



2012
WATERWORKS
SUMMARY REPORT
(January 1, 2012 to December 31, 2012)

PREPARED BY:

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SUBMITTED ON:

March 5, 2013

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CORPORATION OF THE TOWN OF HAWKESBURY

2012 WATERWORKS SUMMARY REPORT

(January 1, 2012 to December 31, 2012)

1. **REQUIREMENTS OF THE SAFE DRINKING WATER ACT, 2002**

Under the new Drinking Water Systems Regulation 170/03, the Town of Hawkesbury's water system has been classified as a *Municipal Large Residential System*. This category is based on the fact that the Hawkesbury's water system serves a major residential development and serves more than 100 private residences.

There are 3840 water services in the Town of Hawkesbury. Furthermore, the Town of Hawkesbury's water system serves three wards in the Township of Champlain, being the Town of Vankleek Hill with 765 water services, the Village of l'Original with 560 water services and Laurentian Park with 40 water services for a total of 1,365 water services.

2. **REQUIREMENTS OF THE DRINKING WATER SYSTEMS REGULATION (ONTARIO REGULATION 170/03)**

The new Drinking Water Systems Regulation 170/03, made under the Safe Drinking Water Act, 2002, provides more detailed regulatory requirements in conjunction with the Safe Drinking Water Act, 2002.

3. **REQUIREMENTS OF THE SYSTEM'S APPROVAL**

The Town of Hawkesbury's drinking water system operates under the new program for Municipal Drinking Water Licensing OAP 177. We been assessed by NSF-ISR and found to be conformance with Ontario's Drinking Water Quality Management Standard. The scope of registration for the DWQMS is Entire Full Scope Accreditation and the expiration date is February 20, 2016.

We also have a Permit to Take Water no. , 94-P-4011, Reference Number 7856-5TARNS, issued on February 15, 2004 in accordance with Section 34 of the Ontario Water Resources Act. This permit is valid until February 15, 2014.

4. RATED CAPACITY AND FLOW RATES

- a) Under Schedule C section 1 of the Municipal Drinking Water License #177-101, the rated capacity at the Hawkesbury Water Filtration Plant is as follows:

Maximum Daily Volume of Treated water = 27,275 m³/day

Based on the 2012 water production data, the maximum daily water production was in March 1, 2012 at 10,832 m³/day. This is well under the Maximum Daily Volume rate allowed.

See Appendix “A” for Waterworks Data 2012.

- b) Under the Permit to Take Water no. 94-P-4011, the rate of taking for the Town of Hawkesbury is as follows:

Maximum Rate of Taking = 25,003 L/min =
Maximum Rate of Taking = 20,000,000 L/day

Based on the 2012 raw water consumption data, the highest rate of taking water (peak) was January 19, 2012 for 28,828 m³/day for about 2 minutes (11h48 to 11h50). The total water production for that day was 10,160 m³. Les Spécialistes AVA perform a vibration test for the Raw water pump and increase the speed to 100% to check the bearing, alignment etc..

See Appendix “A” for Waterworks Data 2012.

5. AVAILABILITY OF REPORT

The Town of Hawkesbury will be advising the users of water from the system, through local newspapers, that the Summary Report will be available for review and inspection, free of charge, at the following locations:

- 1. *Technical Services Department***
Town of Hawkesbury
600 Higginson Street
Hawkesbury, Ontario
K6A 1H1
Tel. (613) 632-0106, ext. 2020

- 2. *Hawkesbury Public Library***
550 Higginson Street
Hawkesbury, Ontario
K6A 1H1

- 3. *Town's website* www.hawkesbury.ca**

Furthermore, a copy of the Summary Report will also be forwarded to the Township of Champlain.

This 2012 Summary Report has been prepared on March 5, 2013 and will be submitted to the Municipal Council of the Corporation of the Town of Hawkesbury within the next three months.

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APPENDIX “A”

WATERWORKS DATA 2012

		FILTERS		
MONTH		Turb. No.1	Turb. No.2	Turb. No.3
JAN	Avg.	0.10	0.11	0.11
	Max	0.15	0.15	0.17
	Min	0.07	0.08	0.07
FEV	Avg.	0.09	0.10	0.10
	Max	0.14	0.15	0.13
	Min	0.07	0.08	0.08
MARS	Avg.	0.11	0.10	0.10
	Max	0.21	0.14	0.16
	Min	0.08	0.08	0.08
APRIL	Avg.	0.12	0.12	0.12
	Max	0.16	0.15	0.17
	Min	0.09	0.09	0.09
MAY	Avg.	0.13	0.13	0.13
	Max	0.15	0.17	0.15
	Min	0.10	0.10	0.10
JUNE	Avg.	0.14	0.15	0.15
	Max	0.22	0.28	0.29
	Min	0.11	0.12	0.12
JULY	Avg.	0.15	0.15	0.15
	Max	0.22	0.19	0.20
	Min	0.10	0.11	0.10
AUGUST	Avg.	0.13	0.13	0.13
	Max	0.15	0.16	0.16
	Min	0.11	0.11	0.10
SEPT.	Avg.	0.13	0.13	0.14
	Max	0.16	0.15	0.18
	Min	0.11	0.11	0.11
OCTO.	Avg.	0.16	0.15	0.17
	Max	0.21	0.20	0.21
	Min	0.12	0.11	0.12
NOV.	Avg.	0.11	0.11	0.11
	Max	0.21	0.27	0.18
	Min	0.07	0.07	0.07
DEC.	Avg.	0.09	0.09	0.10
	Max	0.12	0.12	0.27
	Min	0.07	0.08	0.08
Total		0.12	0.12	0.13
Avg.		0.22	0.28	0.29
Max		0.07	0.07	0.07
Min				

RAW WATER												
MONTH	Date	Temp.	pH	Alk.	Color	Turb.	Residual Alum.	Choli.	E.Coli.	Free Chlorine	Total Chlorine	
JAN	Avg.	0.8	7.23	37	45	3.59	0.000	22.00	3.94	0.00	0.00	
	Max	1.1	7.38	47	48	5.39	0.000	284.00	48.00	0.00	0.00	
	Min	0.4	6.95	30	40	2.88	0.000	0.00	0.00	0.00	0.00	
FEV	Avg.	0.7	7.12	32	45	3.46	0.000	85.21	14.86	0.00	0.00	
	Max	1.0	7.25	38	48	4.55	0.000	1096.00	208.00	0.00	0.00	
	Min	0.4	7.04	29	43	3.08	0.000	0.00	0.00	0.00	0.00	
MARS	Avg.	0.8	7.20	45	48	12.38	0.000	89.03	15.35	0.00	0.00	
	Max	1.2	7.43	55	50	35.70	0.000	1430.00	280.00	0.00	0.00	
	Min	0.4	7.08	32	45	3.70	0.000	0.00	0.00	0.00	0.00	
APRIL	Avg.	4.8	7.36	53	50	26.60	0.000	29.67	7.00	0.00	0.00	
	Max	8.8	7.52	59	50	61.55	0.000	520.00	180.00	0.00	0.00	
	Min	1.3	7.21	46	50	8.43	0.000	0.00	0.00	0.00	0.00	
MAY	Avg.	12.4	7.26	42	50	10.58	0.000	15.97	2.13	0.00	0.00	
	Max	16.5	7.41	54	50	19.50	0.000	208.00	36.00	0.00	0.00	
	Min	9.0	7.08	34	45	6.51	0.000	0.00	0.00	0.00	0.00	
JUNE	Avg.	19.1	7.14	32	50	15.04	0.000	25.13	0.33	0.00	0.00	
	Max	20.9	7.35	37	50	85.10	0.000	300.00	4.00	0.00	0.00	
	Min	16.9	7.04	26	48	6.26	0.000	0.00	0.00	0.00	0.00	
JULY	Avg.	23.8	7.10	32	48	9.23	0.000	16.39	0.13	0.00	0.00	
	Max	25.9	7.21	38	50	21.70	0.000	308.00	4.00	0.00	0.00	
	Min	20.6	7.02	30	41	4.77	0.000	0.00	0.00	0.00	0.00	
AUG.	Avg.	23.7	7.06	32	39	4.33	0.000	23.68	0.26	0.00	0.00	
	Max	25.0	7.16	35	45	5.28	0.000	204.00	4.00	0.00	0.00	
	Min	21.5	6.99	30	35	3.40	0.000	0.00	0.00	0.00	0.00	
SEPT.	Avg.	20.2	7.02	38	38	4.20	0.000	19.33	0.47	0.00	0.00	
	Max	22.3	7.12	43	48	6.52	0.000	172.00	10.00	0.00	0.00	
	Min	18.9	6.94	34	30	2.77	0.000	0.00	0.00	0.00	0.00	
OCTO.	Avg.	14.8	6.96	41	43	6.58	0.000	23.61	1.42	0.00	0.00	
	Max	18.1	7.13	47	50	15.95	0.000	240.00	28.00	0.00	0.00	
	Min	11.0	6.83	37	33	3.58	0.000	0.00	0.00	0.00	0.00	
NOV.	Avg.	9.0	6.97	42	45	4.37	0.000	20.43	3.33	0.00	0.00	
	Max	10.9	7.12	46	91	8.54	0.000	192.00	40.00	0.00	0.00	
	Min	7.0	6.81	37	35	3.32	0.000	0.00	0.00	0.00	0.00	
DEC.	Avg.	3.8	7.08	48	49	9.19	0.000	17.24	10.77	0.00	0.00	
	Max	6.9	7.25	56	50	16.95	0.000	280.00	104.00	0.00	0.00	
	Min	0.9	6.88	40	45	4.05	0.000	0.00	0.00	0.00	0.00	
Total	Avg.	11.17	7.13	39.49	45.71	9.13	0.00	32.31	5.00	0.00	0.00	
	Max	25.85	7.52	59.00	90.50	85.10	0.00	1430.00	280.00	0.00	0.00	
	Min	0.35	6.81	25.50	30.00	2.77	0.00	0.00	0.00	0.00	0.00	

MONTH	BACKWASH		WATER PRODUCTION					
		TSS (mg/l)	Raw Water (M3)	City Consumption (M3)	Back Wash (M3)	Plant Use (M3)	Total Production (m3/d)	Town Flow (m3/d)
JAN	Avg.	0.0					8,484	8,390
	Max	0.0					10,004	9,917
	Min	0.0					7,118	6,995
	Total		274,914	258,408	4,605	6,803	263,013	260,094
FEV	Avg.	0.0					9,093	8,982
	Max	0.0					10,210	10,266
	Min	0.0					8,101	7,980
	Total		268,538	250,159	4,454	6,142	254,612	251,490
MARS	Avg.	0.0					8,683	8,577
	Max	0.0					10,237	9,998
	Min	0.0					7,845	7,750
	Total		283,331	264,774	4,407	6,621	269,181	265,874
APRIL	Avg.	0.0					8,550	8,446
	Max	0.0					9,841	9,745
	Min	0.0					7,576	7,426
	Total		267,273	251,943	4,543	6,459	256,486	253,383
MAY	Avg.	0.0					8,743	8,648
	Max	0.0					10,458	10,394
	Min	0.0					7,587	7,566
	Total		285,795	266,672	4,367	6,753	271,039	268,073
JUNE	Avg.	0.0					9,132	9,017
	Max	0.0					11,009	10,867
	Min	0.0					7,406	7,433
	Total		286,796	269,212	4,748	7,230	273,960	270,520
JULY	Avg.	0.0					8,872	8,764
	Max	0.0					10,617	10,674
	Min	0.0					8,100	7,995
	Total		286,746	270,217	4,802	8,375	275,019	271,675
AUGUST	Avg.	0.0					8,895	8,800
	Max	0.0					10,126	10,029
	Min	0.0					7,407	7,305
	Total		287,573	271,044	4,709	8,372	275,753	272,799
SEPT.	Avg.	0.0					7,948	7,846
	Max	0.0					9,204	9,183
	Min	0.0					6,670	6,515
	Total		249,226	233,877	4,554	8,086	238,431	235,374
OCTO.	Avg.	0.0					7,960	7,851
	Max	0.0					13,681	13,948
	Min	0.0					6,845	6,810
	Total		258,018	241,695	5,073	7,534	246,768	243,371
NOV.	Avg.	0.0					7,815	7,723
	Max	0.0					8,997	8,925
	Min	0.0					7,003	6,882
	Total		245,958	230,088	4,354	6,671	234,442	231,675
DEC.	Avg.	0.0					8,322	8,224
	Max	0.0					11,047	10,959
	Min	0.0					7,250	7,105
	Total		269,598	253,281	4,700	6,899	257,981	254,946
	Avg.	0.00					8,541	
	Max	0.00					13,681	
	Min	0.00					6,670	
	Total		3,263,765	3,061,370	55,314	85,945	3,116,684	

MONTH		CHLORINE				SILICA			LIME		ALUM		FLUOR		
		Monthly (kg)	Dosage (mg/l)	Chateau (kg)	Chateau (mg/l)	Silica (c) (litre)	Alum. (c) (litre)	Dosage SiO ₂ (mg/l)	Lime (c.) (kg)	Dosage (mg/l)	Alum (litre)	Dosage (mg/l)	Fluor(b) (lbs)	Fluor® (kg)	Dosage (mg/l)
JAN	Avg.		2.24		0.24			0.98		11.92		46.35			0.43
	Max		5.01		0.74			1.45		13.07		63.34			0.52
	Min		0.58		0.01			0.32		10.61		36.92			0.15
	Total	615.0		5.5		674	336		3,077.1		20,615.1		586.3	115.9	
FEV	Avg.		2.19		0.48			1.02		11.03		40.66			0.49
	Max		2.93		0.95			1.21		12.01		44.90			0.52
	Min		1.46	10.4	0.26			0.90		10.61		37.32			0.46
	Total	590.0		10.4		688	341		2,760.0		17,704.0		670.5	132.6	
MARS	Avg.		2.32		0.26			1.09		13.02		47.27			0.49
	Max		4.58		0.62			1.20		14.43		67.59			0.54
	Min		1.06		0.00			1.03		12.01		40.42			0.41
	Total	655.0		6.1		772	383		3,445.2		21,642.8		705.5	139.5	
APRIL	Avg.		2.46		0.29			1.04		13.76		51.71			0.47
	Max		3.68		0.68			1.12		14.00		59.17			0.53
	Min		1.17	4.0	0.01			0.97		13.47		41.54			0.14
	Total	660.0		4.0		699	348		3,466.8		22,402.2		637.9	126.2	
MAY	Avg.		2.33		0.45			1.05		13.11		52.18			0.49
	Max		3.49		1.01			1.25		13.51		57.81			0.52
	Min		1.15	7.0	0.05			0.87		12.78		40.23			0.27
	Total	665.0		7.0		750	370		3,495.7		24,175.1		709.1	140.2	
JUNE	Avg.		2.80		0.46			1.05		12.60		44.90			0.51
	Max		4.48		0.81			1.33		13.59		56.10			0.62
	Min		1.10	9.3	0.11			0.95		11.84		37.44			0.42
	Total	800.0		9.3		760	381		3,394.2		20,922.4		733.4	145.0	
JULY	Avg.		3.14		0.42			1.05		14.23		45.60			0.50
	Max		5.13		1.05			1.39		14.96		57.80			0.54
	Min		1.61	11.8	0.00			0.55		11.56		40.29			0.47
	Total	900.0		11.8		754	379		3,849.0		21,185.6		724.9	143.3	
AUGUST	Avg.		3.15		0.64			0.96		13.03		40.70			0.45
	Max		5.46		1.16			1.21		13.68		45.82			0.55
	Min		1.56	17.5	0.30			0.82		11.56		36.05			0.15
	Total	900.0		17.5		695	347		3,527.3		18,988.8		650.0	128.5	
SEPT.	Avg.		3.07		0.65			0.99		13.92		41.98			0.50
	Max		5.44		1.03			1.09		14.84		54.73			0.55
	Min		1.88	14.6	0.45			0.82		12.93		37.01			0.46
	Total	765.0		14.6		619	311		3,258.0		16,953.1		627.8	124.2	
OCTO.	Avg.		3.09		1.00			0.99		14.31		42.25			0.49
	Max		4.60		7.24			1.46		15.53		54.86			0.54
	Min		1.56	17.4	0.16			0.72		12.82		19.77			0.43
	Total	782.0		17.4		639	326		3,445.5		17,532.0		643.7	127.3	
NOV.	Avg.		2.66		0.47			0.96		13.33		44.19			0.38
	Max		4.51		1.13			1.17		14.41		50.27			0.51
	Min		0.00	6.9	0.08			0.00		0.00		41.30			0.02
	Total	650.0		6.9		612	316		3,072.2		17,612.2		480.8	95.1	
DEC.	Avg.		2.48		0.46			1.08		14.90		47.59			0.50
	Max		5.10		0.86			1.20		15.32		51.44			0.56
	Min		0.65	9.5	0.22			0.97		14.20		37.07			0.47
	Total	665.0		9.5		734	374		3,763.6		20,865.3		684.6	135.4	
	Avg.				0.48			1.02		13.26		45.45			0.48
	Max				7.24			1.46		15.53		67.59			0.62
	Min				0.00			0.00		0.00		19.77			0.02
	Total	8,647.0		120.0		8,397	4,209		40,555		240,599		7,855	1,553	

MONTH	Date	GAS		HYDRO	
		(m3)	(kw/m)		Peak Demand
JAN	Avg. Max Min Total	10,749	105,500	544	605
				520	
FEV	Avg. Max Min Total	9,999	99,500	582	595
				480	
MARS	Avg. Max Min Total	9,571	106,500	604	605
				595	
APRIL	Avg. Max Min Total	8,110	93,500	513	590
				450	
MAY	Avg. Max Min Total	2,478	96,000	488	500
				465	
JUNE	Avg. Max Min Total	64	95,500	500	550
				470	
JULY	Avg. Max Min Total	66	104,000	508	590
				450	
AUGUST	Avg. Max Min Total	67	103,000	548	580
				475	
SEPT.	Avg. Max Min Total	353	92,500	551	595
				450	
OCTO.	Avg. Max Min Total	671	93,500	552	580
				450	
NOV.	Avg. Max Min Total	4,888	89,000	476	490
				445	
DEC.	Avg. Max Min Total	8,031	101,000	545	605
				390	
	Avg. Max Min Total	55,047	1,179,500	534.24	605.00
				390.00	

SOMMAIRE / SUMMARY					
	2011	2012	2011	2012	
	Production d'eau		Water production		2012-2011
	(Gallons)		(m3)		
Total de l'année Total for year	685,670,501	652,898,177	3,116,684	2,967,719	95%
Moy. par jour Daily ave.	1,878,549	1,788,762	8,539	8,131	
Moy. par min. Ave. per min.	1,304.55	1,242.20	5.93	5.65	
Consommation max. Max. consumption	3,009,844	2,383,006	13,681	10,832	
Consommation min. Min. consumption	1,467,376	1,231,065	6,670	5,596	
	Produits chimiques		Chemical products		2012-2011
	(lbs)		(kg)		
Pas-8 (Coagulant)	529,317	487,468	240,599	221,576	92%
Chaux/Lime	89,220	87,466	40,555	39,757	98%
Chlore/Chlorine	19,287	18,334	8,767	8,334	95%
Fluor/Fluoride	3,417	3,569	1,553	1,622	104%
Silicate	18,474	19,022	8,397	8,646	103%
Aluminate	8,566	8,905	4,209	4,048	96%