

**May 2021**

**Monthly Summary Report  
Water Systems**

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

**Dated: June 2, 2021**

## 1) **Introduction:**

This report contains the major maintenance activities and operational events that occurred during the month of May 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 0.21m<sup>3</sup>

Estimated May Usage 6.51 m<sup>3</sup>

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

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

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

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

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

Water distribution samples taken at the following locations:

1. 943 Third St. E.	2. 1309 Kings Hwy.	3. 900 Wright Ave.	4. W. Tower
5. 218 Third St. E.	6. 900 Wright Ave.	7. 401 Kings Hwy.	8. W. Tower
9. 218 Third St. E.	10. 900 Wright Ave.	11. 401 Kings Hwy.	12. W. Tower
13. 900 Wright Ave.	14. 401 Kings Hwy.	15. 218 Third St. E.	16. W. Tower
17. 218 Third St. E.	18. 900 Wright Ave.	19. 800 Calder Dr.	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:**

May 05<sup>th</sup> worked on settled water sample pump.

May 6<sup>th</sup> - cleaned top and bottom tanks on the poly unit.  
- cleaned all four (4) check valves on the poly unit.  
-cleaned soda ash line.

May 7<sup>th</sup> - tightened drive belt on poly unit aging mixer.

May 13<sup>th</sup> - cleaned top and bottom tanks on the poly unit.  
- cleaned all four (4) check valves on the poly unit.

May 17<sup>th</sup> - calibrated the Distribution Chlorine Analyzer.  
-calibrated the Fluoride Analyzer.

May 20<sup>th</sup> -cleaned top and bottom tanks on the poly unit.  
- cleaned all four (4) check valves on the poly unit.

May 27<sup>th</sup> -ran generator for 1 hour.  
-took grab samples from filters.

May 28<sup>th</sup> - cleaned top and bottom tanks on the poly unit.  
- cleaned all four (4) check valves on the poly unit.

8) **Water Complaints:**

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

9) **Other Miscellaneous Information:**

May 3<sup>rd</sup> - took weekly routine micro samples.

May 5<sup>th</sup> - Received a load of Alum

May 10<sup>th</sup> - took weekly routine micro samples.  
-took samples for watermain repair at Fourth and Wright 1<sup>st</sup> set.  
-took seasonal sample at Sorting Gap.  
-Sunset Protection Tested Fire alarm.  
-cleaned soda ash line from hopper to silo.

May 11<sup>th</sup> -took samples for watermain repair at Fourth and Wright 2<sup>nd</sup> set  
-took seasonal samples for camp sites and Vandura washroom.  
-ordered reagents for testing.

May 17<sup>th</sup> - took weekly routine micro samples.

May 19<sup>th</sup> - took monthly TSS and Total Cl<sub>2</sub> samples from filter # 3 backwash.

May 20<sup>th</sup> - Flushed Poly lines to Clarifier # 1 and # 2.

May 25<sup>th</sup> - took weekly routine micro samples.





May 26<sup>th</sup> – ordered 40 bags of poly.

May 27<sup>th</sup> – changed UPS on Cl<sub>2</sub> scale.

May 28<sup>th</sup> - checked media depth on filter # 3.

May 31<sup>st</sup> - took weekly routine micro samples.

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

- Greg Wiedenhoeft, Overall Responsible Operator:   
Greg Wiedenhoeft (Jun 3, 2021 14:29 CDT)
- Craig Miller, P.Eng. Environmental Superintendent: 
- Travis Rob, P.Eng. Manager of Operations & Facilities: 
- Acting CAO:   
Dawn Galusha (Jun 3, 2021 16:43 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  
May-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	4.97	4.91	5.28	5.09	5.09	5.09	5.08	4.99	5.10	5.18	4.96	5.10	5.10	5.11	4.89	5.07	5.35	5.21	5.12	5.09	5.13	5.10	5.09	5.24	5.25	5.16	5.17	5.14	5.04	5.16	5.26	158.52	5.11
Peak Instantaneous - Raw Water	l/s	n/a	59.26	59.28	59.36	59.36	59.40	59.48	59.41	59.45	59.53	59.53	59.56	59.55	59.56	59.61	59.53	59.56	59.69	59.83	59.95	59.83	60.16	60.26	60.51	60.72	60.51	60.47	60.26	60.23	60.34	60.24	60.17		59.83
Treated Water	1000 m³	17	3.29	3.26	3.70	3.35	3.14	3.46	3.56	3.29	3.52	3.42	3.40	4.11	4.20	3.97	3.68	3.61	4.33	4.95	4.57	4.09	3.38	3.00	3.23	2.86	3.69	3.84	3.41	3.42	4.03	3.54	3.99	113.29	3.65
Peak Instantaneous - Treated Water	l/s	n/a	66.73	62.57	62.57	66.31	62.83	65.61	62.28	62.75	62.51	62.52	63.43	64.35	65.11	64.56	67.47	63.82	65.74	67.90	66.20	65.37	62.09	64.13	64.64	62.39	64.58	64.99	62.83	63.87	66.56	63.95	64.37		64.36
BackWash Water	1000 m³	n/a	0.27	0.25	0.29	0.27	0.25	0.30	0.27	0.26	0.29	0.26	0.26	0.29	0.27	0.26	0.29	0.27	0.26	0.28	0.27	0.25	0.28	0.26	0.25	0.28	0.27	0.26	0.29	0.27	0.26	0.284	0.265	8.327	0.269
Fluoride Information																																			
Fluoride Residual - Treated Water	mg/l	0.5 to 0.8	0.61	0.67	0.63	0.63	0.62	0.70	0.68	0.70	0.70	0.70	0.70	0.73	0.73	0.73	0.72	0.72	0.68	0.62	0.61	0.63	0.64	0.66	0.66	0.66	0.67	0.68	0.67	0.66	0.66	0.65	0.66		0.67
Turbidity Information																																			
Raw Water	NTU	n/a	0.92	0.87	1.05	1.07	0.87	0.87	0.94	0.92	1.02	1.00	0.99	0.99	1.14	0.74	0.50	0.52	0.60	0.73	0.59	0.69	0.80	0.89	0.86	1.12	1.03	1.08	1.21	1.18	1.23	1.27	1.04		0.93
Settled Water	NTU	n/a	0.07	0.06	0.07	0.09	0.08	0.08	0.09	0.08	0.08	0.07	0.10	0.09	0.10	0.08	0.05	0.08	0.04	0.07	0.06	0.08	0.09	0.07	0.10	0.11	0.10	0.11	0.10	0.11	0.11	0.12	0.08		0.08
Treated Water	NTU	1	0.06	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.08	0.08	0.05	0.06	0.01	0.01	0.01	0.01	0.04	0.06	0.06	0.08	0.06	0.06	0.04	0.06	0.05	0.07	0.06	0.06	0.06	0.06		0.05
Other Operating Parameters																																			
pH - Treated Water	no units	6.5 to 8.5	7.30	7.32	7.40	7.36	7.33	7.2	7.17	7.22	7.13	7.23	7.22	7.28	7.21	7.17	7.13	7.13	7.14	7.10	7.11	7.13	7.30	7.11	7.14	7.1	7.04	7.08	7.09	7.08	7.04	7.07	7.08		7.17
pH - Settled water	no units	n/a	6.19	6.17	6.14	6.24	6.21	6.21	6.28	6.31	6.32	6.26	6.25	6.23	6.32	6.30	6.29	6.30	6.31	6.19	6.20	6.21	6.24	6.22	6.24	6.25	6.25	6.36	6.30	6.37	6.31	6.28	6.29		6.26
pH - Raw Water	no units	n/a	7.11	7.08	7.23	7.16	7.15	7	7.04	7.04	7.17	7.12	7.04	7.07	7.20	7.15	7.22	7.15	7.32	7.03	6.95	6.95	6.99	6.93	6.93	6.89	6.92	6.84	6.91	6.98	6.96	7.00	6.94		7.05
FAC - Treated Water	mg/l	0.2 to 4	2.00	2.05	2.09	1.99	2.07	2.18	2.09	2.06	2.02	1.89	1.78	1.86	1.67	2.09	2.18	2.07	2.12	2.16	2.20	2.09	2.02	2.03	2.02	2.09	2.01	2.09	2.00	2.06	2.09	2.09	2.11		2.04
Total Chlorine Residual Treated	mg/l	0.3 to 7	2.30	2.34	2.29	2.22	2.22	2.45	2.36	2.38	2.30	2.16	2.13	2.08	1.95	2.42	2.39	2.49	2.49	2.50	2.58	2.49	2.45	2.34	2.39	2.37	2.41	2.36	2.32	2.32	2.40	2.42	2.39		2.35
Temperature	°C	15	8.0	8.0	8.0	9.0	9.0	9.0	8.0	8.0	9.0	9.0	9.0	10.0	10.0	10.0	10.0	10.0	11.0	11.0	11.0	12.0	12.0	12.0	12.0	13.0	14.0	14.0	13.0	13.0	13.0	14.0		10.7	
Fluoride used (Total Daily Consumption)	kg	n/a	16.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	16.0	16.0	16.0	16.0	19.0	18.0	18.0	18.0	19.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	517.00	16.7
Chlorine used (Total Daily Consumption)	kg	n/a	19.0	17.0	20.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	17.0	18.0	18.0	21.0	20.0	21.0	22.0	21.0	22.0	20.0	22.0	21.0	21.0	22.0	22.0	21.0	22.0	21.0	21.0	22.0	21.0	625.00	20.2
Soda Ash (Total Daily Consumption)	kg	n/a	183.9	181.7	195.4	188.3	188.3	188.3	188.0	184.6	188.7	191.7	183.5	188.7	188.7	189.1	180.9	187.6	198.0	192.8	189.4	188.3	189.8	188.7	188.3	193.9	194.3	190.9	191.3	190.2	186.5	190.9	194.6	5865.24	189.2
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	169.0	166.9	179.5	173.1	173.1	173.1	172.7	169.7	173.4	176.1	168.6	173.4	173.4	173.7	166.3	172.4	181.9	177.1	174.1	173.1	174.4	173.4	173.1	178.2	178.5	175.4	175.8	174.8	171.4	175.4	178.8	5389.68	173.9
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	0.03	0.01	0.01	0.03	0.01	0.04	0.04	0.04	0.03	0.05	0.02	0.03	0.06	0.06	0.04	0.02	0.05	0.02	0.03	0.05	0.03	0.03	0.05	0.01	0.01	0.01	0.03	0.03	0.01	0.01	0.06		0.03
Poly bags added (25 kg bags )	kg	n/a							0.5					0.5						0.5			0.5					0.5						62.5	

Minimum	Maximum
4.89	5.35
59.26	60.72
2.86	4.95
62.09	67.90

\* MAC - maximum acceptable range

Flow Data MAY	Units	2019		2020		2021	
Total Raw Water	m <sup>3</sup>		160760		155620		158520
Raw Maximum Day	m <sup>3</sup>		6200		5280		5350
Raw Minimum Day	m <sup>3</sup>		4890		4720		4890
Raw Average Daily Consumption	m <sup>3</sup>		5190		5020		5110
Total Treated Water	m <sup>3</sup>		115440		108720		113290
Treated Water Maximim Day Consumption	m <sup>3</sup>		4850		4240		4950
Treated Water Minimim Day Consumption	m <sup>3</sup>		2810		3040		2860
Treated Water Average Day Consumption	m <sup>3</sup>		3710		3520		3650
Daily Average Per Household Consumption Rate	m <sup>3</sup>		0.981		0.930		0.965
* Daily Average Per Person Consumption Rate	m <sup>3</sup>		0.465		0.441		0.457
Monthly Averages - Operating Parameters WTP:							
FAC Residual - Treated Water	mg/L		2.24		2.12		2.04
Total Chlorine Residual - Treated Water	mg/L		2.46		2.35		2.35
Aluminum Sulphate - Raw Water	mg/L		35.0		35.0		34.0
Aluminum Sulphate - Treated Water Residual	mg/L		0.03		0.07		0.03
Fluoride - Treated Water	mg/L		0.62		0.75		0.67
Soda Ash - Raw Water	mg/L		35.0		35.0		37.0
pH - Adjusted	mg/L		7.19		6.98		7.17
Temperature	°C		2.0		2.0		10.7
Quantity of Chemical Used:							
Aluminum Sulphate	kg		5626.6		5446.7		5389.68
Polyelectrolyte	kg		75		62.5		62.5
Chlorine Gas	kg		621		617		625
Soda Ash - Used for pH Adjustment	kg		5626.6		5446.7		5865.24
Fluoride	kg		581		693		517

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

\* Population is 7986

\* Number of Households is 3783












# May 2021 WTP

Final Audit Report


2021-06-03

Created:	2021-06-03
By:	Craig Miller (cmiller@fortfrances.ca)
Status:	Signed
Transaction ID:	CBJCHBCAABAADPndI21CjzuVI5X5arGd4yJS_hJWnBS2

## "May 2021 WTP" History

-  Document created by Craig Miller (cmiller@fortfrances.ca)  
2021-06-03 - 7:06:01 PM GMT- IP address: 216.211.31.9
-  Document emailed to Greg Wiedenhoeft (gwiedenhoeft@fortfrances.ca) for signature  
2021-06-03 - 7:06:44 PM GMT
-  Email viewed by Greg Wiedenhoeft (gwiedenhoeft@fortfrances.ca)  
2021-06-03 - 7:27:53 PM GMT- IP address: 216.211.31.9
-  Document e-signed by Greg Wiedenhoeft (gwiedenhoeft@fortfrances.ca)  
Signature Date: 2021-06-03 - 7:29:29 PM GMT - Time Source: server- IP address: 216.211.31.9
-  Document emailed to Craig Miller (cmiller@fortfrances.ca) for signature  
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Signature Date: 2021-06-03 - 9:43:06 PM GMT - Time Source: server- IP address: 216.211.31.9

 Agreement completed.

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