OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	**260005307**
Drinking-Water System Name:	Fanshawe Cottage Complex
Drinking-Water System Owner:	Upper Thames River Conservation Authority
Drinking-Water System Category:	Non-Municipal Year Round Residential
Period being reported:	January 1, 2024 – December 31, 2024

Complete if your Category is Large Municipal Residential or Small Municipal Residential	***Complete for all other Categories.***
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.**	**Number of Designated Facilities served:** ***none*** **Did you provide a copy of your annual report to all Designated Facilities you serve?** **Yes [ ] No [ ]** **Number of Interested Authorities you report to:** ***none*** **Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?** **Yes [ ] No [ ]**

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
none	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 [x]

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

- **[x] Public access/notice via the web**
- **[ ] Public access/notice via Government Office**
- **[ ] Public access/notice via a newspaper**
- **[x] 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 used to provide 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 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 the 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 loss of power.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite and Ultraviolet Light

Were any significant expenses incurred to?

- **[ ]** Install required equipment
- **[ ]** Repair required equipment
- **[x]** Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred
Normal operation, maintenance and sampling requirement expenses.

July 29, 2024 – Hallet UV replacement (2 units) = $16, 486.70.
September 17, 2024 – distribution valves and pump replacement = $41, 150.97
November 20, 2024 – pumphouse electrical upgrade (controller panel, manual transfer switch, electrical panel) = $17, 552.53

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
Jan 13/24	Power outage	Water system down	n/a	-resample/test once power restored - flushed system	Jan 13 & 14, 2024
June 18/24	Total Colifom/E Coli	NDOGN	count/100mL	-Resample/test -disinfection increased -flushed system -advise users to boil water	June 18 & 19, 2024

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	**48**	**Min 0. – Max 0**	**Min 0 – Max 1**	**0**	**0**
Treated	**28**	**Min 0. – Max 0**	**Min 0 – Max 0**	**0**	**0**
Distribution	**56**	**Min 0. – Max NDOGN**	**Min 0 – Max NDOGN**	**56**	**Min <10 – Max 1150**

NDGON – No data: Overgrown with Non Target Bacteria

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 #)	Unit of Measure
Turbidity	**205**	**Min 0.11 – Max 0.95**	**ntu**
Chlorine	**339**	**Min 0.57 – Max 2.98**	**ppm**

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

Fluoride (If the DWS provides fluoridation)	**n/a**	**n/a**	**n/a**

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
C of A	**Alkalinity**	**March 13, 2024** **Sept 16, 2024**		**mg/L**
C of A	**ph**	**March 13, 2024** **Sept 16, 2024**	**8.29** **7.55**	**pH** **pH**

Haloacetic Acids in Water (HAA)

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
HAA (Note: Show latest annual average)	**Mar 13, 2024** **June 13, 2024** **Sept 16, 2024** **Dec 13, 2024**	**ND**	**Ug/L**	**No**

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 31 -19**	**ND**	**ug/L**	**No**
Arsenic	**Oct 31 -19**	**ND**	**ug/L**	**No**
Barium	**Oct 31 -19**	**67**	**ug/L**	**No**
Boron	**Oct 31 -19**	**17**	**ug/L**	**No**
Cadmium	**Oct 31 -19**	**ND**	**ug/L**	**No**
Chromium	**Oct 31 -19**	**ND**	**ug/L**	**No**
***Lead**	**n/a**	**ND**	**ug/L**	**No**
Mercury	**Oct 31 -19**	**ND**	**ug/L**	**No**
Selenium	**Oct 31 -19**	**ND**	**ug/L**	**No**
Sodium	**Oct 31 -19**	**13000**	**ug/L**	**No**
Uranium	**Oct 31 -19**	**0.75**	**ug/L**	**No**
Fluoride	**Sept 14 -22**	**0.21**	**ug/L**	**No**
Nitrite	**March 13, 2024** **June 13, 2024** **Sept 16, 2024** **Dec 13, 2024**	**ND** **ND** **ND** **ND**	**mg/L** **mg/L** **mg/L** **mg/L**	**No** **No** **No** **No**
Nitrate	**March 13, 2024** **June 13, 2024** **Sept 16, 2024** **Dec 13, 2024**	**1.21** **1.34** **1.24** **1.23**	**mg/L** **mg/L** **mg/L** **mg/L**	**No** **No** **No** **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)

Not applicable during this reporting period.

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	n/a	n/a	ug/L	n/a
Distribution	n/a	n/a	ug/L	n/a

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	Oct 31 -19	ND	ug/L	No
Atrazine + N-dealkylated metobolites	Oct 31 -19	ND	ug/L	No
Azinphos-methyl	Oct 31 -19	ND	ug/L	No
Benzene	Oct 31 -19	ND	ug/L	No
Benzo(a)pyrene	Oct 31 -19	ND	ug/L	No
Bromoxynil	Oct 31 -19	ND	ug/L	No
Carbaryl	Oct 31 -19	ND	ug/L	No
Carbofuran	Oct 31 -19	ND	ug/L	No
Carbon Tetrachloride	Oct 31 -19	ND	ug/L	No
Chlorpyrifos	Oct 31 -19	ND	ug/L	No
Diazinon	Oct 31 -19	ND	ug/L	No
Dicamba	Oct 31 -19	ND	ug/L	No
1,2-Dichlorobenzene	Oct 31 -19	ND	ug/L	No
1,4-Dichlorobenzene	Oct 31 -19	ND	ug/L	No
1,2-Dichloroethane	Oct 31 -19	ND	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Oct 31 -19	ND	ug/L	No
Dichloromethane	Oct 31 -19	ND	ug/L	No
2-4 Dichlorophenol	Oct 31 -19	ND	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Oct 31 -19	ND	ug/L	No
Diclofop-methyl	Oct 31 -19	ND	ug/L	No
Dimethoate	Oct 31 -19	ND	ug/L	No
Diquat	Oct 31 -19	ND	ug/L	No
Diuron	Oct 31 -19	ND	ug/L	No
Glyphosate	Oct 31 -19	ND	ug/L	No
Malathion	Oct 31 -19	ND	ug/L	No
Methoxychlor	Oct 31 -19	ND	ug/L	No
Metolachlor	Oct 31 -19	ND	ug/L	No
Metribuzin	Oct 31 -19	ND	ug/L	No
Monochlorobenzene	Oct 31 -19	ND	ug/L	No
Paraquat	Oct 31 -19	ND	ug/L	No

Pentachlorophenol	**Oct 31 -19**	**ND**	**ug/L**	**No**
Phorate	**Oct 31 -19**	**ND**	**ug/L**	**No**
Picloram	**Oct 31 -19**	**ND**	**ug/L**	**No**
Polychlorinated Biphenyls(PCB)	**Oct 31 -19**	**ND**	**ug/L**	**No**
Prometryne	**Oct 31 -19**	**ND**	**ug/L**	**No**
Simazine	**Oct 31 -19**	**ND**	**ug/L**	**No**
THM (NOTE: show latest annual average)	**March 13, 2024 June 13, 2024 Sept 16, 2024 Dec 13, 2024**	**6.395**	**ug/L**	**No**
Terbufos	**Oct 31 -19**	**ND**	**ug/L**	**No**
Tetrachloroethylene	**Oct 31 -19**	**ND**	**ug/L**	**No**
2,3,4,6-Tetrachlorophenol	**Oct 31 -19**	**ND**	**ug/L**	**No**
Triallate	**Oct 31 -19**	**ND**	**ug/L**	**No**
Trichloroethylene	**Oct 31 -19**	**ND**	**ug/L**	**No**
2,4,6-Trichlorophenol	**Oct 31 -19**	**ND**	**ug/L**	**No**
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T) MCPA	**Oct 31 -19**	**ND**	**ug/L**	**No**
Trifluralin	**Oct 31 -19**	**ND**	**ug/L**	**No**
Vinyl Chloride	**Oct 31 -19**	**ND**	**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.

Parameter	Result Value	Unit of Measure	Date of Sample
	n/a	**n/a**	**n/a**
	n/a	**n/a**	**n/a**