

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

## SOPHIASBURGH PUBLIC SCHOOL ANNUAL REPORT

Drinking water system number:	<b>260014040</b>
Drinking water system name:	<b>Sophiasburgh Central School</b>
Drinking water system owner:	<b>Hastings and Prince Edward District School Board</b>
Drinking water system category:	<b>Small Non-Municipal Non-Residential</b>
Period Being Reported:	<b>April 1, 2020 - March 31, 2021</b>

Number of Designated Facilities Served:	1
Copies provided of annual report to all designated facilities served:	YES
Number of interested authorities you report to:	3
Copies provided of annual report to all interested authorities for each designated facility served:	YES
List all drinking water systems (if any) which receive all of their drinking water from your system:	Sophiasburgh Central School
Copies provided of annual report to all drinking water system owners to whom you provide all of its drinking water:	YES
Indicate method of notifying system users of annual report availability free of charge:	Website and Public Request

### Description of Drinking Water System:

The Sophiasburgh Central Public School drinking water system consists of one in ground storage tank equipped with a submersible pump (previously a jet pump, replaced summer 2020) that supplies hauled municipal water to the water treatment system. Water from a facility meeting the requirement of O. Reg. 170/03 is hauled to the school to serve as the drinking water source. In an effort to reduce the use of purchased water, the toilets, urinals and two outside maintenance taps were reconnected to the original well water system in March 2003. This was done through a separate plumbing system. All other fixtures remain connected only to the water storage tanks. There is no opportunity for cross connections between the two systems as verified by a professional engineer in October 2003. The outside taps to the north and south of the school are for grounds maintenance purposes. These taps have had the valve handles removed and been posted with signs warning of non-potable water. In addition to this, to ensure that no one can access the non-potable water, locks have been installed on the inside shut-off valves for these taps which are located in cupboards inside the school. The treatment system for the tank water consists of two cartridge style filters, a UV pro 20 disinfection system and a post chlorination to provide secondary disinfection residual. The system is equipped with a solenoid valve that shuts down water in instances of poor water quality or loss of power; the solenoid is tested weekly.

A service contract is in place with Culligan Water, Belleville, to maintain the treatment system.

To satisfy treatment requirements as described in Ontario Regulation 170/03, Ultraviolet disinfection equipment is used as primary disinfection. In addition to meeting the minimum treatment requirement we add chlorination as a means of secondary disinfection, though it is not required in this system. The free chlorine residual is sampled and recorded on a daily basis and the UV solenoid is tested for proper functioning on a weekly basis.

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A professional engineer hired by the Board certified that the water supply and works do meet the minimum standards set out in the Ontario Regulation 170/03. They also certified that the minimum treatment laid out in Schedule 2 of the regulations is being complied with and that all equipment required by Schedule 6 and Schedule 9 of the regulations is provided.

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### Water treatment chemicals used over this reporting period:

12% Sodium hypochlorite solution

### Significant Expenses incurred included (0=N/A, X=APPLICABLE):

0	Install Required Equipment
X	Repair Required Equipment
X	Replace Required Equipment

**Description and breakdown of monetary expenses incurred:** April 1, 2020 - March 31, 2021

#### Water system upgrades and replacements:

Replacement - New submersible pump installed to replace jet pump, along with new pressure tank and chlorine injector pump **\$12,274.48**

#### Routine system maintenance (Including service contracts):

Regular maintenance includes monthly checks of the water treatment system. Where components are replaced as regular maintenance (ie filters), that cost is noted under upgrades/replacements/part repair. The costs for regular maintenance on water treatment equipment was : **\$2,824.18**

#### Water sampling and analysis:

The cost for microbiological and chemical water sampling by Greer Galloway and analytical fees was: **\$2,793.66**

#### Staff Training:

Costs for required training of staff under Ontario Regulation 170/03 was: **\$84.62**

### Details on notices submitted in accordance with subsection 18(1) of the SDWA or section 16-4 of Schedule 16 of O.Reg. 170/03 and reported to SAC:

April 1, 2020 - March 31, 2021

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective action date
No incidents.					

### Microbiological testing done under the Schedule 10, 11 or 12 of O.Reg 170/03:

April 1, 2020 - March 31, 2021

	Number of samples	Range of E.Coli or Fecal Results (min-max)	Range of TC Results (min-max)
<b>Cistern</b>	12	0-0	
<b>Treated- Staff Kitchen</b>	12	0-0	0-0
<b>Distribution</b>	12	0-0	0-0

### Operational testing done under Schedule 7, 8 or 9 of O.Reg. 170/03:

April 1, 2020 - March 31, 2021

	Number of Grab Samples	Range of Results (min-max)
<b>Turbidity</b>	12	0.15 - 0.89
<b>Chlorine</b>	180	0.35 - >2.20

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Inorganic testing done during this reporting period or most recent sample results:					
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance	
Antimony	N/A		mg/L		
Arsenic	N/A	0	mg/L	N/A	
Barium	N/A	0	mg/L	N/A	
Boron	N/A	0	mg/L	N/A	
Cadmium	N/A	0	mg/L	N/A	
Chromium	N/A	0	mg/L	N/A	
*Lead	STANDING	22-Sep-20	0.00373	mg/L	No
	FLUSHED	22-Sep-20	0.00269	mg/L	No
Mercury	N/A	0	mg/L	N/A	
Selenium	N/A	0	mg/L	N/A	
Sodium	N/A	0	mg/L	N/A	
Uranium	N/A	0	mg/L	N/A	
Fluoride	N/A	0	mg/L	N/A	
Nitrite - 4th quarter result	Mar-21	0.8	mg/L	No	
Nitrate - 4th quarter result	Mar-21	0.3	mg/L	No	

Organic testing done during this reporting period or most recent sample results:				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	N/A		mg/L	N/A
Atrazine + N-dealkylated metabolites	N/A		mg/L	N/A
Azinphos-methyl	N/A		mg/L	N/A
Benzene	N/A		mg/L	N/A
Benzo(a)pyrene	N/A		mg/L	N/A
Bromoxynil	N/A		mg/L	N/A
Carbaryl	N/A		mg/L	N/A
Carbofuran	N/A		mg/L	N/A
Carbon Tetrachloride	N/A		mg/L	N/A
Chlorpyrifos	N/A		mg/L	N/A
Diazinon	N/A		mg/L	N/A
Dicamba	N/A		mg/L	N/A
1,2-Dichlorobenzene	N/A		mg/L	N/A
1,4-Dichlorobenzene	N/A		mg/L	N/A
1,2-Dichloroethane	N/A		mg/L	N/A
1,1-Dichloroethene (vinylidene chloride)	N/A		mg/L	N/A
Dichlormethane	N/A		mg/L	N/A
2,4-Dichlorophenol	N/A		mg/L	N/A
2,4-Dichlorophenoxyacetic acid (2,4-D)	N/A		mg/L	N/A
Diclofop-methyl	N/A		mg/L	N/A
Dimethoate	N/A		mg/L	N/A
Diquat	N/A		mg/L	N/A
Diuron	N/A		mg/L	N/A

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Glyphosate	N/A		mg/L	N/A
Malathion	N/A		mg/L	N/A
Metolachlor	N/A		mg/L	N/A
Metribuzin	N/A		mg/L	N/A
Monochlorobenzene	N/A		mg/L	N/A
Paraquat	N/A		mg/L	N/A
Pentachlorophenol	N/A		mg/L	N/A
Phorate	N/A		mg/L	N/A
Picloram	N/A		mg/L	N/A
PolyChlorinated Biphenyls (PCB)	N/A		mg/L	N/A
Prometryne	N/A		mg/L	N/A
Simazine	N/A		mg/L	N/A
THM	2-Oct-20	0.084	mg/L	No
Terbufos	N/A		mg/L	N/A
Tetrachloroethylene	N/A		mg/L	N/A
2,3,4,6-Tetrachlorophenol	N/A		mg/L	N/A
Triallate	N/A		mg/L	N/A
Trichloroethylene	N/A		mg/L	N/A
2,4,6-Trichlorophenol	N/A		mg/L	N/A
Trifluarlin	N/A		mg/L	N/A
Vinyl Chloride	N/A		mg/L	N/A

<b>Inorganic or Organic Parameter(s) that exceed half the standard prescribed in Schedule 2 of ODWQS:</b>				
<b>Parameter</b>	<b>Result Value</b>	<b>Unit of Measure</b>	<b>Date of Sample</b>	<b>Notes:</b>
THM - Voluntary Sampling	0.084	mg/L	2-Oct-20	Voluntary Sampling