



Drinking-Water System Number:	220005161
Drinking-Water System Name:	Washago Water Treatment and Distribution
Drinking-Water System Owner:	The Corporation of the Township of Severn
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2011 to December 31, 2011

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></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 [X] No []</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;"> <p>Township of Severn Administrative Office 1024 Hurlwood Lane Orillia, Ontario L3V 6J3</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> </p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <div style="border: 1px solid black; width: 100px; height: 20px; 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 []</p>
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Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

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
Ramara Knob Hill / Somerset	260046137

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 [X] No []



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

Water for the Washago water treatment plant is pumped from Lake Couchiching to a package water treatment plant located on Quetton Street. Sodium Hypochlorite and SternPAC are added prior to direct filtration. Filtration is provided by two trains of pressure type depth filters and clarifiers. Filtered water is chlorinated and then sent to a 257 cubic meter, three cell, baffled, concrete underground reservoir for storage. Backwash water from the clarifiers and filters is sent directly to the sanitary sewage system. The distribution system was constructed in the 1980's and consists of plastic piping. The Washago water system serves the approx. 300 residents of the village of Washago in the Township of Severn and 20 houses in the Township of Ramara.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite
SternPAC

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

Filter Train #2 turbidity analyzer repairs - \$1500
 Final Effluent turbidity analyzer repairs - \$1500
 Standby generator control panel replaced - \$1200
 Standby generator batteries replaced - \$350
 Bathroom and office floor tiles replaced - \$2500
 Low reservoir float installed - \$500
 Distribution header valves replaced (6) - \$4500

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	Parameter	Result	Unit of	Corrective Action	Corrective
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Date			Measure		Action Date
Feb. 9, 2011	THM's	110	ug/L	Resample	Feb. 10, 2011
Apr. 28, 2011	THM's	102	ug/L	Resample	Apr. 28, 2011
May 25, 2011	Total Coliform	7	CFU/100ml	Resample	May 25, 2011
July 27, 2011	THM's	106	ug/L	Resample	July 28, 2011
Oct. 31, 2011	THM's	105	ug/L	Resample	Nov. 1, 2011

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

	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	52	0 - >60	0 - >80	0	
Treated	54	0	0	54	<10 – 10
Distribution	107	0	0 - 7	52	<10

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 #)
Turbidity – Train 1	8760	0.00 – 5.10 NTU
Turbidity – Train 2	8760	0.00 – 5.10 NTU
Turbidity	8760	0.00 – 5.10 NTU
Chlorine	8760	0.00 – 5.01 mg/L
Chlorine Free Residual Distribution System	364	0.78 – 2.05 mg/L
Fluoride (If the DWS provides fluoridation)		

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

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



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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Oct. 24, 2011	0.07	µg/L	No
Arsenic	Oct. 24, 2011	0.7	µg/L	No
Barium	Oct. 24, 2011	27.0	µg/L	No
Boron	Oct. 24, 2011	16	µg/L	No
Cadmium	Oct. 24, 2011	0.005	µg/L	No
Chromium	Oct. 24, 2011	< 0.5	µg/L	No
*Lead	N/A			
Mercury	Oct. 24, 2011	< 0.02	µg/L	No
Selenium	Oct. 24, 2011	< 1	µg/L	No
Sodium	Oct. 24, 2011	29.0	mg/L	Yes
Uranium	Oct. 24, 2011	0.154	µg/L	No
Fluoride	Nov. 4, 2008	0.07	mg/L	No
Nitrite	Jan. 31, 2011 Apr. 19, 2011 Jul. 25, 2011 Oct. 24, 2011	<0.005 <0.005 <0.005 <0.005	mg/L	No
Nitrate	Jan. 31, 2011 Apr. 19, 2011 Jul. 25, 2011 Oct. 24, 2011	0.031 <0.013 <0.013 <0.013	mg/L	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
Plumbing	12	0.11 – 0.82 ug/L	0
Distribution	2	0.13 – 0.14 ug/L	0

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
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Alachlor	Oct. 24, 2011	<0.02	µg/L	No
Aldicarb	Oct. 24, 2011	<0.01	µg/L	No
Aldrin + Dieldrin	Oct. 24, 2011	<0.01	µg/L	No
Atrazine + N-dealkylated metabolites	Oct. 24, 2011	0.03	µg/L	No
Azinphos-methyl	Oct. 24, 2011	<0.02	µg/L	No
Bendiocarb	Oct. 24, 2011	<0.01	µg/L	No
Benzene	Oct. 24, 2011	<0.32	µg/L	No
Benzo(a)pyrene	Oct. 24, 2011	<0.004	µg/L	No
Bromoxynil	Oct. 24, 2011	<0.33	µg/L	No
Carbaryl	Oct. 24, 2011	<0.01	µg/L	No
Carbofuran	Oct. 24, 2011	<0.01	µg/L	No
Carbon Tetrachloride	Oct. 24, 2011	<0.16	µg/L	No
Chlordane (Total)	Oct. 24, 2011	<0.01	µg/L	No
Chlorpyrifos	Oct. 24, 2011	<0.02	µg/L	No
Cyanazine	Oct. 24, 2011	<0.03	µg/L	No
Diazinon	Oct. 24, 2011	<0.02	µg/L	No
Dicamba	Oct. 24, 2011	<0.20	µg/L	No
1,2-Dichlorobenzene	Oct. 24, 2011	<0.41	µg/L	No
1,4-Dichlorobenzene	Oct. 24, 2011	<0.36	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Oct. 24, 2011	<0.01	µg/L	No
1,2-Dichloroethane	Oct. 24, 2011	<0.35	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Oct. 24, 2011	<0.33	µg/L	No
Dichloromethane	Oct. 24, 2011	<0.35	µg/L	No
2,4 Dichlorophenol	Oct. 24, 2011	<0.15	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Oct. 24, 2011	<0.19	µg/L	No
Diclofop-methyl	Oct. 24, 2011	<0.40	µg/L	No
Dimethoate	Oct. 24, 2011	<0.03	µg/L	No
Dinoseb	Oct. 24, 2011	<0.36	µg/L	No
Diquat	Oct. 24, 2011	<1	µg/L	No
Diuron	Oct. 24, 2011	<0.03	µg/L	No
Glyphosate	Oct. 24, 2011	<6	µg/L	No
Heptachlor + Heptachlor Epoxide	Oct. 24, 2011	<0.01	µg/L	No
Lindane (Total)	Oct. 24, 2011	<0.01	µg/L	No
Malathion	Oct. 24, 2011	<0.02	µg/L	No
Methoxychlor	Oct. 24, 2011	<0.01	µg/L	No
Metolachlor	Oct. 24, 2011	<0.01	µg/L	No
Metribuzin	Oct. 24, 2011	<0.02	µg/L	No
Monochlorobenzene	Oct. 24, 2011	<0.30	µg/L	No
Paraquat	Oct. 24, 2011	<1	µg/L	No
Parathion	Oct. 24, 2011	<0.02	µg/L	No
Pentachlorophenol	Oct. 24, 2011	<0.15	µg/L	No
Phorate	Oct. 24, 2011	<0.01	µg/L	No

Picloram	Oct. 24, 2011	<0.25	µg/L	No
Polychlorinated Biphenyls(PCB)	Oct. 24, 2011	<0.04	µg/L	No
Prometryne	Oct. 24, 2011	<0.03	µg/L	No
Simazine	Oct. 24, 2011	<0.01	µg/L	No
THM (NOTE: show latest annual average)		110.3	µg/L	Yes
Temephos	Oct. 24, 2011	<0.01	µg/L	No
Terbufos	Oct. 24, 2011	<0.01	µg/L	No
Tetrachloroethylene	Oct. 24, 2011	<0.35	µg/L	No
2,3,4,6-Tetrachlorophenol	Oct. 24, 2011	<0.14	µg/L	No
Triallate	Oct. 24, 2011	<0.01	µg/L	No
Trichloroethylene	Oct. 24, 2011	<0.44	µg/L	No
2,4,6-Trichlorophenol	Oct. 24, 2011	1.2	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Oct. 24, 2011	<0.22	µg/L	No
Trifluralin	Oct. 24, 2011	<0.02	µg/L	No
Vinyl Chloride	Oct. 24, 2011	<0.17	µg/L	No

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

Parameter	Result Value	Unit of Measure	Date of Sample
Sodium	29.7	mg/L	Oct. 25, 2010
THM's	110.3	ug/L	2010 Average