



**SECTION 11 ANNUAL REPORT**

<b>Drinking-Water System Number:</b>	210000194
<b>Drinking-Water System Name:</b>	Minden Hills DWS
<b>Drinking-Water System Owner:</b>	Township of Minden Hills
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1, 2012 – December 31, 2012

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [X]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ ] No [X]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>7 Milne Street Minden, Ontario K0M 2K0</p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served:  <div style="border: 1px solid black; width: 50px; text-align: center; margin: 5px;">0</div> </p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve?          Yes [ ] No [X]</p> <p>Number of Interested Authorities you report to:  <div style="border: 1px solid black; width: 50px; text-align: center; margin: 5px;">0</div> </p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?          Yes [ ] No [X]</p>
--	---

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Not Applicable	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [ ] No [X]



Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method \_\_\_\_\_

**Describe your Drinking-Water System**

The Minden Well Supply drinking water system consists of a disinfection system that uses liquid sodium hypochlorite injected into the raw water. Continuous monitoring for free chlorine residual and turbidity is carried out prior to the treated water entering the distribution system. Iron and manganese sequestering is accomplished using sodium silicate. Raw flow rate is monitored on both wells using magnetic flow meters. Well two is for standby use only and is exercised weekly to refresh water quality and obtain regulatory samples. A 1500 cubic meter elevated water tower provides storage and augments pressure to the distribution.

**List all water treatment chemicals used over this reporting period**

Sodium hypochlorite  
Sodium silicate

**Were any significant expenses incurred to?**

- Install required equipment
- Repair required equipment
- Replace required equipment

**Please provide a brief description and a breakdown of monetary expenses incurred**

Replace 6" butterfly valve on water supply line

**Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre**

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
2012/03/02	Low Chlorine	0.07	mg/L	Pressurize cl2 panel, back flush and restore cl2 residual	2012/03/02
2012/04/21	Low Chlorine	0.17	mg/L	Ensure proper cl2 pump operation, back flush and restore cl2 residual	2012/04/21
2012/05/22	Low Chlorine	0.17	mg/L	Increase Cl2	2012/05/23



				dosage, verify dist cl2 residual, sample and verify results	
2012/07/30	Low Chlorine	0.10	mg/L	Repair chlorine pump fitting, back flush and restore cl2 residual	2012/07/31
2012/07/31	Low Chlorine	0.07	mg/L	Repair cl2 pump leak on discharge line, back flush and restore cl2 residual	2012/07/31
2012/11/28	Low Chlorine	0.05	mg/L	Replace chlorine line with hole, back flush and restore residual	2012/12/03
2012/12/05	Low Chlorine	0.19	mg/L	Replace damaged tubing, back flush and restore cl2 residual	2012/12/05

**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.**

Location	Number of Samples	Range of E.Coli or Fecal Results (min #) - (max #)	Range of Total Coliform Results (min #) - (max #)	Number of HPC Samples	Range of HPC Results (min #) - (max #)
Raw - RW1	52	0 - 0	0 - 0		-
Raw - RW2	52	0 - 0	0 - 0		-
Treated - TW	52	0 - 0	0 - 0	52	0 - 30
Distribution - DW	156	0 - 0	0 - 0	156	0 - 73

**Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.**

	Number of Grab Samples	Range of Results (min #)-(max #)
<b>Turbidity Well 1</b>	12	0-12-0.24 NTU
<b>Turbidity Well 2</b>	12	0.22-0.30 NTU
<b>Chlorine</b>	8760	0.00-2.04 mg/L
<b>Distribution Chlorine</b>	7/week minimum	0.70-2.07 mg/L

***NOTE:** For continuous monitors use 8760 as the number of samples.*



<b>Fluoride</b> (If DWS provides fluoridation)	N/A	
--	-----	--

**NOTE:** Record the unit of measure if it is **not** milligrams per litre.

**Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.**

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
Reg. 170/03, SDWA 2002	Alkalinity	2012/04/12	144	mg/L
Reg. 170/03, SDWA 2002	Alkalinity	2012/04/12	144	mg/L
Reg. 170/03, SDWA 2002	Alkalinity	2012/10/01	126	mg/L
Reg. 170/03, SDWA 2002	Alkalinity	2012/10/01	126	mg/L

**Summary of Inorganic parameters tested during this reporting period or the most recent sample results**

Parameter	Sample Date	Result Value	Exceedance
Please see results attached	2008/01/14 & 2011/01/10		No

\*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

**Summary of lead testing under Schedule 15.1 during this reporting period**

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
<b>Plumbing</b>	N/A		
<b>Distribution</b>	N/A		

**Summary of Organic parameters sampled during this reporting period or the most recent sample results**

Parameter	Sample Date	Result Value	Exceedance
Please see results attached	2011/01/10		No
THM - 2012 Running Average	2012	16.0	No



**List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.**

<b>Parameter</b>	<b>Result Value</b>	<b>Unit of Measure</b>	<b>Date of Sample</b>
N/A			

The Ontario Clean Water Agency aims to strictly adhere to operational and compliance limits, however certain operational circumstances may cause results to be temporarily outside of the limits. Limits that are momentarily surpassed as a result of pump start-ups, power outages/generator tests, pump rotation, calibrations, alarm verification, etc are a normal part of operations and do not indicate a true exceedance. A true exceedance will be noted and documented within the report.

**Attachments follow,**



Annual Summary - Schedule 23 and Additional Inorganics

Facility: [5838] - Minden Hills Water Treatment Plant  
 Works:  
 Serviced Population: 2300  
 Total Design Capacity(m3day): 1,950.0  
 Tag Group Selected: TW - Treated Water

	01/2012	02/2012	03/2012	04/2012	05/2012	06/2012	07/2012	08/2012	09/2012	10/2012	11/2012	12/2012	Maximum	# of Samples	# of Exceed	Most recent test within last 60 mths		1/2 MAC	MAC
																Date	Result		
<b>Treated Water: Max</b>																			
Antimony (ug/L)																01/10/2011	< 0.02	3.0	6.0
Arsenic: As (ug/L)																01/10/2011	0.2	12.5	25.0
Barium: Ba (ug/L)																01/10/2011	156.0	500.0	1,000.0
Boron: B (ug/L)																01/10/2011	31.0	2,500.0	5,000.0
Cadmium: Cd (ug/L)																01/10/2011	< 0.003	2.5	5.0
Chromium: Cr (ug/L)																01/10/2011	< 0.5	25.0	50.0
Mercury: Hg (ug/L)																01/10/2011	< 0.02	0.5	1.0
Selenium: Se (ug/L)																01/10/2011	< 1.0	5.0	10.0
Uranium: U (ug/L)																01/10/2011	1.08	10.0	20.0
<b>Additional Inorganics</b>																			
Fluoride Residual Mean. (mg/L)																01/14/2008	0.17		1.5
Nitrite (mg/L)	< 0.005			< 0.005			< 0.005			< 0.005			< 0.005	4		10/01/2012	< 0.005		1.0
Nitrate (mg/L)	< 0.013			< 0.013			< 0.013			< 0.013			< 0.013	4		10/01/2012	< 0.013		10.0
Sodium: Na (mg/L)																01/14/2008	14.8		20.0



Annual Summary - Schedule 24

Facility: [5838] - Minden Hills Water Treatment Plant  
 Works: [210000194] - Minden Hills Water Treatment Plant  
 Serviced Population: 2300  
 Total Design Capacity(m3day): 1,950.0  
 Tag Group Selected: TW - Treated Water

	01/2012	02/2012	03/2012	04/2012	05/2012	06/2012	07/2012	08/2012	09/2012	10/2012	11/2012	12/2012	Maximum	# of Samples	# of Exceed	Most recent test within last 60 mths		1/2 MAC	MAC	
																Date	Result			
<b>Treated Water: Max</b>																				
Alachlor (ug/L)																	01/10/2011	0.02	2.5	5.0
Aldicarb (ug/L)																	01/10/2011	0.01	4.5	9.0
Aldrin+Dieldrin (ug/L)																	01/10/2011	0.01	0.35	0.7
Atrazine + N-dealkylated metabolites (ug/L)																	01/10/2011	0.01	2.5	5.0
Azinphos-methyl (ug/L)																	01/10/2011	0.02	10.0	20.0
Bendiocarb (ug/L)																	01/10/2011	0.01	20.0	40.0
Benzene (ug/L)																	01/10/2011	0.32	2.5	5.0
Benzo(a)pyrene (ug/L)																	01/10/2011	0.004	0.005	0.01
Bromoxynil (ug/L)																	01/10/2011	0.33	2.5	5.0
Carbaryl (ug/L)																	01/10/2011	0.01	45.0	90.0
Carbofuran (ug/L)																	01/10/2011	0.01	45.0	90.0
Carbon Tetrachloride (ug/L)																	01/10/2011	0.16	2.5	5.0
Chlordane: Total (ug/L)																	01/10/2011	0.01	3.5	7.0
Chlorpyrifos (ug/L)																	01/10/2011	0.02	45.0	90.0
Cyanazine (ug/L)																	01/10/2011	0.03	5.0	10.0
Diazinon (ug/L)																	01/10/2011	0.02	10.0	20.0
Dicamba (ug/L)																	01/10/2011	0.2	60.0	120.0
1,2-Dichlorobenzene (ug/L)																	01/10/2011	0.41	100.0	200.0
1,4-Dichlorobenzene (ug/L)																	01/10/2011	0.36	2.5	5.0
DDT + metabolites (ug/L)																	01/10/2011	0.01	15.0	30.0
1,2-Dichloroethane (ug/L)																	01/10/2011	0.35	2.5	5.0
1,1-Dichloroethylene (ug/L)																	01/10/2011	0.33	7.0	14.0
Dichloromethane (Methylene Chloride) (ug/L)																	01/10/2011	0.35	25.0	50.0
2,4-Dichlorophenol (ug/L)																	01/10/2011	0.15	450.0	900.0
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)																	01/10/2011	0.19	50.0	100.0
Diclofop-methyl (ug/L)																	01/10/2011	0.4	4.5	9.0
Dimethoate (ug/L)																	01/10/2011	0.03	10.0	20.0
Dinoseb (ug/L)																	01/10/2011	0.36	5.0	10.0
Diquat (ug/L)																	01/10/2011	1.0	35.0	70.0
Diuron (ug/L)																	01/10/2011	0.03	75.0	150.0
Glyphosate (ug/L)																	01/10/2011	6.0	140.0	280.0
Heptachlor+hepachlor epoxide (ug/L)																	01/10/2011	0.01	1.5	3.0



Annual Summary - Schedule 24

Facility: [5838] - Minden Hills Water Treatment Plant  
 Works: [210000194] - Minden Hills Water Treatment Plant  
 Serviced Population: 2300  
 Total Design Capacity(m3day): 1,950.0  
 Tag Group Selected: TW - Treated Water

	01/2012	02/2012	03/2012	04/2012	05/2012	06/2012	07/2012	08/2012	09/2012	10/2012	11/2012	12/2012	Maximum	# of Samples	# of Exceed	Most recent test within last 60 mths		1/2 MAC	MAC	
																Date	Result			
<b>Treated Water: Max</b>																				
Lindane (ug/L)																	01/10/2011	0.01	2.0	4.0
Malathion (ug/L)																	01/10/2011	0.02	95.0	190.0
Methoxychlor (ug/L)																	01/10/2011	0.01	450.0	900.0
Metolachlor (ug/L)																	01/10/2011	0.01	25.0	50.0
Metribuzin (ug/L)																	01/10/2011	0.02	40.0	80.0
Monochlorobenzene (Chlorobenzene) (u																	01/10/2011	0.3	40.0	80.0
Paraquat (ug/L)																	01/10/2011	1.0	5.0	10.0
Parathion (ug/L)																	01/10/2011	0.02	25.0	50.0
Pentachlorophenol (ug/L)																	01/10/2011	0.15	30.0	60.0
Phorate (ug/L)																	01/10/2011	0.01	1.0	2.0
Picloram (ug/L)																	01/10/2011	0.25	95.0	190.0
Polychlorinated Biphenyls PCB (ug/L)																	01/10/2011	0.04	1.5	3.0
Prometryne (ug/L)																	01/10/2011	0.03	0.5	1.0
Simazine (ug/L)																	01/10/2011	0.01	5.0	10.0
Temephos (ug/L)																	01/10/2011	0.01	140.0	280.0
Terbufos (ug/L)																	01/10/2011	0.01	0.5	1.0
Tetrachloroethylene (ug/L)																	01/10/2011	0.35	15.0	30.0
2,3,4,6-Tetrachlorophenol (ug/L)																	01/10/2011	0.14	50.0	100.0
Triallate (ug/L)																	01/10/2011	0.01	115.0	230.0
Trichloroethylene (ug/L)																	01/10/2011	0.43	25.0	50.0
2,4,6-Trichlorophenol (ug/L)																	01/10/2011	0.25	2.5	5.0
2,4,5-Trichlorophenoxy acetic acid (2,4,!																	01/10/2011	0.22	140.0	280.0
Trifluralin (ug/L)																	01/10/2011	0.02	22.5	45.0
Vinyl Chloride (ug/L)																	01/10/2011	0.17	1.0	2.0