

**Part III Form 2
Section 11. ANNUAL REPORT.**

Drinking-Water System Number:	220002716
Drinking-Water System Name:	Kincardine Drinking Water System
Drinking-Water System Owner:	Municipality of Kincardine
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	Year 2016

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 [X]

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

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

Municipal Administration Centre
 1475 Concession 5, RR #5
 Kincardine, Ontario
 N2Z 2X6

List Drinking-Water Systems, which receive all of their drinking water from your system:

Huronville Subdivision Distribution System, WW #260046709

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 [X] No [] NA []

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

- [X] Public access/notice via the web
- [X] 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
- [X] Public access/notice via other method _____ Notification by mail _____

Describe your Drinking-Water System

The Kincardine Water System consists of a surface water treatment plant that receives water from Lake Huron. The water treatment plant provides conventional filtration and consists of 2 Actiflo clarifiers, 4 filters, chlorination system and underground reservoir. The intake capacity is 18,750 m3/d. The distribution system serves the town of Kincardine and residents north of the town via a pipeline, plus the Huronville subdivision, with a total of approximately 3600 connections.

List all water treatment chemicals used over this reporting period

Chlorine Gas
 Clarion A5
 Magnafloc (Polymer)
 Actisand

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Describe

Distribution Capital Upgrades \$107,994.35
 Watermain Break Repairs - \$18,784.07
 Water Meter Replacement Program - \$5,668.03
 Treatment and Monitoring Systems - \$10,112.11
 Recoating of the Standpipe - \$705,037.05

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
July 15, 2016 AWQI # 130299	Chemical contamination	Cloudy blue water, pH 4.2		Filtered water to waste; Switched to alternate alum pump	July 15, 2016

Microbiological testing done under Schedule 10 during this reporting period

Water Source	Number of Samples	Range of Total Coliform Results (#-#)	Range of E. coli Results (#-#)	Number of HPC Samples	Range of HPC Results (#-#)
Raw	52	0 – 12,800	0 – 63	52	1 – >2000
Treated	52	0 – 0	0 – 0	52	0 – 1
Distribution	260	0 – 0	0 – 0	260	0 – >2000

Operational testing done under Schedule 7 during the period covered by this Annual Report.

Treated Water	Number of Grab Samples	Range of Results (#-#)
Turbidity	Continuous monitoring	0.076 – 1.99
Chlorine	Continuous monitoring	0.85 – 1.66

Distribution Water	Number of Grab Samples	Range of Results (#-#)
Free Chlorine Residual	366	0.25 – 1.35

Summary of additional testing and sampling carried out in accordance with the requirement of a Licence or Order.

Date of Legal Document	Parameter	Date Sampled	Result	Unit of Measure
None	None	None	None	None

Summary of Inorganic parameters tested during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Oct 17/16	0.11	ug/L	No
Arsenic	Oct 17/16	0.2	ug/L	No
Barium	Oct 17/16	13.5	ug/L	No
Boron	Oct 17/16	10	ug/L	No
Cadmium	Oct 17/16	0.007	ug/L	No
Chromium	Oct 17/16	0.49	ug/L	No
Mercury	Oct 17/16	< 0.01	ug/L	No
Selenium	Oct 17/16	0.11	ug/L	No
Sodium	Jan14/14	5.27	mg/L	No
Uranium	Oct 17/16	0.026	ug/L	No
Fluoride	Oct 8/13	0.14	mg/L	No
Nitrite	Jan 11/16 April 11/16 July 25/16 Oct 17/16	<0.003 <0.003 <0.003 <0.003	mg/L	No
Nitrate	Jan 11/16 April 11/16 July 25/16 Oct 17/16	0.473 0.385 0.273 0.262	mg/L	No

Summary of lead testing under Schedule 15.1 during this reporting period

Parameter	Location Type	Number of Samples	Range of Results
pH	Distribution	6	6.97 – 7.89
Alkalinity (mg/L)	Distribution	6	62 – 70
Lead	Distribution	0	--

Summary of Organic parameters sampled during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Oct 17/16	< 0.02	ug/L	No
Aldicarb	Oct 19/15	< 0.01	ug/L	No
Aldrin + Dieldrin	Oct 19/15	< 0.01	ug/L	No
Atrazine + N-dealkylated metabolites	Oct 17/16	0.03	ug/L	No
Azinphos-methyl	Oct 17/16	< 0.05	ug/L	No
Bendiocarb	Oct 19/15	< 0.01	ug/L	No
Benzene	Oct 17/16	< 0.32	ug/L	No
Benzo(a)pyrene	Oct 17/16	< 0.004	ug/L	No
Bromoxynil	Oct 17/16	< 0.33	ug/L	No
Carbaryl	Oct 17/16	< 0.05	ug/L	No
Carbofuran	Oct 17/16	< 0.01	ug/L	No
Carbon Tetrachloride	Oct 17/16	< 0.16	ug/L	No
Chlordane (Total)	Oct 19/15	< 0.01	ug/L	No
Chlorpyrifos	Oct 17/16	< 0.02	ug/L	No
Cyanazine	Oct 19/15	< 0.03	ug/L	No
Diazinon	Oct 17/16	< 0.02	ug/L	No
Dicamba	Oct 17/16	< 0.20	ug/L	No
1,2-Dichlorobenzene	Oct 17/16	< 0.41	ug/L	No
1,4-Dichlorobenzene	Oct 17/16	< 0.36	ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Oct 19/15	< 0.01	ug/L	No
1,2-Dichloroethane	Oct 17/16	< 0.35	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Oct 17/16	< 0.33	ug/L	No
Dichloromethane	Oct 17/16	< 0.35	ug/L	No
2-4 Dichlorophenol	Oct 17/16	< 0.15	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Oct 17/16	< 0.19	ug/L	No
Diclofop-methyl	Oct 17/16	< 0.40	ug/L	No
Dimethoate	Oct 17/16	< 0.03	ug/L	No
Dinoseb	Oct 19/15	< 0.36	ug/L	No
Diquat	Oct 17/16	< 1	ug/L	No
Diuron	Oct 17/16	< 0.03	ug/L	No
Glyphosate	Oct 17/16	< 1	ug/L	No
Heptachlor + Heptachlor Epoxide	Oct 19/15	< 0.01	ug/L	No
Lindane (Total)	Oct 19/15	< 0.01	ug/L	No
Malathion	Oct 17/16	< 0.02	ug/L	No

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Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Methoxychlor	Oct 19/15	< 0.01	ug/L	No
2 methyl-4-chlorophenoxyacetic acid (MCPA)	Oct 17/16	< 0.00012	mg/L	No
Metolachlor	Oct 17/16	< 0.01	ug/L	No
Metribuzin	Oct 17/16	< 0.02	ug/L	No
Monochlorobenzene	Oct 17/16	< 0.3	ug/L	No
Paraquat	Oct 17/16	< 1	ug/L	No
Parathion	Oct 19/15	< 0.02	ug/L	No
Pentachlorophenol	Oct 17/16	< 0.15	ug/L	No
Phorate	Oct 17/16	< 0.01	ug/L	No
Picloram	Oct 17/16	< 1	ug/L	No
Polychlorinated Biphenyls (PCB)	Oct 17/16	< 0.04	ug/L	No
Prometryne	Oct 17/16	< 0.03	ug/L	No
Simazine	Oct 17/16	< 0.01	ug/L	No
Temephos	Oct 19/15	< 0.01	ug/L	No
Terbufos	Oct 17/16	< 0.01	ug/L	No
Tetrachloroethylene	Oct 17/16	< 0.35	ug/L	No
2,3,4,6-Tetrachlorophenol	Oct 17/16	< 0.20	ug/L	No
Triallate	Oct 17/16	< 0.01	ug/L	No
Trichloroethylene	Oct 17/16	< 0.44	ug/L	No
2,4,6-Trichlorophenol	Oct 17/16	< 0.25	ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Oct 19/15	< 0.22	ug/L	No
Trifluralin	Oct 17/16	< 0.02	ug/L	No
Vinyl Chloride	Oct 17/16	< 0.17	ug/L	No

Summary of Trihalomethane (THM) distribution sampling

Date Sampled	Result Value (ug/L)	Running Annual Average (ug/L)	Exceedance
January 11/16	9.3	13.8	No
April 11/16	20	16.8	No
July 25/16	34	21.1	No
Oct 17/16	30	23.3	No

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
None	None	None	None