



CORPORATION OF THE TOWN OF HAWKESBURY

2005
WATERWORKS
SUMMARY REPORT
(January 1, 2005 to December 31, 2005)

PREPARED BY:

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SUBMITTED ON:

March 31, 2006

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CORPORATION OF THE TOWN OF HAWKESBURY
2005 WATERWORKS SUMMARY REPORT
(January 1, 2005 to December 31, 2005)

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.

Based on the 2005 Municipal Directory, there are 4,852 household units in the Town of Hawkesbury. Furthermore, the Town of Hawkesbury's water system serves two wards in the Township of Champlain, being the Town of Vankleek Hill with 895 household units and the Village of L'Orignal with 806 household units, for a total of 1,701 household units.

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 an amended Certificate of Approval no. 1145-5UCLCJ, issued by the Ministry of the Environment on January 6, 2004, and under 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.

In 2005, the Town of Hawkesbury was not issued any order by the Ministry of the Environment and no failure was ever reported on the system in 2005.

Waterworks Upgrades

In 2005, the Town of Hawkesbury proceeded with a Request for Proposal for the water standpipe rehabilitation.

The firm, J.L. Richards & Associates Ltd., was awarded the contract for the preparation of the plans and specifications for the water standpipe rehabilitation.

The scope of work is to rehabilitate the inside lining of the tank beginning in the Fall of 2006 and an inspection is necessary in order to assess the scope of work required to properly rehabilitate the tank lining and implement other modifications (i.e. improved mixing). The work to the water standpipe will be carried out in 2006.

4. **RATED CAPACITY AND FLOW RATES**

Under Part 4 of the amended Certificate of Approval no. 1145-5UCLCJ, the rated capacity at the Hawkesbury Water Filtration Plant is as follows:

- Maximum Flow Rate (L/sec) = 316
- Maximum Daily Volume (m³/day) = 27,275

Based on the water production data, the maximum daily water production was in August 2005 at 15,115 m³/day or 175 L/sec, well under the maximum flow rate allowed.

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

Based on the raw water consumption data, the rate of taking (peak) was in August 2005 at 19,490 L/min and the maximum was 16,778,000 L/day, well within the maximum rate of taking allowed.

See Appendix "A" for Waterworks Data 2005.

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, from March 31, 2006, at the following locations:

1. ***Technical Services Department***
Town of Hawkesbury
600 Higginson Street
Hawkesbury, Ontario
K6A 1H1
Tel. (613) 632-0106, ext. 2237

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 2005 Summary Report has been prepared on March 31, 2006 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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March 31, 2006

APPENDIX “A”

WATERWORKS DATA 2005

		DAILY RAW WATER TAKING VALUES	
MONTH		Raw Water (M3)	Raw water (peak) (m3/d)
JAN	Avg.	11,624	
	Max	13,250	21,859
	Min	8,783	
	Total	360,350	
FEV	Avg.	11,225	
	Max	13,153	27,973
	Min	9,090	
	Total	314,308	
MARS	Avg.	11,056	
	Max	12,173	25,714
	Min	9,023	
	Total	342,736	
APRIL	Avg.	11,507	
	Max	12,930	27,514
	Min	9,557	
	Total	345,202	
MAY	Avg.	11,925	
	Max	14,574	22,052
	Min	8,532	
	Total	369,663	
JUNE	Avg.	13,306	
	Max	16,664	28,070
	Min	7,857	
	Total	389,193	
JULY	Avg.	12,108	
	Max	15,931	25,037
	Min	8,903	
	Total	375,347	
AUGUST	Avg.	12,646	
	Max	16,778	25,289
	Min	8,859	
	Total	392,038	
SEPT.	Avg.	11,219	
	Max	13,316	19,889
	Min	8,866	
	Total	336,560	
OCTO.	Avg.	9,855	
	Max	12,771	18,584
	Min	7,171	
	Total	305,494	
NOV.	Avg.	11,755	
	Max	13,483	21,935
	Min	8,809	
	Total	352,665	
DEC.	Avg.	10,053	
	Max	12,359	18,403
	Min	7,203	
	Total	311,835	
Avg.		11,523	
Max		16,778	28,070
Min		7,171	
Total		4,581,956	

MONTH	BACKWASH		WATER PRODUCTION					Town Flow (m3/d)
		TSS (mg/l)	Raw Water Consumption (M3)	City Water Consumption (M3)	Back Wash (M3)	Plant Use (M3)	Total Production (m3/d)	
JAN	Avg.	0	11,624	10,473	122	258	10,595	10,550
	Max	12	13,250	11,926	155	269	12,051	11,989
	Min	0	8,783	7,901	105	244	8,022	7,908
	Total		360,350	324,660	3,776	8,001	328,436	327,067
FEV	Avg.	0	11,225	10,001	124	269	10,125	8,565
	Max	10	13,153	11,964	166	494	12,064	11,683
	Min	0	9,090	8,112	0	248	8,237	0
	Total		314,308	280,028	3,472	7,527	283,499	239,827
MARS	Avg.	0	11,056	9,892	121	303	9,813	9,840
	Max	20	12,173	10,810	150	324	10,950	10,728
	Min	0	9,023	8,332	99	130	8,436	8,098
	Total		342,736	300,458	3,737	9,405	304,195	305,049
APRIL	Avg.	0	11,507	9,596	124	304	9,720	9,732
	Max	11	12,930	10,701	169	317	10,822	10,970
	Min	0	9,557	7,673	92	294	7,778	7,953
	Total		345,202	287,887	3,712	9,132	291,589	291,957
MAY	Avg.	0	11,925	9,993	118	296	10,111	9,987
	Max	4	14,574	13,079	140	333	13,198	12,085
	Min	0	9,532	7,448	100	266	7,568	7,616
	Total		369,663	309,788	3,660	9,247	313,448	309,597
JUNE	Avg.	0	13,306	11,839	114	341	11,953	11,823
	Max	4	16,664	14,649	167	377	14,789	14,748
	Min	0	7,857	8,272	0	291	8,410	8,366
	Total		399,193	355,165	3,434	10,232	358,599	354,678
JULY	Avg.	9	12,108	11,633	127	385	11,760	11,262
	Max	12	15,931	14,363	169	411	14,431	14,536
	Min	0	8,903	8,785	68	356	8,929	0
	Total		375,347	360,630	3,925	11,944	364,555	349,134
AUGUST	Avg.	0	12,646	12,156	120	372	12,275	12,092
	Max	13	16,778	14,961	226	391	15,115	14,835
	Min	0	8,959	9,135	0	334	9,260	9,266
	Total		392,036	376,828	3,710	11,517	380,538	374,887
SEPT.	Avg.	0	11,219	10,862	127	317	10,989	10,746
	Max	3	13,316	12,594	155	358	12,732	12,519
	Min	0	8,866	8,435	116	264	8,560	8,450
	Total		336,560	325,854	3,803	9,508	329,657	322,384
OCTO.	Avg.	0	9,855	9,601	128	271	9,729	8,028
	Max	5	12,771	11,514	184	298	11,644	11,337
	Min	0	7,171	7,263	105	250	7,383	0
	Total		305,494	297,638	3,977	8,414	301,614	248,878
NOV.	Avg.	0	11,755	11,397	126	294	11,523	11,357
	Max	16	13,498	13,176	397	322	13,290	13,201
	Min	0	9,809	9,391	0	230	9,504	8,340
	Total		352,665	341,900	3,792	8,824	345,692	340,699
DEC.	Avg.	0	10,053	9,983	128	322	10,111	10,025
	Max	0	12,359	11,897	149	453	12,039	11,900
	Min	0	7,203	7,745	108	250	7,867	7,805
	Total		311,635	309,482	3,958	9,997	313,440	310,765
Avg.		1	11,523	10,602	123	311	10,725	
Max		20	16,778	14,961	397	494	15,115	
Min		0	7,171	7,263	0	130	7,383	
Total			4,581,956	4,217,370	49,071	124,217	3,915,272	

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.		2.68		0.00			1.07		12.66		2005.00	2006		2005.00
	Max		4.55		0.00			1.23		13.82		47.36			0.67
	Min		1.72		0.00			0.88		12.17		37.22			0.05
	Total	865.0		0.0		867	430		4,109.0		30,398.0		643.6	0.0	
FEV	Avg.		2.62		0.00			1.09		11.69		43.07			0.51
	Max		3.93		0.00			1.55		12.34		55.09			0.70
	Min		2.01		0.00			0.85		11.26		32.19			0.18
	Total	730.0		0.0		765	383		3,277.4		23,214.0		644.5	0.0	
MARS	Avg.		2.93		0.00			1.03		12.72		43.79			0.52
	Max		4.60		0.00			1.22		16.77		93.13			0.66
	Min		1.55		0.00			0.88		11.39		26.14			0.05
	Total	880.0		0.0		777	386		3,822.7		25,549.0		702.7	0.0	
APRIL	Avg.		2.82		0.00			1.16		13.56		54.65			0.58
	Max		5.41		0.00			1.25		14.64		67.72			0.71
	Min		1.51		0.00			0.99		11.39		45.75			0.42
	Total	810.0		0.0		833	415		3,903.7		30,347.0		761.2	0.0	
MAY	Avg.		2.59		0.00			0.98		11.04		47.15			0.60
	Max		5.04		0.00			1.21		11.46		55.10			0.88
	Min		1.19		0.00			0.81		10.76		34.43			0.39
	Total	795.0		0.0		757	378		3,418.8		28,143.0		834.1	0.0	
JUNE	Avg.		3.08		0.00			0.92		12.16		41.52			0.55
	Max		5.90		0.00			1.12		13.85		54.83			0.69
	Min		0.90		0.00			0.74		10.55		15.91			0.35
	Total	1,085.0		0.0		817	408		4,310.1		28,426.0		879.5	0.0	
JULY	Avg.		3.38		0.00			0.84		13.08		41.10			0.56
	Max		5.31		0.00			1.10		13.89		55.38			1.04
	Min		1.05		0.00			0.51		12.37		27.12			0.14
	Total	1,220.0		0.0		762	378		4,722.1		28,558.0		921.5	0.0	
AUGUST	Avg.		3.19		1.27			0.68		11.91		36.64			0.60
	Max		4.07		2.63			0.80		12.48		94.49			1.03
	Min		1.62		0.52			0.45		10.95		11.67			0.39
	Total	1,200.0		44.3		642	330		4,493.0		26,202.4		1,016.0	0.0	
SEPT.	Avg.		3.01		1.11			0.68		11.08		35.93			0.54
	Max		4.15		3.31			0.81		11.80		73.83			0.76
	Min		2.12		0.29			0.46		9.60		22.98			0.15
	Total	980.0		29.0		556	277		3,608.7		22,541.5		798.6	0.0	
OCTO.	Avg.		2.94		0.00			0.78		11.74		41.35			0.54
	Max		3.77		0.00			0.97		13.69		74.86			1.20
	Min		2.32		0.00			0.60		10.86		12.05			0.02
	Total	870.0		0.0		585	287		3,486.4		23,579.0		738.3	0.0	
NOV.	Avg.		2.59		0.74			0.84		14.20		53.22			0.56
	Max		3.91		2.98			1.12		15.70		67.20			0.98
	Min		0.87		0.17			0.63		13.56		35.92			0.09
	Total	887.0		29.0		720	0		4,857.6		35,041.0		863.1	0.0	
DEC.	Avg.		2.27		0.48			0.87		13.19		51.54			0.59
	Max		3.21		1.93			1.05		14.51		89.31			0.98
	Min		0.00		0.11			0.67		11.04		31.47			0.44
	Total	700.0		18248.8		679	338		4,103.2		30,498.0		823.3	0.0	
		Avg.			0.30			0.91		12.42		207.91			167.59
		Max			3.31			1.55		16.77		94.49			1.20
		Min			0.00			0.45		9.60		11.67			0.02
Total		11,032.0		16349.1		8,760	4,008		48,113		332,497		9,626	0	

MONTH	Date	GAS		HYDRO	
		(m3)	(kw/m)	Peak Demand	
2006					
JAN	Avg.				
	Max				695
	Min				575
	Total	10,299	112,000		
FEV	Avg.				
	Max				600
	Min				445
	Total	8,414	97,500		
MARS	Avg.				
	Max				580
	Min				470
	Total	8,119	109,500		
APRIL	Avg.				
	Max				590
	Min				560
	Total	5,230	104,500		
MAY	Avg.				
	Max				580
	Min				470
	Total	2,154	110,500		
JUNE	Avg.				
	Max				595
	Min				485
	Total	64	122,000		
JULY	Avg.				
	Max				590
	Min				480
	Total	64	119,500		
AUGUST	Avg.				
	Max				590
	Min				575
	Total	66	115,000		
SEPT.	Avg.				
	Max				585
	Min				545
	Total	63	100,500		
OCTO.	Avg.				
	Max				575
	Min				465
	Total	1,416	102,000		
NOV.	Avg.				
	Max				595
	Min				565
	Total	4,576	118,500		
DEC.	Avg.				
	Max				615
	Min				495
	Total	7,964	111,500		
Avg.					695.00
Max					445.00
Min					
Total		48,429	#####		

SOMMAIRE / SUMMARY

	2004	2005	2004	2005
	Production d'eau (Gallons)		Water production (m3)	
Total de l'année Total for year	853,113,380	861,359,759	3,877,788	3,915,272
Moy. par jour Daily ave.	2,337,280	2,359,890	10,624	10,727
Moy. par min. Ave. per min.	1,623	1,639	7.38	7.45
Consommation max. Max. consumption	3,126,420	3,325,300	14,211	15,115
Consommation min. Min. consumption	1,682,120	1,624,280	7,646	7,383
	Produits chimiques (lbs)		Chemical products (kg)	
Alun/Alum	1,052,258	731,493	478,299	332,497
Chaux/Lime	97,836	105,848	44,471	48,113
Chlore/Chlorine	24,380	60,238	11,082	27,381
Fluor/Fluoride	1,129	0	513	0
Silicate	24,658	19,273	11,208	8,760
Aluminate	11,194	8,818	5,088	4,008

Surintendant/Superintendent
SERVICE DE L'ENVIRONNEMENT/ENVIRONMENT SERVICE