

March 2021

**Monthly Summary Report
Water Systems**

**Prepared By: Greg Wiedenhoeft, ORO
Senior Water Treatment Plant Operator**

Dated: April 5, 2021

1) **Introduction:**

This report contains the major maintenance activities and operational events that occurred during the month of March 2021 at the Water Treatment Plant - Water Works # 220000978 and the Airport Groundwater Well Water Works No. 849N7DGE0 (Precedes Airport Groundwater Well Water Works No. 26002736). This information report has been prepared for Council to better understand how the water systems they own and operate are maintained on a monthly basis. Also, this report will assist Council as Directors of the Corporation in exercising its obligation to meet a reasonable Standard of Care as outlined in Section 19 of the Safe Drinking Water Act. The water treatment plant falls under the requirements of Ontario Regulation 170/03 – Drinking Water Systems.

The Airport Small Drinking Water System, System No. 849N7DGE0, was put into service August 01, 2017. The system falls under the requirements of Ontario Regulation 319/08 – Small Drinking Water Systems.

2) **Flow Data:**

Water Treatment Plant: See attached spreadsheet.

Airport Groundwater Well:

Estimated Daily Usage 0.21 m3

Estimated March Usage 6.5 m3

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

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

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

Water Distribution System: 20 samples taken where 25% of samples were tested for heterotrophic plate count (HPC) – with one adverse water quality incident.

One Adverse Sample from 1330 Woodward St. Re-sampled one upstream and one at 1330 Woodward St. per MECP requirements, with 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. 835 Mckenzie Ave. | 2. 401 Kings Hwy. | 3. 900 Wright Ave. | 4. W. Tower |
| 5. 1227 Fifth St. E. | 6. 740 Sixth St. W. | 7. 617 Mowat Ave. | 8. W. Tower |
| 9. 218 Third St. E. | 10. 900 Wright Ave. | 11. 943 Third St. E. | 12. W. Tower |
| 13. 1330 Woodward St. | 14. 1309 Kings Hwy. | 15. 900 Wright Ave. | 16. W. Tower |
| 17. 218 Third St. E. | 18. 401 Kings Hwy. | 19. 900 Wright Ave. | 20. W. Tower |

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

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

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

Water distribution sample taken March 16, 2021 – no adverse results.

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

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

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

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

7) Maintenance Activities at the WTP:

Mar 03rd -Cleaned troughs on clarifier # 1.
-Cleaned flumes on filters.

Mar 04th - Cleaned top and bottom tanks on the poly unit.
-Cleaned all 4 check valves on the poly unit.

Mar 09th -Cleaned and inspected clarifier # 1.

Mar 11th - Cleaned top and bottom tanks on the poly unit.
-Cleaned all 4 check valves on the poly unit.

Mar 12th -Calibrated distribution Chlorine analyzer.

Mar 15th -Canect Electric here working on the boiler.
-Calibrated distribution Chlorine analyzer.

Mar 17th -Greased Clarifier # 2 chains.

Mar 19th - Cleaned top and bottom tanks on the poly unit.
-Cleaned all 4 check valves on the poly unit.

Mar 23rd -Flushed settled sample pump line.

Mar 25th - Cleaned top and bottom tanks on the poly unit.
-Cleaned all 4 check valves on the poly unit.

8) Water Complaints:

- Poor Pressure – 0 complaints.
- Water quality – 1 complaint.
- 1018 Colonization Rd. W. **High chlorine** - took two samples and both numbers were normal.

9) Other Miscellaneous Information:

Mar 1st -Routine micro sample collection.

Mar 08th -Routine micro sample collection.

Mar 09th -Water main repair sample on 200 block of Crowe 1st set.
-Received a load of Alum

Mar 10th -Water main repair sample on 200 block of Crowe 2st set.

Mar 15th -Routine micro sample collection.

Mar 16th -Took annual samples at the Plant and Tower
-Took T.S.S. Samples off Filter #1.
-Took quarterly samples at the Plant and Tower

Mar 22nd -Routine micro sample collection.





Mar 23rd -Water service repair sample 1003 Colonization Rd. W.

Mar 25th -Re-sample for adverse at 1330 Woodward St.

Mar 26th -Ran standby generator for 1 hour.
-Took grab samples off the filters.
-Calibrated Fluoride analyzer.

Mar 29th -Routine micro sample collection.

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:

- Greg Wiedenhoeft, ORO, Senior WTP Operator: 
Greg Wiedenhoeft (Jun 4, 2021 11:00 CDT)
- Craig Miller, P.Eng. Environmental Superintendent: 
- Travis Rob, P.Eng. Manager of Operations & Facilities: 
- Acting CAO: 
Dawn Galusha (Jun 4, 2021 13:24 CDT)
- Rick Wiedenhoeft, Chair O & F Exec Committee: _____
- June Caul, Mayor: _____
- John McTaggart, Councillor: _____
- Mike Behan, Councillor: _____
- Wendy Brunetta, Councillor: _____
- Doug Judson, Councillor: _____
- Andrew Hallikas, 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 Greg Wiedenhoeft, Overall Responsible Operator at 274-2325.

Town of Fort Frances - Water treatment Plant - Water Works # 220000978
Monitoring Record
Mar-21

Operating Data	Units	*MAC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	Average
		or Range																																	
Flow rates																																			
Raw Water	1000 m³	17	5.16	5.02	5.00	5.00	5.03	4.97	4.98	5.05	5.20	4.96	5.00	5.00	4.91	4.94	4.99	5.05	5.02	5.00	5.01	4.95	5.00	5.06	5.00	5.02	5.03	5.03	4.90	5.03	5.13	4.90	4.96	155.30	5.01
Peak Instantaneous - Raw Water	l/s	n/a	58.51	58.55	58.53	58.60	58.55	58.46	58.54	58.54	58.50	61.81	58.53	61.72	58.90	58.78	58.63	58.69	58.67	58.65	58.65	58.66	58.60	58.56	58.64	58.65	58.64	58.68	58.65	58.69	58.68	58.71	58.53		58.82
Treated Water	1000 m³	17	3.69	3.62	3.66	3.59	3.62	3.70	3.21	3.75	5.53	3.73	3.60	3.38	3.37	3.53	3.60	3.19	3.48	3.49	3.07	3.42	3.51	3.28	3.44	3.50	3.17	3.51	2.90	3.52	3.33	3.32	3.41	109.12	3.52
Peak Instantaneous - Treated Water	l/s	n/a	63.38	62.77	63.40	63.44	63.39	62.85	63.56	63.27	66.02	65.24	63.51	62.40	63.48	62.52	62.46	63.51	63.25	62.96	62.85	63.09	63.07	62.55	63.20	63.31	62.24	62.82	63.00	61.68	62.84	64.20	63.28		63.21
BackWash Water	1000 m³	n/a	0.28	0.27	0.25	0.28	0.27	0.25	0.29	0.27	0.25	0.28	0.27	0.26	0.29	0.27	0.26	0.29	0.27	0.26	0.28	0.27	0.26	0.28	0.27	0.25	0.29	0.27	0.21	0.29	0.27	0.250	0.280	8.332	0.269
Fluoride Information																																			
Fluoride Residual - Treated Water	mg/l	0.5 to 0.8	0.62	0.62	0.62	0.63	0.63	0.63	0.64	0.64	0.64	0.64	0.64	0.64	0.66	0.66	0.65	0.56	0.55	0.61	0.61	0.58	0.62	0.62	0.57	0.69	0.64	0.68	0.70	0.71	0.65	0.66	0.64		0.63
Turbidity Information																																			
Raw Water	NTU	n/a	0.54	0.35	0.48	0.49	0.44	0.52	0.47	0.46	0.41	0.44	0.46	0.55	0.54	0.49	0.56	0.62	0.47	0.51	0.63	0.63	0.68	0.60	0.63	0.61	0.66	0.67	0.70	0.68	0.70	1.15	0.96		0.58
Settled Water	NTU	n/a	0.11	0.09	0.07	0.11	0.09	0.13	0.11	0.14	0.14	0.12	0.14	0.14	0.13	0.14	0.35	0.32	0.42	0.25	0.16	0.16	0.09	0.11	0.08	0.10	0.09	0.11	0.12	0.11	0.07	0.13	0.17		0.15
Treated Water	NTU	1	0.06	0.06	0.07	0.09	0.05	0.01	0.01	0.01	0.07	0.03	0.08	0.07	0.05	0.05	0.06	0.10	0.13	0.10	0.08	0.04	0.03	0.05	0.11	0.09	0.08	0.10	0.08	0.08	0.06	0.10	0.10		0.07
Other Operating Parameters																																			
pH - Treated Water	no units	6.5 to 8.5	7.21	7.17	7.28	7.18	7.22	7.26	7.28	7.17	7.18	7.07	7.15	7.41	7.17	7.14	7.08	7.34	7.32	7.20	7.20	7.25	7.25	7.21	7.24	7.27	7.24	7.22	7.15	7.18	7.37	7.32	7.29		7.23
pH - Settled water	no units	n/a	6.39	6.47	6.60	6.37	6.37	6.43	6.37	6.40	6.44	6.40	6.40	6.49	6.38	6.43	6.45	6.44	6.37	6.41	6.41	6.37	6.33	6.29	6.49	6.53	6.43	6.38	6.33	6.36	6.40	6.43	6.39		6.41
pH - Raw Water	no units	n/a	7.08	7.10	7.16	7.11	7.15	7.08	7.16	7.16	7.10	7.09	7.12	7.00	7.06	7.01	6.99	7.02	6.99	7.01	7.00	7.05	7.06	7.06	7.09	7.14	7.18	7.10	7.13	7.09	7.08	7.16	7.09		7.08
FAC - Treated Water	mg/l	0.2 to 4	2.16	2.11	2.28	2.28	2.12	2.12	2.11	2.11	2.24	2.14	2.23	2.18	2.11	2.10	2.15	2.08	2.07	2.11	2.20	2.12	2.10	2.08	2.09	2.09	2.11	2.17	2.15	2.17	2.15	2.13	2.20		2.14
Total Chlorine Residual Treated	mg/l	0.3 to 7	2.36	2.48	2.38	2.66	2.26	2.50	2.22	2.56	2.74	2.52	2.62	2.48	2.36	2.38	2.68	2.38	2.54	2.36	2.40	2.38	2.42	2.34	2.38	2.40	2.56	2.48	2.38	2.42	2.36	2.36	2.42		2.44
Temperature	°C	15	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		3.3	
Fluoride used (Total Daily Consumption)	kg	n/a	18.0	17.0	18.0	17.0	18.0	17.0	17.0	17.0	17.0	16.0	17.0	16.0	16.0	16.0	16.0	17.0	15.0	16.0	16.0	15.0	15.0	15.0	16.0	18.0	18.0	18.0	17.0	18.0	18.0	17.0	17.0	519.00	16.7
Chlorine used (Total Daily Consumption)	kg	n/a	19.0	19.0	18.0	19.0	18.0	18.0	19.0	18.0	20.0	18.0	18.0	18.0	18.0	18.0	20.0	17.0	18.0	19.0	18.0	19.0	18.0	18.0	19.0	18.0	18.0	19.0	18.0	18.0	19.0	17.0	18.0	569.00	18.4
Soda Ash (Total Daily Consumption)	kg	n/a	190.9	185.7	185.0	185.0	186.1	183.9	184.3	186.9	192.4	183.5	185.0	185.0	181.7	182.8	184.6	186.9	185.7	185.0	185.4	183.2	185.0	187.2	185.0	185.7	186.1	186.1	181.3	186.1	189.8	181.3	183.5	5746.10	185.4
Soda Ash - Dosage	mg/l	n/a	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37		37.0
Alum residual - (Total Daily Consumption)	kg	n/a	175.4	170.7	170.0	170.0	171.0	169.0	169.3	171.7	176.8	168.6	170.0	170.0	166.9	168.0	169.7	171.7	170.7	170.0	170.3	168.3	170.0	172.0	170.0	170.7	171.0	171.0	166.6	171.0	174.4	166.6	168.6	5280.20	170.3
Alum residual - Dosage	mg/l	n/a	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0		34.0
Alum residual - Treated Water	mg/l	0.1	0.07	0.02	0.05	0.09	0.06	0.02	0.04	0.05	0.08	0.05	0.04	0.04	0.04	0.05	0.02	0.02	0.02	0.05	0.05	0.02	0.04	0.05	0.06	0.02	0.01	0.02	0.02	0.03	0.01	0.01	0.05		0.04
Poly bags added (25 kg bags)	kg	n/a					0.5					0.5		0.5											0.5									62.5	

* MAC - maximum acceptable range

Minimum	Maximum
4.90	5.20
58.46	61.81
2.90	5.53
61.68	66.02

Flow Data MARCH	Units	2019	2020	2021
Total Raw Water	m ³	158980	155940	155300
Raw Maximum Day	m ³	5380	6000	5200
Raw Minimum Day	m ³	4680	4690	4900
Raw Average Daily Consumption	m ³	5130	5030	5010
Total Treated Water	m ³	121380	105300	109120
Treated Water Maximim Day Consumption	m ³	4880	4490	5530
Treated Water Minimim Day Consumption	m ³	3440	2790	2900
Treated Water Average Day Consumption	m ³	3920	3400	3520
Daily Average Per Household Consumption Rate	m ³	1.036	0.899	0.930
* Daily Average Per Person Consumption Rate	m ³	0.491	0.426	0.441
Monthly Averages - Operating Parameters WTP				
FAC Residual - Treated Water	mg/L	2.14	2.08	2.14
Total Chlorine Residual - Treated Water	mg/L	2.33	2.31	2.44
Aluminum Sulphate - Raw Water	mg/L	35.0	35.0	34.0
Aluminum Sulphate - Treated Water Residua	mg/L	0.03	0.06	0.04
Fluoride - Treated Water	mg/L	0.6	0.75	0.63
Soda Ash - Raw Water	mg/L	35.0	35.0	37.0
pH - Adjusted	mg/L	6.83	6.93	7.23
Temperature	°C	2.1	2.2	3.3
Quantity of Chemical Used:				
Aluminum Sulphate	kg	5564.3	5457.9	5280.2
Polyelectrolyte	kg	75	75.0	62.5
Chlorine Gas	kg	590	588	569
Soda Ash - Used for pH Adjustmen	kg	5564.3	5457.9	5746.1
Fluoride	kg	563	707	519

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

* Population is 7986

* Number of Households is 3783












March 2021 WTP - Please re-sign


Final Audit Report

2021-06-04

Created:	2021-06-04
By:	Craig Miller (cmiller@fortfrances.ca)
Status:	Signed
Transaction ID:	CBJCHBCAABAARzIk6dowHxfXacCFwg92ISJMPDrJhDP6

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