

## Drinking-Water Systems Regulation O. Reg. 170/03

### Optional Annual Report Template

<b>Drinking-Water System Number:</b>	260005307
<b>Drinking-Water System Name:</b>	Fanshawe Cottage Complex
<b>Drinking-Water System Owner:</b>	Upper Thames River Conservation Authority
<b>Drinking-Water System Category:</b>	Non- Municipal Year Round Residential
<b>Period being reported:</b>	January 1, 2006 – December 31, 2006

**Complete if your Category is Large Municipal Residential or Small Municipal Residential**

Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ ]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [ ] No [ ]

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

**Complete for all other Categories.**

Number of Designated Facilities served:

none

Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ] *not applicable [x]*

Number of Interested Authorities you report to:

n/a

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ] *not applicable [x]*

**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
n/a	n/a

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 [ ] *not applicable [x]*

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

## Drinking-Water Systems Regulation O. Reg. 170/03

- 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 drinking water system is supplied by two drilled wells located west of the pump house. These wells are collectively referred to by staff as wells F5. Submersible well pumps draw water from the wells which enter the pump house via separate discharge pipes. Primary disinfection for each well source is achieved through the use of separate ultraviolet (UV) disinfection units, one on each discharge line. Each UV unit is located downstream of separate disinfection units (5 micron), which are required to provide the necessary inactivation of viruses. Downstream of the UV treatment, flow from each well enters a common header where the water is injected with sodium hypochlorite to provide the necessary secondary disinfection. Water then enters an in-ground storage reservoir where it is subsequently drawn via two distribution pumps that supply water to the Fanshawe Cottage Complex.

All critical functions of the disinfection treatment system are monitored for faults. The pump house is equipped with an on-line chlorine analyzer to monitor the free chlorine residual leaving the pump house. In the event that the residual should drop below the low alarm level, a control relay will stop the distribution pumps to prevent water from entering the distribution system. In addition, the UV disinfection systems include fail-safe solenoid valves mounted immediately upstream of each unit which are set to close in the event of a UV alarm or a loss of power. Alarming is also present on each UV system, as is automatic shutoff of the submersible pumps in the event of primary disinfection failure.

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

Sodium hypochlorite, Ultraviolet Light

### **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**

The following significant expenses were incurred as part of the pump house upgrade work undertaken in 2006:

- Installation of new UV disinfection systems complete with prefiltration units, chlorine analyzer, upgrades to the existing electrical system, and all other piping, appurtenances, control and alarm relays, etc.: \$ 19 600.00; and
- Engineering Consulting Fees related to Design and Submission of Revised Engineering Evaluation Report: \$ 14,500.00.

## Drinking-Water Systems Regulation O. Reg. 170/03

**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
Dec 5 -06	Total Coliform	1	cfu/100ml	Notified of adverse situation – followed protocol to report. Flushed system and resampled as per direction from MHU. Resample results indicated 0 total coliform and 0 ecoli at all sample points.	Dec 6 -06

**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 #)
<b>Raw</b>	53	0	0	Not required	Not applicable
<b>Treated</b>	50	0	1	Not required	Not applicable
<b>Distribution</b>	99	0	0	99	<10 – 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 #)
<b>Turbidity</b>	364	.08 - .95
<b>Chlorine</b>	745	.28 - +2.20
<b>Fluoride</b> (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. *not applicable***

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

## Drinking-Water Systems Regulation O. Reg. 170/03

### 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	May 27 -04	<0.002	mg/l	No
Arsenic	May 27 -04	<0.002	mg/l	No
Barium	May 27 -04	0.06	mg/l	No
Boron	May 27 -04	<0.02	mg/l	No
Cadmium	May 27 -04	<0.002	mg/l	No
Chromium	May 27 -04	<0.01	mg/l	No
Lead	Sept 7 -06	.08	ug/l	No
Mercury	May 27 -04	0.0001	ug/l	No
Selenium	May 27 -04	<0.002	mg/l	No
Sodium	Aug 24 -05	7500	mg/l	No
Uranium	May 27 -04	0.0009	mg/l	No
Fluoride	Sept 5 -02	0.27	mg/l	No
Nitrite	Feb 27 -06 May 25 -06 Sept 7 -06 Dec 7 -06	Not Detected Not Detected Not Detected Not Detected	mg/l	No
Nitrate	Feb 27 -06 May 25 -06 Sept 7 -06 Dec 4 -06	1.8 1.9 2.2 2.1	mg/l	No

### 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	May 27 -04	<0.0005	ug/l	No
Aldicarb	May 27 -04	<0.0005	ug/l	No
Aldrin + Dieldrin	May 27 -04	Not detected	ug/l	No
Atrazine + N-dealkylated metabolites	May 27 -04	Not detected	ug/l	No
Azinphos-methyl	May 27 -04	<0.0005	ug/l	No
Bendiocarb	May 27 -04	<0.001	ug/l	No
Benzene	May 27 -04	<0.0002	ug/l	No
Benzo(a)pyrene	May 27 -04	<0.00001	ug/l	No
Bromoxynil	May 27 -04	<0.0005	ug/l	No
Carbaryl	May 27 -04	<0.001	ug/l	No
Carbofuran	May 27 -04	<0.001	ug/l	No
Carbon Tetrachloride	May 27 -04	<0.0002	ug/l	No
Chlordane (Total)	May 27 -04	Not detected	ug/l	No
Chlorpyrifos	May 27 -04	<0.0005	ug/l	No
Cyanazine	May 27 -04	<0.0005	ug/l	No
Diazinon	May 27 -04	<0.0005	ug/l	No
Dicamba	May 27 -04	<0.0002	ug/l	No
1,2-Dichlorobenzene	May 27 -04	<0.0002	ug/l	No
1,4-Dichlorobenzene	May 27 -04	<0.0002	ug/l	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	May 27 -04	Not detected	ug/l	No

## Drinking-Water Systems Regulation O. Reg. 170/03

1,2-Dichloroethane	May 27 -04	<0.0002	ug/l	No
1,1-Dichloroethylene (vinylidene chloride)	May 27 -04	<0.0002	ug/l	No
Dichloromethane	May 27 -04	<0.001	ug/l	No
2-4 Dichlorophenol	May 27 -04	<0.0003	ug/l	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	May 27 -04	<0.0002	ug/l	No
Diclofop-methyl	May 27 -04	<0.0002	ug/l	No
Dimethoate	May 27 -04	<0.0005	ug/l	No
Dinoseb	May 27 -04	<0.00005	ug/l	No
Diquat	May 27 -04	<0.005	ug/l	No
Diuron	May 27 -04	<0.005	ug/l	No
Glyphosate	May 27 -04	<0.01	ug/l	No
Heptachlor + Heptachlor Epoxide	May 27 -04	Not detected	ug/l	No
Lindane (Total)	May 27 -04	<0.000002	ug/l	No
Malathion	May 27 -04	<0.0005	ug/l	No
Methoxychlor	May 27 -04	<0.00001	ug/l	No
Metolachlor	May 27 -04	<0.0005	ug/l	No
Metribuzin	May 27 -04	<0.0005	ug/l	No
Monochlorobenzene	May 27 -04	<0.0002	ug/l	No
Paraquat	May 27 -04	<0.005	ug/l	No
Parathion	May 27 -04	<0.0005	ug/l	No
Pentachlorophenol	May 27 -04	<0.002	ug/l	No
Phorate	May 27	<0.0005	ug/l	No
Picloram	May 27 -04	<0.00005	ug/l	No
Polychlorinated Biphenyls(PCB)	May 27 -04	<0.00005	ug/l	No
Prometryne	May 27 -04	<0.00025	ug/l	No
Simazine	May 27 -04	<0.0005	ug/l	No
THM (NOTE: show latest annual average)	Feb 27 -06 May 25 -06 Sept 7 -06 Dec 4 06	2.875	ug/l	No
Temephos	May 27 -04	<0.0005	ug/l	No
Terbufos	May 27 -04	<0.0005	ug/l	No
Tetrachloroethylene	May 27 -04	<0.0002	ug/l	No
2,3,4,6-Tetrachlorophenol	May 27 -04	<0.0005	ug/l	No
Triallate	May 27 -04	<0.0005	ug/l	No
Trichloroethylene	May 27 -04	<0.0002	ug/l	No
2,4,6-Trichlorophenol	May 27 -04	<0.0005	ug/l	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	May 27 -04	<0.00005	ug/l	No
Trifluralin	May 27 -04	<0.0005	ug/l	No
Vinyl Chloride	May 27 -04	<0.0002	ug/l	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards. *not applicable*

Parameter	Result Value	Unit of Measure	Date of Sample

**(Only if DWS category is large municipal residential, small municipal residential, large municipal non residential, non municipal year round residential, large non municipal non residential)**

