

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

HARMONY PUBLIC SCHOOL (WELLS) ANNUAL REPORT

Drinking water system number:	260013962
Drinking water system name:	Harmony Public School
Drinking water system owner:	Hastings and Prince Edward District School Board
Drinking water system category:	Small Non-Municipal Non-Residential
Period Being Reported:	April 1, 2020 - March 31, 2021

Number of Designated Facilities Served:	2
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:	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
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 - Solenoid valve assembly	\$5,324.83
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 :	
	\$3,885.95
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						
		EAST WELL			West WELL *	
	Number of samples	Range of E.Coli or Fecal (min-max)	Range of TC Results (min-max)	Range of E.Coli (min-r)	Range of TC Results (min-max)	
Raw	9	0-0	0-0	n/a	n/a	
Treated- Staff Kitchen	16	0-0	0-0	n/a	n/a	
Distribution	16	0-0	0-0	n/a	n/a	
<i>* wells combine prior to all treatment</i>						
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)				
Turbidity	17	0.09 - 1.84				
Chlorine	180	0.33 - 1.24				

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Inorganic testing done during this reporting period or most recent sample results:				
Parameter		Sample Date	EAST Result Value	Exceedance
Antimony		25-May-16	<0.0001	No
Arsenic		25-May-16	0.0004	No
Barium		25-May-16	0.002	No
Boron		25-May-16	0.023	No
Cadmium		25-May-16	<0.00002	No
Chromium		25-May-16	<0.002	No
*Lead	STANDING	29-Sep-20	0.00185	No
	FLUSHED	29-Sep-20	0.00053	No
Mercury		25-May-16	<0.00002	No
Selenium		25-May-16	<0.001	No
Sodium		25-May-16	342	Yes
Uranium		25-May-16	0.00201	No
Fluoride		25-May-16	0.2	No
Nitrite - 4th quarter result		Mar-21	<0.1	No
Nitrate - 4th quarter result		Mar-21	0.8	No

Organic testing done during this reporting period or most recent sample results:				
Parameter		Sample Date	Result Value	Exceedance
Alachlor		25-May-16	<0.0003	No
Atrazine + N-dealkylated metabolites		25-May-16	<0.0005	No
Azinphos-methyl		25-May-16	<0.001	No
Benzene		25-May-16	<0.0005	No
Benzo(a)pyrene		25-May-16	<0.000005	No
Bromoxynil		25-May-16	<0.0003	No
Carbaryl		25-May-16	<0.003	No
Carbofuran		25-May-16	<0.001	No
Carbon Tetrachloride		25-May-16	<0.0002	No
Chlorpyrifos		25-May-16	<0.0005	No
Diazinon		25-May-16	<0.001	No
Dicamba		25-May-16	<0.005	No
1,2-Dichlorobenzene		25-May-16	<0.0001	No
1,4-Dichlorobenzene		25-May-16	<0.0002	No
1,2-Dichloroethane		25-May-16	<0.0002	No
1,1-Dichloroethene (vinylidene chloride)		25-May-16	<0.0001	No
Dichlormethane		25-May-16	<0.0003	No
2,4-Dichlorophenol		25-May-16	<0.0001	No
2,4-Dichlorophenoxyacetic acid (2,4-D)		25-May-16	<0.005	No
Diclofop-methyl		25-May-16	<0.0005	No
Dimethoate		25-May-16	<0.001	No
Diquat		25-May-16	<0.005	No
Diuron		25-May-16	<0.005	No
Glyphosate		25-May-16	<0.025	No
MCPA 2-Methyl-4-chlorophenoxyacetic Acid		25-May-16	<0.00012	No

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Malathion	25-May-16	<0.005	No	
Metolachlor	25-May-16	<0.003	No	
Metribuzin	25-May-16	<0.003	No	
Monochlorobenzene	25-May-16	<0.0002	No	
Paraquat	25-May-16	<0.001	No	
Pentachlorophenol	25-May-16	<0.0001	No	
Phorate	25-May-16	<0.0003	No	
Picloram	25-May-16	<0.005	No	
PolyChlorinated Biphenyls (PCB)	25-May-16	<0.00005	No	
Prometryne	25-May-16	<0.0001	No	
Simazine	25-May-16	<0.0005	No	
THM	1-Sep-20	<0.006	No	
Terbufos	25-May-16	<0.0003	No	
Tetrachloroethylene	25-May-16	<0.0002	No	
2,3,4,6-Tetrachlorophenol	25-May-16	<0.0001	No	
Triallate	25-May-16	<0.010	No	
Trichloroethylene	25-May-16	<0.0001	No	
2,4,6-Trichlorophenol	25-May-16	<0.0001	No	
Trifluarlin	25-May-16	<0.0005	No	
Vinyl Chloride	25-May-16	<0.0002	No	

Inorganic or Organic Parameter(s) that exceed half the standard prescribed in Schedule 2 of ODWQS:				
Parameter	Result Value	Unit of Measure	Date of Sample	Notes:
Sodium	342	mg/L	25-May-16	Separate potable water system installed to deliver alternate supply to fountains (DWIS#260095667)