



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	210000498
Drinking-Water System Name:	Warkworth Water Treatment Plant
Drinking-Water System Owner:	Municipality of Trent Hills
Drinking-Water System Category:	WT III, WD I
Period being reported:	January 1 to December 31, 2010

<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>Trent Hills Municipal Office 66 Front Street South, Campbellford ON</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input type="text"/></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: <input type="text"/></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
Warkworth Water Distribution System	210000498

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

The Warkworth water treatment plant is a conventional water treatment system, which draws all of its raw water supply from Mill Creek. The treatment system consists of a low lift pumping station, one (1) package treatment system consisting of primary and secondary flocculation, sedimentation and two (2) dual-media filters equipped with granular activated carbon for taste, odour and dissolved organic carbon removal, a baffled contact tank connected to the filter discharge providing primary disinfection, and high lift pumping station equipped with secondary disinfection capabilities accomplished by a chlorine injection system located on the plant discharge piping.

A 500 cubic meter off-site storage reservoir provides peak hour demands and fire flow protection. The water distribution system is comprised of various water main materials of different sizes with a single pressure zone. The system supplies drinking water to the Village of Warkworth.

List all water treatment chemicals used over this reporting period

1. Poly Aluminum-chloride (SternPAC) - supplied by Kemira
2. Dry Polymer (Magnafloc LT27A) - supplied by Ciba Specialty Chemicals
3. Sodium Hypo-chlorite – supplied by Swish Maintenance

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

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



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	57	2-660	32-66000	0	N/A
Treated	52	0-0	0-0	52	0-2
Distribution	108	0-0	0-0	108	0-80

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	8760	0.028-0.640
Chlorine	8760	0.00-5.00
Fluoride (If the DWS provides fluoridation)	N/A	N/A

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

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	05/01/10	0.05	Micrograms	0
Arsenic	05/01/10	0.4	Micrograms	0
Barium	05/01/10	44.3	Micrograms	0
Boron	05/01/10	6.5	Micrograms	0
Cadmium	05/01/10	0.003<MDL	Micrograms	0
Chromium	05/01/10	0.5	Micrograms	0
*Lead	05/01/10	0.36	Micrograms	0
Mercury	05/01/10	0.02<MDL	Micrograms	0
Selenium	05/01/10	1<MDL	Micrograms	0
Sodium	05/01/10	12.4	Micrograms	0
Uranium	05/01/10	0.010<MDL	Micrograms	0
Fluoride	05/01/10	0.06<MDL	Milligrams	0
Nitrite	15/11/10	0.005<MDL	Milligrams	0
Nitrate	15/11/10	0.400	Milligrams	0

*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	N/A	N/A	N/A
Distribution	8	0.06-1.99	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
Alachlor	05/01/10	0.11<MDL	Micrograms	0
Aldicarb	05/01/10	0.30<MDL	Micrograms	0
Aldrin + Dieldrin	05/01/10	0.067<MDL	Micrograms	0
Aldrin	05/01/10	0.06<MDL	Micrograms	0
Dieldrin	05/01/10	0.067<MDL	Micrograms	0
Atrazine + N-dealkylated metabolites	05/01/10	0.12<MDL	Micrograms	0
Atrazine	05/01/10	0.11<MDL	Micrograms	0
Desethyl atrazine	05/01/10	0.12<MDL	Micrograms	0
Azinphos-methyl	05/01/10	0.21<MDL	Micrograms	0
Bendiocarb	05/01/10	0.13<MDL	Micrograms	0
Benzene	05/01/10	0.32<MDL	Micrograms	0
Benzo(a)pyrene	05/01/10	0.004<MDL	Micrograms	0
Bromoxynil	05/01/10	0.33<MDL	Micrograms	0
Carbaryl	05/01/10	0.16<MDL	Micrograms	0
Carbofuran	05/01/10	0.37<MDL	Micrograms	0
Carbon Tetrachloride	05/01/10	0.16<MDL	Micrograms	0
Chlordane (Total)	05/01/10	0.11<MDL	Micrograms	0
a-chlordane	05/01/10	0.069<MDL	Micrograms	0
g-chlordane	05/01/10	0.063<MDL	Micrograms	0
Oxychlordane	05/01/10	0.11<MDL	Micrograms	0
Chlorpyrifos	05/01/10	0.18<MDL	Micrograms	0
Cyanazine	05/01/10	0.18<MDL	Micrograms	0
Diazinon	05/01/10	0.081<MDL	Micrograms	0
Dicamba	05/01/10	0.20<MDL	Micrograms	0
1,2-Dichlorobenzene	05/01/10	0.41<MDL	Micrograms	0
1,4-Dichlorobenzene	05/01/10	0.36<MDL	Micrograms	0
Dichlorodiphenyltrichloroethane (DDT) + metabolites	05/01/10	0.35<MDL	Micrograms	0
op-DDT	05/01/10	0.095<MDL	Micrograms	0
pp-DDD	05/01/10	0.098<MDL	Micrograms	0
pp-DDE	05/01/10	0.075<MDL	Micrograms	0
pp-DDT	05/01/10	0.14<MDL	Micrograms	0
1,2-Dichloroethane	05/01/10	0.35<MDL	Micrograms	0
1,1-Dichloroethylene(vinylidene chloride)	05/01/10	0.33 <MDL	Micrograms	0

Dichloromethane	05/01/10	0.35<MDL	Micrograms	0
2-4 Dichlorophenol	05/01/10	0.15<MDL	Micrograms	0
2,4-Dichlorophenoxy acetic acid (2,4-D)	05/01/10	0.019<MDL	Micrograms	0
Diclofop-methyl	05/01/10	0.40<MDL	Micrograms	0
Dimethoate	05/01/10	0.12<MDL	Micrograms	0
Dinoseb	05/01/10	0.36<MDL	Micrograms	0
Diquat	05/01/10	1<MDL	Micrograms	0
Diuron	05/01/10	0.087<MDL	Micrograms	0
Glyphosate	05/01/10	6<MDL	Micrograms	0
Heptachlor + Heptachlor Epoxide	05/01/10	0.11<MDL	Micrograms	0
Heptachlor	05/01/10	0.061<MDL	Micrograms	0
Heptachlor Epoxide	05/01/10	0.11<MDL	Micrograms	0
Lindane (Total)	05/01/10	0.056<MDL	Micrograms	0
Malathion	05/01/10	0.091<MDL	Micrograms	0
Methoxychlor	05/01/10	0.14<MDL	Micrograms	0
Metolachlor	05/01/10	0.092<MDL	Micrograms	0
Metribuzin	05/01/10	0.12<MDL	Micrograms	0
Monochlorobenzene	05/01/10	0.30<MDL	Micrograms	0
Paraquat	05/01/10	1<MDL	Micrograms	0
Parathion	05/01/10	0.18<MDL	Micrograms	0
Pentachlorophenol	05/01/10	0.15<MDL	Micrograms	0
Phorate	05/01/10	0.11<MDL	Micrograms	0
Picloram	05/01/10	0.25<MDL	Micrograms	0
Polychlorinated Biphenyls(PCB)	05/01/10	0.04<MDL	Micrograms	0
Prometryne	05/01/10	0.23<MDL	Micrograms	0
Simazine	05/01/10	0.15<MDL	Micrograms	0
THM (NOTE: show latest annual average)		37.0	Micrograms	0
Temephos	05/01/10	0.31<MDL	Micrograms	0
Terbufos	05/01/10	0.12<MDL	Micrograms	0
Tetrachloroethylene	05/01/10	0.35<MDL	Micrograms	0
2,3,4,6-Tetrachlorophenol	05/01/10	0.14<MDL	Micrograms	0
Triallate	05/01/10	0.10<MDL	Micrograms	0
Trichloroethylene	05/01/10	0.43<MDL	Micrograms	0
2,4,6-Trichlorophenol	05/01/10	0.25<MDL	Micrograms	0
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	05/01/10	0.22<MDL	Micrograms	0
Trifluralin	05/01/10	0.12<MDL	Micrograms	0
Vinyl Chloride	05/01/10	0.17<MDL	Micrograms	0

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