

**February 2022**

**Monthly Summary Report  
Water Systems**

**Prepared by: Greg Wiedenhoef  
Overall Responsible Operator**

**Dated: March 4, 2022**

## 1) **Introduction:**

This report contains the major maintenance activities and operational events that occurred during the month of February 2022 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 Monthly Usage	5.9 m3

## 3) **Microbiological (Health Related) Water Analysis - Main Water System No. 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. 940 Third St. E.	2. 601 Reid Ave.	3. 900 Wright Ave.	4. W. Tower
5. 601 Reid Ave.	6. 218 Third St. E.	7. 900 Wright Ave.	8. W. Tower
9. 943 Third St. E.	10. 1309 King's Hwy.	11. 900 Wright Ave.	12. W. Tower
13. 943 Third St. E.	14. 835 McKenzie Ave.	15. 740 Sixth St. W.	16. 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 December 21, 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:**

- Feb 1<sup>st</sup> - Reassembled clarifier #1 mixer drive assembly.  
Changed sprockets, bearings, couplers, shaft and chain
- Feb 3<sup>rd</sup> - Cleaned all 4 check valves on the poly pumps.  
- Cleaned top and bottom tanks on the poly unit.
- Feb 7<sup>th</sup> - Transfer sludge from clarifier #2 to clarifier #1.  
- Changed oil in clarifier #1 mixer gearbox.
- Feb 8<sup>th</sup> - Changed oil in clarifier #1 rake gearbox.  
- Flushed poly line to clarifier #1.  
- Transfer sludge from clarifier #2 to clarifier #1.  
- Put clarifier #1 back online.
- Feb 9<sup>th</sup> - Re – aligned the couplers on clarifier #1.
- Feb 10<sup>th</sup> - Cleaned all 4 check valves on the poly pumps.  
- Cleaned top and bottom tanks on the poly unit.  
- Changed the oil in compressor #1 & #2.
- Feb 14<sup>th</sup> - Calibrated distribution cl2 analyzer.  
- Received 15 barrels of Fluoride.

Feb 15<sup>th</sup> - Changed out the East cl2 tonner.  
- Received 3 tonners of cl2 and sent back 3 empties.

Feb 16<sup>th</sup> - Calibrated distribution cl2 analyzer.

Feb 17<sup>th</sup> - Cleaned all 4 check valves on the poly unit.  
- Cleaned top and bottom tanks on the poly unit.

Feb 18<sup>th</sup> - Calibrated distribution cl2 analyzer.

Feb 22<sup>nd</sup> - Calibrated distribution cl2 analyzer.

Feb 23<sup>rd</sup> - Tightened mixer chain on clarifier #1.

Feb 24<sup>th</sup> - Cleaned all 4 check valves on the poly pumps.  
- Cleaned top and bottom tanks on the poly unit.  
- Calibrated fluoride analyzer.  
- Received a load of Alum.  
- Greased Soda Ash elevator and auger.

Feb 25<sup>th</sup> - Cleaned launders in clarifier #2.  
- Cleaned Filter trough.  
- Flushed settled sample pump line.  
- Flushed poly line for clarifier #2.

#### 8) **Water Complaints:**

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

#### 9) **Other Miscellaneous Information:**

Feb 4<sup>th</sup> - Routine micro sample collection.

Feb 8<sup>th</sup> - Took a Bacti sample at 425 3<sup>rd</sup> St. W. water service repair.

Feb 11<sup>th</sup> - Cannect Electric here working on High lift pump #1.

Feb 14<sup>th</sup> - Routine micro sample collection.  
- Took DWSP samples.

Feb 17<sup>th</sup> - Took Bacti samples for the 300 blk. of Church St. main repair. (1<sup>st</sup> set)

- Feb 22<sup>nd</sup>
- Routine micro sample collection.
  - Took Bacti samples for the 300 blk. of Church St. main repair. (2<sup>nd</sup> set)
  - Monthly TSS sample collection.
- Feb 24<sup>th</sup>
- Ran the standby generator for 1 hr.
  - Took grab samples off the filters.
- Feb 28<sup>th</sup>
- Routine micro sample collection.
  - Took a Bacti sample at 1224 2<sup>nd</sup> St. E. water service repair.

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, Overall Responsible Operator: Greg Wiedenhoeft
- Craig Miller, P.Eng. Environmental Superintendent: Craig Miller
- Travis Rob, P.Eng. Manager of Operations & Facilities: Travis Rob
- Faisal Anwar, CAO: \_\_\_\_\_
- 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 Greg Wiedenhoeft, Overall Responsible Operator at 807-274-2325.

Flow Data February	Units	2020		2021		2022	
Total Raw Water	m <sup>3</sup>		144910		139410		143930
Raw Maximum Day	m <sup>3</sup>		5160		5320		6090
Raw Minimum Day	m <sup>3</sup>		4560		4090		4760
Raw Average Daily Consumption	m <sup>3</sup>		5000		4980		5140
Total Treated Water	m <sup>3</sup>		10190		103890		116300
Treated Water Maximim Day Consumption	m <sup>3</sup>		3830		4270		5840
Treated Water Minimim Day Consumption	m <sup>3</sup>		3160		3240		3560
Treated Water Average Day Consumption	m <sup>3</sup>		3510		3710		4150
Daily Average Per Household Consumption Rate	m <sup>3</sup>		0.928		0.981		1.097
* Daily Average Per Person Consumption Rate	m <sup>3</sup>		0.440		0.465		0.520
Monthly Averages - Operating Parameters WTP:							
FAC Residual - Treated Water	mg/L		1.97		2.08		2.12
Total Chlorine Residual - Treated Water	mg/L		2.23		2.31		2.4
Aluminum Sulphate - Raw Water	mg/L		35.0		34.0		37.0
Aluminum Sulphate - Treated Water Residual	mg/L		0.06		0.05		0.04
Fluoride - Treated Water	mg/L		0.74		0.67		0.67
Soda Ash - Raw Water	mg/L		35.0		37.0		36.0
pH - Adjusted	mg/L		6.97		7.17		7.05
Temperature	°C		2.0		2.0		2.0
Quantity of Chemical Used:							
Aluminum Sulphate	kg		5071.9		4739.94		5325.41
Polyelectrolyte	kg		62.5		50.0		75.0
Chlorine Gas	kg		547		516		500
Soda Ash - Used for pH Adjustment	kg		5071.9		5158.17		5181.48
Fluoride	kg		657		464		528

\* The Canadian Average is 450 litres (0.45 m<sup>3</sup>) per day.

\* Population is 7986

\* Number of Households is 3783

Town of Fort Frances - Water treatment Plant - Water Works # 220000978  
Monitoring Record  
Feb-22

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	Total	Average
		or Range																														
Flow rates																																
Raw Water	1000 m³	17	4.92	4.95	5.01	4.97	5.02	4.97	4.97	4.97	5.01	4.97	5.05	4.83	4.97	5.09	4.76	5.79	6.09	5.28	5.05	5.20	5.16	6.00	5.15	5.16	5.15	5.21	5.11	5.12	143.93	5.14
Peak Instantaneous - Raw Water	l/s	n/a	58.29	58.22	58.21	61.37	58.19	58.25	58.31	61.14	59.48	58.30	58.29	58.25	58.24	58.26	58.29	70.76	70.81	70.74	60.34	60.48	60.37	60.36	60.29	60.30	60.26	60.28	60.14	60.09		60.58
Treated Water	1000 m³	17	3.62	3.56	3.76	4.11	4.16	4.33	4.07	3.90	4.01	3.91	3.97	3.85	3.98	4.15	5.12	5.84	4.36	4.02	3.88	4.00	3.97	4.33	4.08	4.54	4.20	4.08	4.36	4.14	116.30	4.15
Peak Instantaneous - Treated Water	l/s	n/a	62.66	63.17	63.45	65.13	64.57	64.51	64.47	64.24	64.08	65.37	64.57	63.88	63.82	63.39	65.86	118.43	63.32	63.99	63.91	64.14	63.27	63.16	64.56	64.68	64.62	64.43	65.23	65.87		66.17
BackWash Water	1000 m³	n/a	0.28	0.26	0.25	0.28	0.26	0.25	0.28	0.26	0.25	0.54	0.25	0.28	0.26	0.25	0.27	0.17	0.24	0.28	0.26	0.25	0.28	0.26	0.25	0.28	0.26	0.46	0.28	0.26	7.748	0.277
Fluoride Information																																
Fluoride Residual - Treated Water	mg/l	0.5 to 0.8	0.67	0.68	0.67	0.65	0.66	0.66	0.67	0.67	0.67	0.66	0.66	0.67	0.67	0.67	0.67	0.66	0.66	0.66	0.66	0.67	0.67	0.67	0.68	0.68	0.68	0.67	0.68	0.67		0.67
Turbidity Information																																
Raw Water	NTU	n/a	0.45	0.42	0.39	0.50	0.37	0.35	0.41	0.54	0.44	0.36	0.39	0.46	0.43	0.42	0.30	0.20	0.67	0.62	0.56	0.56	0.68	0.39	0.34	0.38	0.58	0.44	0.38	0.52		0.45
Settled Water	NTU	n/a	0.17	0.21	0.17	0.18	0.19	0.15	0.20	0.17	0.19	0.13	0.14	0.13	0.14	0.13	0.12	0.08	0.11	0.12	0.12	0.16	0.13	0.13	0.12	0.14	0.16	0.15	0.13	0.13		0.15
Treated Water	NTU	1	0.11	0.12	0.12	0.10	0.09	0.11	0.11	0.10	0.10	0.09	0.09	0.09	0.09	0.11	0.01	0.01	0.01	0.08	0.09	0.11	0.11	0.12	0.11	0.10	0.11	0.11	0.12	0.10		0.09
Other Operating Parameters																																
pH - Treated Water	no units	6.5 to 8.5	7.04	7.05	7.08	7.11	7.10	7.08	7.11	7.06	7.09	7.08	7.03	7.01	7.06	7.00	7.04	7.00	6.97	7.01	7.08	7.02	7.01	7.07	7.08	7.03	7.04	7.06	7.04	7.08		7.05
pH - Settled water	no units	n/a	6.55	6.53	6.56	6.50	6.58	6.57	6.49	6.54	6.60	6.55	6.51	6.58	6.51	6.64	6.43	6.46	6.45	6.56	6.58	6.62	6.59	6.56	6.49	6.55	6.57	6.40	6.46	6.45		6.53
pH - Raw Water	no units	n/a	6.95	6.89	6.92	6.94	6.98	6.98	6.95	6.97	6.98	6.98	6.97	6.97	6.99	7.04	7.05	7.07	7.05	7.02	7.00	6.98	7.01	6.82	6.81	6.94	6.98	6.85	6.90	6.97		6.96
FAC - Treated Water	mg/l	0.2 to 4	1.99	2.01	2.00	1.98	2.01	2.09	2.02	2.04	2.11	2.06	2.03	2.02	1.99	2.11	2.07	2.35	2.42	2.18	2.11	2.10	2.13	2.19	2.11	2.22	2.15	2.21	2.28	2.24		2.12
Total Chlorine Residual Treated	mg/l	0.3 to 7	2.33	2.28	2.36	2.37	2.36	2.32	2.27	2.32	2.42	2.36	2.36	2.42	2.38	2.35	2.26	2.45	2.77	2.55	2.42	2.42	2.43	2.32	2.48	2.48	2.47	2.34	2.45	2.48		2.40
Temperature	°C	15	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0
Fluoride used (Total Daily Consumption)	kg	n/a	20.0	20.0	19.0	20.0	19.0	19.0	19.0	18.0	19.0	18.0	18.0	17.0	18.0	17.0	21.0	21.0	19.0	17.0	18.0	17.0	18.0	18.0	21.0	20.0	20.0	20.0	19.0	19.0	528.00	18.9
Chlorine used (Total Daily Consumption)	kg	n/a	17.0	16.0	17.0	17.0	18.0	16.0	17.0	18.0	16.0	17.0	17.0	16.0	17.0	18.0	16.0	22.0	23.0	19.0	17.0	19.0	17.0	20.0	17.0	19.0	18.0	19.0	19.0	18.0	500.00	17.9
Soda Ash (Total Daily Consumption)	kg	n/a	177.1	178.2	180.4	178.9	180.7	178.9	178.9	178.9	180.4	178.9	181.8	173.9	178.9	183.2	171.4	208.4	219.2	190.1	181.8	187.2	185.8	216.0	185.4	185.8	185.4	187.6	184.0	184.3	5181.48	178.7
Soda Ash - Dosage	mg/l	n/a	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0		36.0
Alum residual - (Total Daily Consumption)	kg	n/a	182.0	183.2	185.4	183.9	185.7	183.9	183.9	183.9	185.4	183.9	186.9	178.7	183.9	188.3	176.1	214.2	225.3	195.4	186.9	192.4	190.9	222.0	190.6	190.9	190.6	192.8	189.1	189.4	5325.41	183.6
Alum residual - Dosage	mg/l	n/a	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0		37.0
Alum residual - Treated Water	mg/l	0.1	0.03	0.04	0.02	0.03	0.03	0.03	0.03	0.04	0.03	0.04	0.03	0.03	0.02	0.05	0.04	0.05	0.05	0.05	0.03	0.04	0.03	0.04	0.04	0.04	0.04	0.0	0.03	0.04		0.04
Poly bags added (25 kg bags )	kg	n/a			0.5				0.5				0.5							0.5				0.5			0.5				75.0	

\* MAC - maximum acceptable range

Signature:   
Greg Wiedenhoef (Jun 29, 2022 09:03 CDT)

Email: gwiedenhoef@fortfrances.ca

Signature: 

Email: cmiller@fortfrances.ca

Signature: 

Email: trob@fortfrances.ca

Minimum	Maximum
4.76	6.09
58.19	70.81
3.56	5.84
62.66	118.43














# Feb 2022 WTP Report

Final Audit Report

2022-06-30

Created:	2022-06-29
By:	Craig Miller (cmiller@fortfrances.ca)
Status:	Signed
Transaction ID:	CBJCHBCAABAARtxpd8VfpKQuwhCfLCWj13AMTsBVbN3U

## "Feb 2022 WTP Report" History

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