

Finch Drinking Water System
O. Reg. 170/03 Schedule 22 - Summary Report for Municipalities

This report is a summary of water quality information for Finch's Drinking Water System, published in accordance with Schedule 22 of Ontario's Drinking Water Systems Regulation (O. Reg. 170/03) for the reporting period of January 1, 2017 to December 31, 2017. Finch's Drinking Water System is categorized as a Large Municipal Residential Drinking Water System.

This report was prepared by the Ontario Clean Water Agency on behalf of the Township of North Stormont.

Who gets a copy of the Report:

- In the case of a drinking-water system owned by a municipality, the members of the municipal council;
- In the case of a drinking-water system owned by a municipal service board established under section 195 of the Municipal Act, 2001, the members of the municipal service board; or
- In the case of a drinking-water system owned by a corporation, the board of directors of the corporation.

What must the Report contain?

The report must:

- (a) List the requirements of the Act, the regulations, the system's approval and any order that the system failed to meet at any time during the period covered by the report and specify the duration of the failure; and
- (b) For each failure referred to in clause (a), describe the measures that were taken to correct the failure.

The following table lists the requirements that the system failed to meet and the measures taken to correct the failure:

Drinking Water Legislation	List the requirement(s) the system failed to meet	Specify the duration of the failure (i.e. date(s))	Describe the measures taken to correct the failure	Status (complete or outstanding)
Safe Drinking Water Act	n/a			
Ontario Regulations	n/a			
Permit to Take Water # 7327-83ZL7J	Condition 3.2 - maximum flow rate for Well #2	12/27/2017 – 12/28/2017	New well pump had just been installed. Flow control valve throttled further to reduce the flow rate.	Complete
Drinking Water Works Permit # 182-201	n/a			
Municipal Drinking Water Licence # 182-101	n/a			
Provincial Officer's Order	n/a			

What else must the Report contain?

The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

- a) A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows and daily instantaneous peak flow rates.
- b) A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval.

Attached please find the 2017 Performance Assessment Report and 2017 Annual Records of Water Taking for Finch's Drinking Water System, which contain all required flow information.

When does the Report get submitted?

If a report is prepared for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31, 2018.

ONTARIO CLEAN WATER AGENCY

WATER PLANT PERFORMANCE ASSESSMENT REPORT

MUNICIPALITY: TOWNSHIP OF NORTH STORMONT

PROJECT: FINCH WATER SUPPLY

ORG. NUM.: 5811

WORKS NUM.: 210003912

DESCRIPTION: A TWO WELL SYSTEM EQUIPPED WITH AN AERATION TOWER, FILTRATION AND A CLEAR WELL DISINFECTION IS WITH SODIUM HYPOCHLORITE.

YEAR: 2017

WATER SOURCE: GROUNDWATER

DESIGN CAPACITY: 777.6 m³/d

MONTH	SYSTEM FLOWS TREATED			TREATED		DISTRIBUTION		BACTI (INDICATE NO. OF SAMPLES)				RAW WATER	
	TOTAL FLOW (m ³)	AVG DAY FLOW (m ³)	MAX DAY FLOW (m ³)	MIN FREE CL ₂ RESID (mg/L)	MAX FREE CL ₂ RESID (mg/L)	MIN FREE CL ₂ RESID (mg/L)	MAX FREE CL ₂ RESID (mg/L)	<i>E.coli</i> , TC, HPC				<i>E. coli</i>	
								Safe		Adverse			
								TREAT	DIST	TREAT	DIST	ABSENT	PRESENT
JAN	6,295	203	239	0.58	2.83	0.92	1.90	15	25	0	0	10	0
FEB	5,726	205	241	0.56	3.00	0.74	2.09	12	20	0	0	8	0
MAR	6,463	208	243	0.62	3.00	0.88	2.10	12	20	0	0	8	0
APR	6,389	213	241	0.35	3.00	0.61	2.44	12	20	0	0	8	0
MAY	7,293	235	346	0.44	3.00	0.55	1.71	15	25	0	0	10	0
JUN	7,386	246	312	0.37	2.99	0.52	2.12	12	20	0	0	8	0
JUL	7,079	228	280	0.30	2.35	0.50	1.80	15	25	0	0	10	0
AUG	8,320	268	424	0.24	3.00	0.50	2.52	12	20	0	0	8	0
SEP	9,279	309	469	0.44	3.00	0.97	2.57	12	20	0	0	8	0
OCT	9,465	305	503	0.39	4.29	0.42	2.75	15	25	0	0	9	0
NOV	8,061	269	293	0.78	2.92	0.72	2.63	12	20	0	0	4	0
DEC	8,386	271	326	0.43	3.74	0.90	2.11	12	20	0	0	5	0
TOTAL	90,142							156	260	0	0	96	0
AVG		247											
MIN				0.24		0.42							
MAX			503		4.29		2.75						
CRITERIA				CT 0.32		0.05	4.00						

COMMENTS: Max. day flow includes days that hydrants were flushed.

* Low Treated Cl₂ of 0.30 mg/L on July 19 for <1 min on start up.

* Low Treated Cl₂ of 0.24 mg/L on August 29 - Operator responded on site. Sodium hypochlorite added to clearwell.

Calculated minimum free chlorine of 0.20 mg/L for CT using actual max. flow rate of 5.76 l/s.

* High Cl₂ of 4.29 mg/L. Plant locked out. Operator on site.

Well #2 was offline October 30 - December 27. New well pump installed December 19, 2017.

Facility Flow Summary

Drinking-Water System Number: 210003912
 Drinking-Water System Name: FINCH DRINKING WATER SYSTEM
 Drinking-Water System Owner: Title Holder: Municipality
 Drinking-Water System Category: Large Municipal Residential
 Municipal Drinking Water License: 182-101
 Period being reported: January 1 - December 31, 2017

Raw Water

Raw Water (Source Name) Raw Well #1
 Source Type: Drilled
 Drinking Water Permit to Take Water No: 7327-83ZL7J

Month	Monthly Flow Total (m3/month)	Daily Flow Average (m3/day)	Daily Flow Maximum (m3/day)	Daily Flow Peak Flow Rate (L/sec)
Jan	3387.00	109.26	235.00	7.75
Feb	1863.00	66.54	252.00	7.75
Mar	3704.00	119.48	249.00	7.76
Apr	504.00	16.80	227.00	7.72
May	3831.00	123.58	317.00	7.78
Jun	4757.00	158.57	321.00	7.72
Jul	3377.00	108.94	261.00	7.76
Aug	5646.00	182.13	439.00	7.71
Sep	4235.00	141.17	443.00	7.72
Oct	3217.00	103.77	438.00	7.74
Nov	8357.00	278.57	303.00	7.74
Dec	7292.00	235.23	340.00	7.41
Total	50170.00			
Avg	4180.83	137.00		
Max	8357.00		443.00	7.78
Criteria			777.00	9.00

Facility Flow Summary

Drinking-Water System Number: 210003912
 Drinking-Water System Name: FINCH DRINKING WATER SYSTEM
 Drinking-Water System Owner: Title Holder: Municipality
 Drinking-Water System Category: Large Municipal Residential
 Municipal Drinking Water License: 182-101
 Period being reported: January 1 - December 31, 2017

Raw Water

Raw Water (Source Name) Raw Well #2
 Source Type: Drilled
 Drinking Water Permit to Take Water No: 7327-83ZL7J

Month	Monthly Flow Total (m3/month)	Daily Flow Average (m3/day)	Daily Flow Maximum (m3/day)	Daily Flow Peak Flow Rate (L/sec)
Jan	3117.00	100.55	247.00	8.49
Feb	4062.00	145.07	245.00	8.49
Mar	2978.00	96.06	253.00	8.49
Apr	6135.00	204.50	250.00	8.83
May	3687.00	118.94	357.00	8.44
Jun	2862.00	95.40	296.00	8.41
Jul	3939.00	127.06	266.00	8.43
Aug	2963.00	95.58	323.00	8.41
Sep	5431.00	181.03	488.00	8.41
Oct	6658.00	214.77	521.00	8.34
Nov	0	0	0	0
Dec	1396.00	45.03	308.00	9.98
Total	43228.00			
Avg	3602.33	118.67		
Max	6658.00		521.00	9.98
Criteria			777.00	9.00

Mr. James Mahoney
 Supervisor, Ministry of the Environment and Climate Change
James.Mahoney@ontario.ca

February 13, 2018

Re: Notification of Flow Rate Exceedance - Finch DWS - PTTW #7327-83ZL7J

This letter provides written notification of non-compliance with respect to the flow rate specified under Condition 3.2 of PTTW #7327-83ZL7J issued for the village of Finch's municipal wells located at 20 William Street, in the Township of North Stormont.

The maximum flow rate for Well #2 was exceeded as follows:

Date	Start Time	End Time	Duration (hh:mm)	Peak Flow Rate (L/min)	PTTW Max. Flow Rate (L/min)
12/27/2017	14:24	14:26	00:02	541.8	540
12/27/2017	14:54	15:00	00:06	546.6	540
12/27/2017	19:15	19:34	00:19	564.6	540
12/27/2017	19:50	20:10	00:20	564.6	540
12/27/2017	20:24	20:42	00:18	264.6	540
12/27/2017	21:00	21:15	00:15	555.6	540
12/27/2017	21:35	21:51	00:16	557.4	540
12/27/2017	22:11	22:24	00:13	553.2	540
12/27/2017	22:46	22:55	00:09	560.4	540
12/27/2017	23:20	23:30	00:10	562.8	540
12/27/2017	23:57	23:59	00:02	558.6	540
12/28/2017	00:00	00:09	00:09	546.0	540
12/28/2017	00:33	00:42	00:09	552.6	540
12/28/2017	01:07	01:15	00:09	549.0	540
12/28/2017	09:16	09:35	00:19	565.2	540
12/28/2017	09:51	10:05	00:14	562.2	540

On December 19th, 2017 a new submersible well pump was installed in Well #2, and the well was put back into service on December 27th. The flow rate exceedances occurred as a result of insufficient throttling of the flow control valve after installation of the new well pump. The well had been operated earlier in the day on the 27th, and it appeared the flow rate had stabilized; however, as the well continued to operate over the course of the day and overnight, the flow rate continued to drift and exceeded the maximum rate specified in the PTTW. As there was no high flow alarm configured for the well, it was only discovered by the operator the following day. At that time, the flow control valve was throttled further to reduce the flow below 9 L/s (540 L/min). The concentration of free chlorine in the treated water remained above the minimum required to meet the CT value for disinfection during that time.

A high flow alarm has since been configured for both wells located at the Finch WTP.

If you have any questions or concerns, please contact me at (613) 448-3098.

Sincerely,



Dawn Crump
Process & Compliance Technician
Seaway Valley Cluster

Cc: Marc Chenier, CAO/Clerk, Township of North Stormont
Stephane Barbarie, Senior Operations Manager, OCWA
Brenda Beaudoin, Provincial Officer, MOECC