00pm	6:00pm	>100%	>80%	
2A	Total Traffic Volume Entering Intersection (vph) (2 way total)	319	549	406	391	438	497	509	237			Average Compliance %
	Compliance % (=vol*100)/720)	44.31	76.25	56.39	54.31	60.83	69.03	70.69	32.92	8.00	8.00	58.09
2B	Crossing Travffic Volume (vph) (2 way total)	30	127	36	67	53	120	46	60			
	Compliance % (=vol*100)/170)	17.65	74.71	21.18	39.41	31.18	70.59	27.06	35.29	8.00	8.00	39.63

Justification	Guidance	Hour Ending								8hr Ped Volume
		8:00am	9:00am	12:00am	1:00pm	3:00pm	4:00pm	5:00pm	6:00pm	
5	Total No. of pedestrians entering the intersection	8	52	6	15	15	63	12	4	175

Armit Avenue and Scott Street*

Justification	Guidance	Hour Ending								No of Hours w/ Compliance		
		8:00am	9:00am	12:00am	1:00pm	3:00pm	4:00pm	5:00pm	6:00pm	>100%	>80%	
1A	Total Traffic Volume Entering Intersection (vph) (2 way total)	199	385	427	493	493	461	639	434			Average Compliance %
	Compliance % (=(vol*100)/720)	27.64	53.47	59.31	68.47	68.47	64.03	88.75	60.28	8.00	8.00	61.30
1B	Crossing Travffic Volume (vph) (2 way total)	93	151	191	214	246	249	262	222			
	Compliance % (=(vol*100)/170)	54.71	88.82	112.35	125.88	144.71	146.47	154.12	130.59	2.00	1.00	119.71

* Average Compliance percentage surpasses 100% Therefore traffic signals are Justified at step 1

2017 - tonnage at Landfill Site - updated July 31, 2017

2017 - tonnage at Landfill Site - updated July 31, 2017											2016	2017			
MONTH	Residential Waste tonnes	Res %	ICI Waste tonnes	ICI %	Non Community Waste tonnes	Non Com %	Covering Material tonnes	2016	Average last 10 years	2017	Total Fees	Average last 10 years	Total Fees	2017-2016 Tonnes	2017-2016 Fees
								Total Tonne	Total Tonne	Total Tonne		Fees 2007 to 2016			
JAN	137.74	30.55	304.18	67.47	8.93	1.98	0.00	369.18	360.75	450.85	\$20,490.00	\$17,849.10	\$26,266.82	81.67	\$5,776.82
FEB	111.80	31.97	230.26	65.85	7.60	2.17	0.00	314.92	306.73	349.66	\$17,474.70	\$15,355.62	\$20,191.04	34.74	\$2,716.34
MAR	149.38	32.06	309.46	66.41	7.17	1.54	0.00	395.39	411.69	466.01	\$23,164.20	\$21,321.44	\$28,951.58	70.62	\$5,787.38
APRIL	217.26	34.44	405.17	64.22	8.48	1.34	20.73	573.09	574.04	630.91	\$34,152.50	\$30,505.60	\$40,385.84	57.82	\$6,233.34
MAY	243.32	32.81	491.78	66.31	6.49	0.88	0.00	641.69	719.34	741.59	\$34,655.80	\$36,978.61	\$43,112.32	99.90	\$8,456.52
JUNE	314.60	47.45	341.84	51.56	6.58	0.99	159.94	1,246.89	846.85	663.02	\$37,412.30	\$38,270.35	\$40,162.52	-583.87	\$2,750.22
JULY		#DIV/0!		#DIV/0!		#DIV/0!		618.23	673.76	0.00	\$37,556.30	\$37,267.74		-618.23	-\$37,556.30
AUG		#DIV/0!		#DIV/0!		#DIV/0!		897.44	657.07	0.00	\$43,194.40	\$34,723.56		-897.44	-\$43,194.40
SEPT		#DIV/0!		#DIV/0!		#DIV/0!		695.10	651.51	0.00	\$42,510.30	\$34,879.94		-695.10	-\$42,510.30
OCT		#DIV/0!		#DIV/0!		#DIV/0!		686.35	803.03	0.00	\$36,305.40	\$40,187.03		-686.35	-\$36,305.40
NOV		#DIV/0!		#DIV/0!		#DIV/0!		615.60	569.91	0.00	\$37,603.60	\$29,432.34		-615.60	-\$37,603.60
DEC		#DIV/0!		#DIV/0!		#DIV/0!		587.46	416.38	0.00	\$21,415.30	\$21,716.47		-587.46	-\$21,415.30
Average per monthly	195.68	32.25	347.11	65.99	7.54	1.76	30.11	636.78	582.59	275.17	\$32,161.23	\$29,873.98	\$33,178.35	244.85	31,720.62
Total	1174.11		2082.68		45.25		180.67	7641.34	6991.06	3302.04	\$385,934.80	\$358,487.81	\$199,070.12	-4339.30	-\$186,864.68
Town of Fort Frances Tonnage	3256.79										\$385,934.80	Actual	\$199,070.12		
											\$384,888.00	Budget	\$391,084.00		
								Includes 603.005t associated with the Fight the Blight Campaign							
Total Tonnage	3302.04										\$385,934.80	Forecasted	\$398,140.24		
Residential Tonnage	1174.11	35.56%													
ICI Tonnage	2082.68	63.07%													
Coverage material	180.67														

Sewer & Water Data for 2017

up-dated July 31, 2017

Month	Days per month	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017-2016	2017-2016	2017	2017
		Total	daily	Couch.	Couch.	Couch.	Total	daily	Couch.	Couch.	Couch.	Diff	Diff	Difference	Infiltration
		Sewage	Sewage	Sewage	Sewage	Sewage	Treated	Treated	2 Water	2 Water	Water	Treated	Wastewater	STP-WTP	daily average
		STP	STP	Meters	Meters	%	WTP	WTP	Meters	Meters	%	WTP	STP		
		cu. meters monthly	cu. meters daily	cu. meters monthly	cu. meters daily		cu. meters monthly	cu. meters daily	cu. meters monthly	cu. meters daily					
January	31	174745	5636.94	13111	422.94	7.50%	114550.0	3695.2	10605.0	342.1	9.26%	-3560.0	-1965.0	60195.0	1941.8
February	28	174956	6248.43	13811	493.25	7.89%	103680.0	3702.9	10605.0	378.8	10.23%	-6570.0	17839.0	71276.0	2545.6
March	31	223183	7199.45	15572	502.32	6.98%	113560.0	3663.2	10785.0	347.9	9.50%	-4500.0	-8182.0	109623.0	3536.2
April	30	256759	8558.63	15613	520.43	6.08%	108330.0	3611.0	10785.0	359.5	9.96%	1590.0	2888.0	148429.0	4947.6
May	31	228551	7372.61	14312	461.68	6.26%	116990.0	3773.9	9850.0	317.7	8.42%	-1590.0	18298.0	111561.0	3598.7
June	30	201914	6730.47	13005	433.50	6.44%	114210.0	3807.0	9850.0	328.3	8.62%	-5980.0	-72302.0	87704.0	2923.5
July	31		0.00		0.00	#DIV/0!		0.0		0.0	#DIV/0!	-126030.0	-252416.0	0.0	0.0
August	31		0.00		0.00	#DIV/0!		0.0		0.0	#DIV/0!	-137500.0	-190658.0	0.0	0.0
September	30		0.00		0.00	#DIV/0!		0.0		0.0	#DIV/0!	-104260.0	-180285.0	0.0	0.0
October	31		0.00		0.00	#DIV/0!		0.0		0.0	#DIV/0!	-103050.0	-181205.0	0.0	0.0
November	30		0.00		0.00	#DIV/0!		0.0		0.0	#DIV/0!	-96940.0	-169075.0	0.0	0.0
December	31		0.00		0.00	#DIV/0!		0.0		0.0	#DIV/0!	-108030.0	-187407.0	0.0	0.0
Total	365	1260108		85424			671320.0		62480			-696420.0	-1204470.0	588788.0	1613.1
Monthly Average												-58035.0	-100372.5	49065.7	1624.5
daily Average															

TOWN OF FORT FRANCES
Operations and Facilities Division - Environmental Area - Operations Statistics
(May 2017)

STAFFING:

See Operations Statistics (May) 2017 prepared by M. Strachan, Superintendent of Transportation

OVERTIME HOURS - Equivalent Straight Time Hours

See Operations Statistics (May) 2017 prepared by M. Strachan, Superintendent of Transportation

WATER DISTRIBUTION:

Water Main Breaks:

- Number of water main breaks: Two (2)
- 937 Banta Blvd. and 1012 Victoria Ave. N.

Hydrant Repairs:

- Number of hydrant repairs: None

Hydrant Replacements:

- Number of hydrant replacements: None

Hydrant Installations (NEW):

- Number of new hydrant installations: None

Main Valve Repairs:

- Number of water main valve repairs: One (1)
- Banta Blvd. at Shevlin Ave. (VAL 465)

Main Valve Replacements:

- Number of water main valve replacements: None

Water Service Breaks:

- Number of water service breaks: None

Water Service Repairs:

- Number of water service repairs: Three (3)
- 811 Church St., 800 Church St. and 922 Reid Ave.

Water Service Installations (NEW):

- Number of water service installations: None

Water Service Terminations:

- Number of water service terminations: None

Water Service Turn "Off/On":

- Number of water service turn "Off/On": Twenty-four (24)
 - 700 McIrvine Rd., 127 First St. E., 1271 Idylwild Dr., 1404 King's Hwy., Point Park Pump Stn.,
 - 1000 Calder Dr. (2), 401 King's Hwy., 854 Minnie Ave. (2), 1027 Third St. E., 237 Fifth St. E. (3),
 - 1301 Calder Dr., 800 Calder Dr., 901 Second St. E., 306 Victoria Ave., 1319 Colonization Rd. E.
 - 1011 Front St., 400 Central Ave., 1000 First St. E. (2) and 621 First St. E.

Frozen Water Services:

- Number of frozen water services: None

Water Meter Installations/Replacements:

- Number of water meter installations/replacements: Three (3)
 - 127 First St. E., 1150 Portage Ave. N. and 801 Eighth St. W.

Backflow Preventer Installations/Replacements:

- Number of backflow preventer new installations: None

Backflow Preventer Annual Testing:

- Number of backflow preventer tested: Fourteen (14)
 - 127 First St. E., 298 Scott St., 1455 Idylwild Dr., 1101 Front St., 239 Church St., 417 Scott St.
 - 515 Mowat Ave., 206 Victoria Ave. 1000 McIrvine Rd., 858 Sixth St. W., 511 Victoria Ave., 414 Scott St.
 - 472 Church St. and 232 Scott St.

Other Information:

- Sunny Cove Camp - re-assembling of the equipment for water system.
- Commenced with the valve exercising program (Area 1) and hydrant valve exercising.
- Replaced missing and faded markers on fire hydrants.
- May 1, 2017 - Connection inspection of the water service at 1228 Third St. E.
- May 2, 2017 - terminated the illegal water service line at 801 Eighth St. W.
- Summarized final costs for invoicing of private works.
- Recorded locations of curb stops at various locations.
- May 25, 2017 - J. Bruyere attended a course on Water Repair Logistics at the Keewaytinook Centre in Dryden.
- May 29 - June 2, 2017 - L. Carmody attended the Entry-Level Course for Drinking Water Operators at the Airplane Hotel in Thunder Bay.

WATER TREATMENT PLANT:

- May, 2017 - In receipt of the Water Treatment Facility Monthly Report.
- May 17, 2017 - Sunset Protection Systems at plant to complete annual testing of fire system and extinguishers.

SEWERAGE COLLECTION:

Wastewater Main Backups:

- Number of wastewater main backup: None

Sewer Main Repairs:

- Number of sewer main repairs: None

Sewer Manhole Repairs:

- Number of sewer manhole repairs: None

Sewer Service Repairs:

- Number of sewer service repairs: None

Sewer Service Replacements:

- Number of sewer service installations: None

Sewer Service Installations (NEW):

- Number of water service installations: None

Sewer Service Terminations:

- Number of water service terminations: None

Other Information:

- Cleaned twelve (12) plugged sewer services at the following locations:
 - 520 Scott St., 831 Armit Ave., 930 Christie Ave. N., 1319 Colonization Rd. W., 1110 Second St. E.
 - 906 Second St. E., 308 Third St. W., 240 Second St. E. (2), 1146 Fourth St. E., 600 Church St.
 - and 1226 Third St. E.
- May 1, 2017 - Completed a connection inspection of the sewer services at 1228 Third St. E.
- Completed a television inspection of the sewer services at 1228 Third St. E., 328 First St. E., 605 Victoria Ave. 600 Victoria Ave. and 1226 Third St. E.
- Recorded locations of cleanouts at various locations.
- May 24 to June 1, 2017 - Excavate and install a new sewage holding tank near the Airport Maintenance Garage
- May 26, 2017 - Cleaned sanitary sewer mains for Makkinga (Colonization Rd. E. connecting streets)
- Sewer main flushing (Dead Ends)
- May 29, 2017 - Cambrian started flushing/cleaning and televising of the sanitary sewer mains.
- Installed the sanitary sewage holding tank at the Airport Maintenance Garage.

WASTE-WATER TREATMENT FACILITY:

- May, 2017 - Received the Wastewater Treatment Facility Monthly Report.

WASTE MANAGEMENT:

Garbage Collection:

- Number of complaints regarding garbage collection:
 - Town - 0 complaints, Asselin's - 4 complaints

Sanitary Landfill (Waste Disposal Site):

Landfill Scales functioning properly during this period.

- Amount of residential waste delivered to the landfill:
 - 243,320 kgs (243.32 tonnes)
- Amount of ICI waste delivered to the landfill:
 - 491,780 kgs (491.78 tonnes)
- May 13, 2017 - Free tipping day at the landfill - Yard Waste Only.

Recycling:

- Number of complaints regarding recycled materials:
 - Town - 0 complaints, Asselin's - 3 complaints
- Amount of recycled waste diverted from the landfill:
 - Emterra - May - 47.74 tonnes

Prepared By: _____

Date: _____

Environmental & Facilities Superintendent

TOWN OF FORT FRANCES
Operations and Facilities Division - Environmental Area - Operations Statistics
(June 2017)

STAFFING:

See Operations Statistics (June) 2017 prepared by M. Strachan, Superintendent of Transportation

OVERTIME HOURS - Equivalent Straight Time Hours

See Operations Statistics (June) 2017 prepared by M. Strachan, Superintendent of Transportation

WATER DISTRIBUTION:

Water Main Breaks:

- Number of water main breaks: None

Hydrant Repairs:

- Number of hydrant repairs: Seven (7)
 - Calder Dr. next to Point Park showers (HYD330), 1112 Fifth St. E. (HYD229), 924 Sixth St. E. (HYD270)
 - 1128 Fourth St. E. (HYD298), 824 Armit Ave. (HYD253), 940 Fourth St. E. (HYD285)
 - and Eighth St. E. at Mill Road (HYD327)

Hydrant Replacements:

- Number of hydrant replacements: None

Hydrant Installations (NEW):

- Number of new hydrant installations: None

Main Valve Repairs:

- Number of water main valve repairs: Five (5)
 - Fifth St. E. at Shevlin Ave. (VAL463), Fifth St. E. at CNR (VAL325), CNR at Crowe Ave. (VAL631)
 - Cornwall Ave. at Fifth St. W. (VAL182) and Second St. E. at Crowe Ave. (VAL391)

Main Valve Replacements:

- Number of water main valve replacements: None

Water Service Breaks:

- Number of water service breaks: None

Water Service Repairs:

- Number of water service repairs: Eight (8)
 - 1035 Cornwall Ave. N., 800 McKenzie Ave., 1008 Walker Ave., 108 Sixth St. E., 410 Sinclair St.,
 - 1005 Fifth St. E., 320 Second St. E. and 1044 Cornwall Ave. N.

Water Service Installations (NEW):

- Number of water service installations: One (1)
 - 650 Sixth St. W.

Water Service Replacements:

- Number of water service replacements: None

Water Service Terminations:

- Number of water service terminations: None

Water Service Turn "Off/On":

- Number of water service turn "Off/On": Five (5)
 - 145 Third St. W., 1214 Third St. E., 1005 Fifth St. E. (2) and 1044 Cornwall Ave. N.

Frozen Water Services:

- Number of frozen water services: None

Water Meter Installations/Replacements:

- Number of water meter installations/replacements: Two (2)
 - 1533 King's Hwy. and 411 McIrvine Rd.

Backflow Preventer Installations/Replacements:

- Number of backflow preventer installations/replacements: One (1)
 - 411 McIrvine Rd.

Backflow Prevention - Testing:

- Number of backflow preventers tested: Four (4)
 - 921 Sixth St. W., 237 Fifth St. E., 1533 King's Hwy. and 411 McIrvine Rd.

Other Information:

- Summarized final costs for invoicing of private works associated with private works
- June 14, 2017 - G. Wiedenhoef attended a course "Working from Heights" at the La Place Rendez-vous.
- June 19, 2017 - Bay City started construction works at Nelson St.
- Continued with the valve exercising program (Area 1) and hydrant valve exercising.
- Recorded locations of curb stops at various locations.
- Worked in conjunction with Bay City to isolate the existing water main, disinfect and test water quality before putting the temporary water service lines on Nelson St. into service.
- Replaced missing and faded markers on fire hydrants.

WATER TREATMENT PLANT:

- June, 2017 - In receipt of the Water Treatment Facility Monthly Report.
- June 14, 2017 - P. Lemesurier attended a course "Working from Heights" at the La Place Rendez-vous.
- June 19 - 23, 2017 - B. Webb attended a course Water Distribution - Class 1-3 held at the Keewaytinook Centre of Excellence in Dryden.

SEWERAGE COLLECTION:

Wastewater Main Backups:

- Number of wastewater main backup: One (1)
 - Flinders Ave. (500 blk.)

Wastewater Main Repairs:

- Number of wastewater main repairs: None

Wastewater Manhole Repairs:

- Number of wastewater manhole repairs: None

Sewer Service Repairs:

- Number of sewer service repairs: One (1)
 - Sinclair St. - 410

Sewer Service Replacements:

- Number of sewer service replacements: None

Sewer Service Installations (NEW):

- Number of sewer service installations: One (1)
 - Sixth St. W. - 650

Sewer Service Terminations:

- Number of water service terminations: None

Other Information:

- Cleaned eight (8) plugged sewer services at the following locations:
 - 629 Third St. E., 900 Armit Ave., 650 Third St. E., 400 Third St. E., 1332 Sixth St. E., 410 Sinclair St.
 - 512 Front St. and 916 Victoria Ave. N.
- June 16, 2017 - Cambrian commenced the cleaning and televising the sanitary sewer mains
- June 20, 2017 - Connection inspection of the water service at 320 Second St. E.
- June 20, 2017 - Television inspection of the water service at 916 Victoria Ave. N.
- June 22 - 23, 2017 - Cleaned sanitary sewer mains for the Township of Barwick (Chapple)
- June 26, 2017 - Assisted Bay City in exposing valves using vactor truck.
- June 29, 2017 - Cleaned sanitary sewer mains for the community of Rainy River
- Recorded locations of cleanouts at various locations.

WASTE-WATER TREATMENT FACILITY:

- June 2017 - In receipt of the Wastewater Treatment Facility Monthly Report.

WASTE MANAGEMENT:

Garbage Collection:

- Number of complaints regarding garbage collection:
 - Town - 0 complaints, Asselin's - 8 complaints

Sanitary Landfill (Waste Disposal Site):

Landfill Scales functioning properly during this period.

- Amount of residential waste delivered to the landfill:
 - 314,600 kgs (314.60 tonnes)
- Amount of ICI waste delivered to the landfill:
 - 341,840 kgs (341.84 tonnes)
- June 2017 - Bay City hauled material from their respective construction sites to the landfill - cover material.
- June 15, 2017 - Weigh-Tronix on site to check weigh scales (issue with weights)

Recycling:

- Number of complaints regarding recycled materials:
 - Town - 0 complaints, Asselin's - 2 complaints
- Amount of recycled waste diverted from the landfill:
 - No Data - Emterra

Prepared By: _____ Environmental & Facilities Superintendent

Date: _____

July 19, 2017

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

Attention: Mr. Doug Herr
Environmental and Facilities Superintendent

Dear Doug:

**Re: Fort Frances Wastewater Treatment Facility
June 2017 Monthly Report**

As per the operating agreement, the attached document is the June 2017 monthly report for the Fort Frances Wastewater Treatment Facility.

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

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

Yours truly,



Kelly Cunningham
Senior Operator

For Larry Wachter
Operations Manager

**The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
June 2017 Monthly Operations Report**

INTRODUCTION

In accordance with the Agreement between the Ontario Clean Water Agency (Operating Authority) and the Town of Fort Frances, the Fort Frances Sewage Treatment Plant is required to prepare a monthly report. This document covers the reporting month of June 2017; the facility performance report summarizes important information regarding the quality of the effluent, wastewater, analytical test results, maintenance operations, and relevant activities of the WWTP.

DESCRIPTION OF WORKS

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

The Fort Frances Sewage Treatment Plant operates under *Environmental Compliance Approval Number 6786-A44PWG*. The ECA outlines the terms and conditions, and the report captures these terms and conditions in the following sections.

LABORATORY

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

JUNE 2017 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	2.6 mg/L	25 mg/L	15 mg/L	16.7 kg/d	225 kg/d	135 kg/d
Total Suspended Solids	7.8 mg/L	25 mg/L	15 mg/L	53.2 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.24 mg/L	1.0 mg/L	0.9 mg/L	1.6 kg/d	9 kg/d	8.1 kg/d
Total Nitrogen Nitrate Nitrogen	7.71 mg/L 5.65 mg/L					
Total Cl ₂ Residual		<0.01 mg/L (when in use)				
E-Coli		10.8 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 7.6 to 7.9; average pH was 7.7		
Temperature degrees C				Temperatures ranged from 12.0 to 14.5 C; average temperature of effluent was 13.6 C		

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

WASTEWATER LIQUID PROCESS

The average daily flow for June was 6730.5 m³/day. This represents 75 % of the design average flow. Total treated flow for the month was 201914 m³.

The Fort Frances WWTP met all effluent compliance criteria for the parameters listed above and additionally was well within the recommended more stringent monthly performance objective levels as outlined in the Environmental Compliance Approval.

INVENTORY

Chemical	End of Month Status	Units
Hypochlorite	1090 +/- @ 8.0% +3x205 L @ 12%	Litres
Alum	10.8 +/- @ 55 %	Cubic meters
Polymer	2 x 205 L drums	Liters

MAINTENANCE

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

Treatment Plant:

- Alternated lead/lag pumps
- Adjusted fluidizing water to head cell and grit snail as needed
- Greased all blowers
- Regular cleaning of head works EW basket strainer
- Greased Grit Snail and lubricated drive chain
- Weekly inspection of spiral screen access hatch, removed wrapped debris as required
- Repaired polymer check valves
- Hot water flushed and cleaned alum lines
- Weekly manifold wash on the Fournier press
- Removed debris from the Teacup and hosed Snail
- Pumped sump digester valve chamber
- Rodded chunks out of the alum line
- Wiped DO probes

Pump Stations:

- Ran gensets
- Changed seal water strainers
- Removed brush from Boundary Road and Church Street lift stations
- Dealt with an air locked pump at Boundary Road lift station and reset PLC

PROCESS AND OPTIMIZATION ISSUES

The lack of a booster pump for the polymer system dilution water is preventing further optimization of the new sludge thickener.

SLUDGE SUMMARY

Asselin Storage and Transportation Limited hauled a calculated total of 77.9 m³ (9 bins) of thickened digested sludge to the Town of Fort Frances landfill site. The hauled sludge averaged 18.5 % TS for the month.

COMPLAINTS

There were no complaints during the report period.

BYPASS/OVERFLOW REPORT(S)

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

COMMENTS

Plant power consumption for the month was 619 (x 180 multiplier) kWh.

The polymer/water solution flow for the month of May was 148 m³ at a polymer concentration of 0.2%.

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

The annual fire extinguisher inspections were completed.

The Town of Fort Frances Operations and Facilities Committee held one of their meetings at the wastewater plant and toured the facility afterwards.

REPORTS

ALS – Environmental Analytical Reports (on-file at plant)

Fort Frances WPCP Equipment Run Time Report (on-file at plant)

Bypass Report (on-file at plant as per occurrence)

Incident Report (on-file at plant as per occurrence)

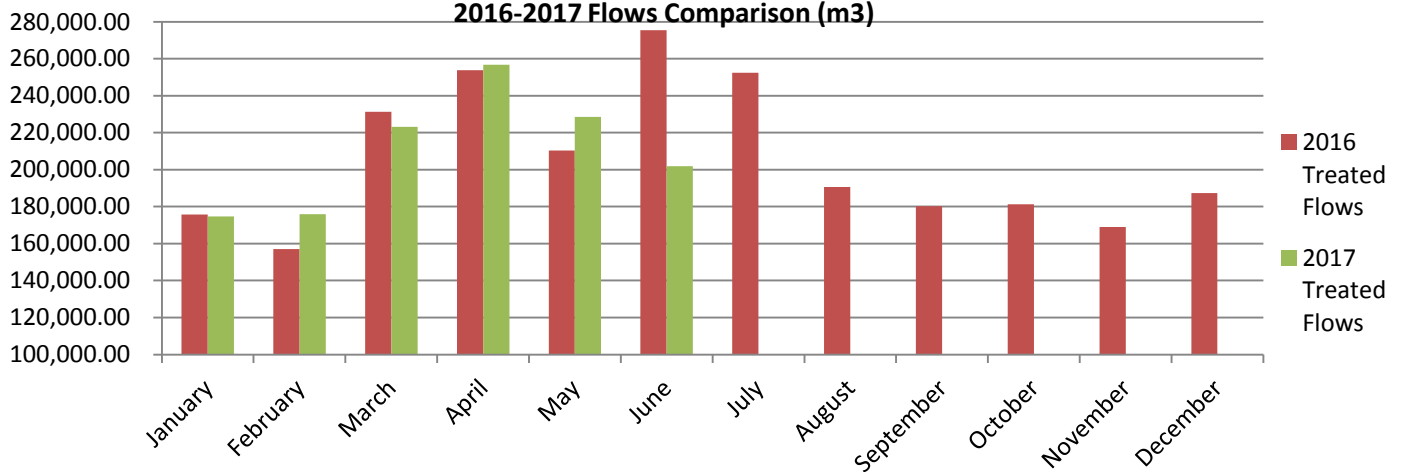
Month	Sewage Flows Year 2016					Usage	Sludge	Sludge	Removal Efficiency	
	Avg. Day	Max Day	Total	Total	Total	% Plant	Volume	Bins	CBOD5 0.964130156	
	Flow	Flow	Treated	ByPass	Volume	Capacity	Hauled	Hauled	Suspended Solids 0.959154748	
	m3	m3	Volume ML	Volume ML	ML		M3		Total Phosphorus 0.909871245	
January	5636.9	6162	174745		174745	63%	85.3	11		
February	6284.1	9818	175956		175956	70%	63.3	8		
March	7199.5	8844	223183		223183	80%	85.4	12		
April	8558.6	10641	256759	350	256759	95%	83.8	11		
May	7372.6	9480	228551		228551	82%	66.8	9		
June	6730.5	10063	201914		201914	75%	77.9	9		
July						0%				
August						0%				
September						0%				
October						0%				
November						0%				
December						0%				
Sum				350	1261108		462.5	60		
Average	6964		210185		210185	77%	77.1	10		
Max		10641	256759		256759			12		
C of A	9000	18000								

	BOD5/CBOD5			Suspended Solids			Total Phosphorus			Nitrogen		E. Coli
	Avg. Raw	Avg. Eff.	Avg. Load	Avg. Raw	Avg. Eff.	Avg. Load	Avg. Raw	Avg. Eff.	Avg. Load	Avg. Raw	Avg. Eff.	Geo Mean
	BOD	CBOD	CBOD	S.S	S.S	S.S	T.P	T.P	T.P	TKN	Total N	Counts
	(mg/L)	(mg/L)	(kg/day)	(mg/L)	(mg/L)	(kg/day)	(mg/L)	(mg/L)	(kg/day)	(mg/L)	(mg/L)	/100ml
January	84.0	2.0	11.3	138.4	3.2	18.1	2.31	0.11	0.63	17.5	8.8	3.6
February	64.3	2.3	15.5	142.6	5.8	35.2	2.04	0.18	1.09	16.5	8.0	11.8
March	70.0	2.8	20.5	118.7	5.7	42.0	1.98	0.20	1.42	15.8	8.0	39.5
April	48.3	2.3	19.9	107.3	5.4	46.5	1.50	0.17	1.50	12.5	7.7	53.0
May	59.2	2.0	15.3	123.0	3.8	28.2	1.77	0.15	1.10	13.9	6.8	15.0
June	64.5	2.6	16.7	146.1	7.8	53.2	2.05	0.24	1.60	14.0	7.7	10.8
July												
August												
September												
October												
November												
December												
Average	65.1	2.3	16.5	129.4	5.3	37.2	1.9	0.18	1.22	15.0	7.8	22.3
Max	84	2.8	20.5	146.1	7.8	53.2	2.3	0.24	1.60	17.5	8.8	53
C of A		25	225		25	225		1.0	9.0	200	6.0	200

2016-2017 Comparison Chart

Month	2016 Treated Sewage	2017 Treated Sewage	% Variance 2016 to 2017	2016 Hauled Sludge	2017 Hauled Sludge	% Variance 2016 to 2017
	m3	m3	m3	m3 (9% solid)	m3 (18% solid)	m3
January	175,712.00	174,745.00	-1%	249.90	85.30	-65.87%
February	157,117.00	175,956.00	11%	251.70	63.30	-74.85%
March	231,365.00	223,183.00	-4%	212.70	85.40	-59.85%
April	253,871.00	256,759.00	1%	228.30	83.80	-63.29%
May	210,352.00	228,551.00	8%	241.20	66.80	-72.31%
June	275,522.00	201,914.00	-36%	217.40	77.90	-64.17%
July	252,416.00			227.50		
August	190,658.00			130.30		
September	180,285.00			92.80		
October	181,205.00			108.00		
November	169,075.00			92.60		
December	187,407.00			92.60		
Totals	2,464,985.00	1,261,108.00		2,145.00	462.50	

2016-2017 Flows Comparison (m3)



2016-2017 Sludge Haulage Comparison

