

December 7, 2012

Report To: Mayor & Council

From: Doug Brown, Manager of Operations & Facilities

**SUBJECT: November 2012 Drinking Water Systems Monthly Summary Report**



Please find attached the November 2012 Summary Report on the drinking water systems, prepared by Randy White, Senior WTP Operator.

Your Administration recommends that Operations & Facilities Executive Committee accept the November 2012 report as presented.

Respectfully submitted,  
Operations & Facilities Division

*Doug Brown*

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

**Council approval of this report will** accept the November 2012 Drinking Water Systems Monthly Summary Report and approve the report prior to it being made available to the general public.

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

11 Council Water Report November 2012.doc

**RECOMMENDED**

DEC 07 2012

DIV. MNG.

EXECUTIVE COMM.

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**November, 2012**

**Monthly Summary Report  
Water Systems**

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

**Dated: December 05, 2012**

## **1) Introduction -**

This report contains the major maintenance activities and operational events that occurred during the month of November 2012 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.

## **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**

Nov. 01<sup>st</sup> - cleaned the four (4) check valves on the poly unit.

Nov. 01<sup>st</sup> - cleaned the top and bottom tank on the poly unit.

Nov. 05<sup>th</sup> - Lakeside here working on S.C.A.D.A. system.

Nov. 06<sup>th</sup> - Lakeside here working on S.C.A.D.A. system.

Nov. 07<sup>th</sup> - Lakeside here working on S.C.A.D.A. system.

Nov. 07<sup>th</sup> - manually blew down clarifier # 1.

Nov. 14<sup>th</sup> - cleaned the soda ash auger.

Nov. 14<sup>th</sup> - worked on low lift # 3 seal.

Nov. 15<sup>th</sup> - high pressure flush on poly lines.

Nov. 16<sup>th</sup> - manually blew down clarifier # 1.

Nov. 21<sup>st</sup> - unloaded a shipment of chlorine.

Nov. 23<sup>rd</sup> - manually blew down clarifier # 1.

Nov. 26<sup>th</sup> - manually blew down clarifier # 1.

Nov. 28<sup>th</sup> - recalibrated distribution chlorine analyzer.

Nov. 29<sup>th</sup> - cleaned the top and bottom tank on the poly unit.

Nov. 30<sup>th</sup> - cleaned the top and bottom tank on the poly unit.

**8) Water Complaints –**

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

**9) Other Miscellaneous Information:**

Nov. 05<sup>th</sup> - took weekly routine bacti samples.

Nov. 13<sup>th</sup> - Q.M.S. meeting at Water Treatment Plant.

Nov. 13<sup>th</sup> - took weekly routine bacti samples.

Nov. 13<sup>th</sup> - worked on Oct. monthly report.

Nov. 14<sup>th</sup> - D.W.S.P. samples taken.

Nov. 19<sup>th</sup> - took weekly routine bacti samples.

Nov. 22<sup>nd</sup> - Q.M.S. meeting at Water Treatment Plant.

Nov. 26<sup>th</sup> - took weekly routine bacti samples.

Nov. 26<sup>th</sup> - Q.M.S. meeting at Water Treatment Plant

Nov. 28<sup>th</sup> - Q.M.S. Audit at Water Treatment Plant.

Nov. 29<sup>th</sup> - information meeting at the Civic Centre for all Town Employees.

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: Brian Webb
- Doug Herr, Environmental & Facilities Supt.: Dsh H -
- Doug Brown, Manager of Operations & Facilities: Doug Brown
- Mark McCaig, CAO: \_\_\_\_\_
- Rick Wiedenhoeft, Chair O&F Exec Committee: R. Wiedenhoeft
- Roy Avis, Mayor: ~~Roy Avis~~
- Paul Ryan, Councillor: Paul Ryan
- John Albanese, Councillor: \_\_\_\_\_
- Andrew Hallikas, Councillor: \_\_\_\_\_
- Sharon Tibbs, Councillor: \_\_\_\_\_
- Ken Perry, Councillor: Ken Perry

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.

Flow and Operating Data

Flow Data November		Units	2010		2011		2012	
			Day of the Month		Day of the Month		Day of the Month	
Total Raw Water	m <sup>3</sup>			166220		178680		129100
Raw Maximum Day	m <sup>3</sup>		Saturday 06th	5790	Friday 11th	6750		4500
Raw Minimum Day	m <sup>3</sup>		Monday 29th	4940	Friday 04th	5400		4120
Raw Average Daily Consumption	m <sup>3</sup>			5540		5960		4300
Total Treated Water	m <sup>3</sup>			120710		124300		108860
Treated Water Maximum Day Consumption	m <sup>3</sup>		Friday 19th	4400	Friday 11th	4730		4030
Treated Water Minimum Day Consumption	m <sup>3</sup>		Monday 29th	3710	Tuesday 01st	3520		3180
Treated Water Average Day Consumption	m <sup>3</sup>			4020		4140		3630
Daily Average Per Household Consumption Rate	m <sup>3</sup>			1.063		1.094		0.960
* Daily Average Per Person Consumption Rate	m <sup>3</sup>			0.503		0.518		0.455
Monthly Averages - Operating Parameters WTP:								
FAC Residual - Treated Water	mg/L			2.09		2.02		1.71
Total Chlorine Residual - Treated Water	mg/L			2.43		2.41		2.09
Aluminum Sulphate - Raw Water	mg/L			35		34.5		33.9
Aluminum Sulphate - Treated Water Residual	mg/L			0.05		0.06		0.06
Fluoride - Treated Water	mg/L			0.69		0.70		0.63
Soda Ash - Raw Water	mg/L			34		34		34
PH - Adjusted	mg/L			7.1		7.32		7.37
Temperature	C			6.0		5.5		4.3
Quantity of Chemical Used:								
Aluminum Sulphate	kg			5817.7		6164.5		1016.5
Polyelectrolyte	kg			50		62.5		62.5
Chlorine Gas	kg			611		650		410
Soda Ash - Used for PH Adjustment	kg			6551.5		6075.1		4389.4
Fluoride	kg			582		630		345

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

\* Population is 7986

\* Number of Households is 3783

Operating Data		Units	MAC or Range	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
Flow rates																																			
100% M3	17	4.96	4.35	4.43	4.44	4.21	4.31	4.32	4.34	4.27	4.36	4.34	4.38	4.19	4.31	4.29	4.26	4.12	4.50	4.26	4.35	4.26	4.31	4.28	4.31	4.17	4.45	4.18	4.33	4.23	4.35	4.22	139.10	4.30	
Raw Water		50.64	50.41	50.47	50.48	50.51	50.44	50.57	50.47	50.78	50.69	50.39	50.56	50.63	50.56	50.79	50.78	50.22	50.24	50.28	50.24	50.19	50.19	50.21	50.24	50.20	50.19	50.19	50.19	50.21	50.26	50.28	1488.40	51.32	
Peak instantaneous - Raw Water		U/s																																	
100% M3	17	3.47	3.61	3.64	3.64	3.45	3.88	3.92	3.46	3.69	3.41	4.03	3.75	3.72	3.90	3.93	3.60	3.65	3.39	3.65	3.34	3.78	3.54	3.54	3.42	3.68	3.42	3.51	3.34	3.49	3.88	109.86	3.63		
Treated Water		U/s																																	
Peak instantaneous - Treated Water		U/s																																	
Backwash Water		0.481	0.528																																
Fluoride Information																																			
Fluoride Residual - Treated Water		mg/l	0.5 to 0.8	0.64	0.65	0.60	0.53	0.52	0.56	0.57	0.58	0.50	0.56	0.51	0.55	0.56	0.59	0.54	0.65	0.64	0.68	0.70	0.69	0.75	0.69	0.75	0.60	0.78	0.61	0.54	0.73	19.02	0.63		
Turbidity Information																																			
Raw Water		NTU	1.18	1.25	1.32	1.23	1.17	1.22	1.17	1.19	1.12	1.68	2.61	1.68	1.33	1.13	1.19	1.06	1.10	1.18	1.31	1.09	0.92	0.93	0.90	0.96	0.91	0.93	0.82	0.84	0.85	34.74	1.16		
Settled Water		NTU	0.07	0.08	0.09	0.08	0.05	0.06	0.05	0.06	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.13	0.08	0.06	0.09	0.07	0.06	0.08	0.08	2.12	0.07		
Treated Water		NTU	0.04	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06	0.06	0.06	0.04	0.04	0.06	0.03	0.05	0.06	1.39	0.05		
Other Operating Parameters																																			
pH - Treated Water		6.5 to 6.5	7.05	7.25	7.15	7.10	7.56	7.40	7.32	7.89	7.42	7.45	7.25	7.60	7.48	7.54	7.42	7.44	6.98	7.34	7.22	7.31	7.34	7.29	7.34	7.01	7.39	7.38	7.37	7.39	220.95	7.37			
pH - Settled Water																																			