

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

## HARMONY PUBLIC SCHOOL ANNUAL REPORT

Drinking water system number:	<b>260013962</b>
Drinking water system name:	<b>Harmony Public 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 1st 2021 - March 31st, 2022</b>

Number of Designated Facilities Served:	2
Copies provided of annual report to all designated facilities served:	YES
Number of interested authorities you report to:	2
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:	Harmony Public School and YMCA Kids Club-Harmony Site (DWIS#500103065)
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 Harmony Public School drinking water system consists of two wells. The east well, located near parking lot at front of building, is equipped with a submersible pump that supplies raw water to a supply room inside the school. The west well, near bus loop, is equipped with a submersible pump that supplies raw water to a storage room inside the school. Both wells feed into the treatment room. The water passes through 2 stages of cartridge filters (20 to 5 to 1 micron), and then through a UV disinfection unit. Both filter and UV units are in place with a duplicate line so that maintenance will not stop flow to school. The UV systems are equipped with an automatic solenoid shut off valve that shuts down during loss of power or if the UV sensor is not able to guarantee the quality of the water passing through. The water then goes through a flow meter to monitor water consumption and finally through a chlorine injection point to maintain a chlorine residual throughout the system (supplemental chlorination). Chlorine residual is measured each day the school is open. A cistern system was installed in November 2016 (DWS# 260095667) to supply fresh municipal water to school fountains only.

A service contract is in place with MacLellan Water Technologies to maintain the treatment systems.

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, as required and identified by the Engineer evaluation report. 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.

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

12% Sodium hypochlorite solution

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

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

**Description and breakdown of monetary expenses incurred:** April 1st 2021 - March 31st, 2022

**Water system upgrades and replacements:**

Two Well-X-Trol pressure tanks were installed as a replacement to existing, under **\$3,457.38**

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

Regular maintenance includes monthly checks of the water treatment system by MacLellan Water Technologies and the minor repair/replacement of necessary parts/equipment(including cistern maintenance). The costs for regular maintenance on water treatment equipment was : **\$6,026.69**

**Water sampling and analysis:**

The cost for microbiological and chemical water sampling by Greer Galloway and analytical fees was: **\$4,227.19**

**Staff Training:**

Costs for required training of staff under Ontario Regulation 170/03 was: **\$170.00**

**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 1st 2021 - March 31st, 2022

Incident Date	Parameter	Result	Corrective Action	Corrective action date
31-May-21	Sodium	400mg/L	Resampled. Signs posted. Bottled water supplied as alternative.	Immediate

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

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**Combined wells**

	Number of samples	Range of E.Coli or Fecal (min-max)	Range of TC Results (min-max)
<b>Raw</b>	12	0-0	0-0
<b>Treated- Staff Kitchen</b>	20	0-0	0-0
<b>Distribution</b>	20	0-0	0-0

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

April 1st 2021 - March 31st, 2022

	Number of Grab Samples	Range of Results (min-max)
<b>Turbidity</b>	20	0.11-0.40
<b>Chlorine</b>	196	0.19-1.98

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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	31-May-21	<0.0001	mg/L	No
Arsenic	31-May-21	0.0005	mg/L	No
Barium	31-May-21	0.002	mg/L	No
Boron	31-May-21	0.036	mg/L	No
Cadmium	31-May-21	<0.000015	mg/L	No
Chromium	31-May-21	<0.002	mg/L	No
Fluoride	31-May-21	<0.1	mg/L	No
Lead - STANDING	8-Oct-21	0.00145	mg/L	No
Lead - FLUSHED		0.00077	mg/L	No
Mercury	31-May-21	<0.00002	mg/L	No
Nitrite	16-Mar-22	<0.1	mg/L	No
Nitrate		<0.1	mg/L	No
Selenium	31-May-21	<0.001	mg/L	No
Sodium	31-May-21	400	mg/L	Yes
Uranium	31-May-21	0.00121	mg/L	No

Organic testing done during this reporting period or most recent sample results:				
Parameter	Sample	Result Value	Unit of	Exceedance
Alachlor	31-May-21	< 0.0003	mg/L	No
Atrazine + N-dealkylated metabolites	31-May-21	< 0.0005	mg/L	No
Azinphos-methyl	31-May-21	< 0.001	mg/L	No
Benzene	31-May-21	< 0.0005	mg/L	No
Benzo(a)pyrene	31-May-21	< 0.000006	mg/L	No
Bromoxynil	31-May-21	< 0.0005	mg/L	No
Carbaryl	31-May-21	< 0.003	mg/L	No
Carbofuran	31-May-21	< 0.001	mg/L	No
Carbon Tetrachloride	31-May-21	< 0.0002	mg/L	No
Chlorpyrifos	31-May-21	< 0.0005	mg/L	No
Diazinon	31-May-21	< 0.001	mg/L	No
Dicamba	31-May-21	< 0.01	mg/L	No
1,2-Dichlorobenzene	31-May-21	< 0.0005	mg/L	No
1,4-Dichlorobenzene	31-May-21	< 0.0005	mg/L	No
1,2-Dichloroethane	31-May-21	< 0.0005	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	31-May-21	< 0.0005	mg/L	No
Dichlormethane	31-May-21	< 0.005	mg/L	No
2,4-Dichlorophenol	31-May-21	< 0.0002	mg/L	No
2,4-Dichlorophenoxyacetic acid (2,4-D)	31-May-21	< 0.01	mg/L	No
Diclofop-methyl	31-May-21	< 0.0009	mg/L	No
Dimethoate	31-May-21	< 0.001	mg/L	No
Diquat	31-May-21	< 0.005	mg/L	No
Diuron	31-May-21	< 0.005	mg/L	No
Glyphosate	31-May-21	< 0.025	mg/L	No
Malathion	31-May-21	< 0.01	mg/L	No
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	31-May-21	< 0.01	mg/L	No

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<b>Metolachlor</b>	31-May-21	< 0.003	mg/L	No
<b>Metribuzin</b>	31-May-21	< 0.003	mg/L	No
<b>Monochlorobenzene</b>	31-May-21	< 0.003	mg/L	No
<b>Paraquat</b>	31-May-21	< 0.001	mg/L	No
<b>Pentachlorophenol</b>	31-May-21	< 0.0002	mg/L	No
<b>Phorate</b>	31-May-21	< 0.0003	mg/L	No
<b>Picloram</b>	31-May-21	< 0.015	mg/L	No
<b>PolyChlorinated Biphenyls (PCB)</b>	31-May-21	< 0.00005	mg/L	No
<b>Prometryne</b>	31-May-21	< 0.0001	mg/L	No
<b>Simazine</b>	31-May-21	< 0.00005	mg/L	No
<b>Terbufos</b>	31-May-21	< 0.00005	mg/L	No
<b>Tetrachloroethylene</b>	31-May-21	< 0.0005	mg/L	No
<b>2,3,4,6-Tetrachlorophenol</b>	31-May-21	< 0.0002	mg/L	No
<b>Triallate</b>	31-May-21	< 0.01	mg/L	No
<b>Trichloroethylene</b>	31-May-21	< 0.0005	mg/L	No
<b>2,4,6-Trichlorophenol</b>	31-May-21	< 0.0005	mg/L	No
<b>Trifluarlin</b>	31-May-21	< 0.0005	mg/L	No
<b>Trihalomethanes (THM)</b>	5-Oct-21	< 0.006	mg/L	No
<b>Vinyl Chloride</b>	31-May-21	< 0.0002	mg/L	No