



# ANNUAL REPORT

FOR

## TOWN OF ARNPRIOR WATERWORKS

PERIOD: January 1, 2016 – December 31, 2016



<b>Drinking-Water System Number:</b>	220000932
<b>Drinking-Water System Name:</b>	Arnprior Drinking Water System
<b>Drinking-Water System Owner:</b>	Town of Arnprior
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	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.**

Town of Arnprior Town Hall 105 Elgin St. W. Arnprior ON. K7S 0A8
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**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:**

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>
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 [ ] N/A [x]**



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

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method

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**Describe your Drinking-Water System**

The Arnprior Water Filtration Plant (WFP) is owned and operated by the Corporation of the Town of Arnprior. The WFP is situated at 71 James St. Arnprior Ontario, plant operators can be reached at 613-623-4231 Ext 1809. Certified operators monitor and control the treatment and testing of water production and quality.

Water is pumped from the Madawaska River to the treatment plant where Coagulant and Polymer are added as a flocculent. The water is then put through a clarification process called an Actiflow system, where microsand is utilized to enhance flocculation and acts as a ballast to aid in settling solids. The water is then filtered; Chlorine, Fluoride, Phosphoric Acid and Soda Ash are added to prepare the water for consumption. The treated water is stored in two 2,200 m<sup>3</sup> reservoirs, Aqueous Ammonia is added, the treated water is then pumped to the distribution system, as well as a 2,700 m<sup>3</sup> elevated water storage tank.

**List all water treatment chemicals used over this reporting period**

- Coagulant
- Soda Ash
- Chlorine gas
- Fluoride
- Ammonium Sulphate
- Phosphoric Acid

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment



[ ] Replace required equipment

**Please provide a brief description and a breakdown of monetary expenses incurred**

- A new V10K Gas Chlorinator was installed to replace an older model Chlorinator. There are now two V10K Chlorinators in use.
- A Phosphoric Acid system was constructed as part of the Corrosion Control Program (CCP) complete with a ventilated chemical room, dosing pumps and chemical tanks.
- A substantial amount of work was carried out on Clearwell Number One to repair crack and leaks.

**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
2016/02/18	Total Coliform	1	Cfu/100ml	Total Coliform of 1 TC/100ml in a sample result at 201 Madawaska Blvd. on 2016/02/18. Re-sampled at same location plus upstream and downstream on the water system with Zero TC/100	2016/02/23
2016/07/12	Loss of water pressure		PSI	Private water main burst at 465 McCartney St. resulting in a loss of pipe pressure and a boil water advisory to that address. Pipe was repaired water tested and boil water restriction was lifted by the Renfrew County and District Health Unit.	2016/07/29
2016/08/10	Loss of water pressure		PSI	Renfrew County and District Health Unit issued a drinking water advisory as a precautionary measure to all users of the Municipal Water System in the Town of Arnprior due to a significant pressure loss in the municipal drinking water distribution system on August 10 <sup>th</sup> , 2016.  On August 12, 2016 at 1:30 pm the drinking water advisory issued was lifted after the system was	2016/08/22



<b>2016/08/18</b>	<b>Total Coliform</b>	<b>8</b>	<b>Cfu/100ml</b>	<p>thoroughly flushed with fresh water and the two required sets of samples taken 24 hours apart met the microbiological water quality standards, as set out in Schedule I of Ontario Regulation 169/03 (Ontario Drinking Water Quality Standards).</p> <p>Total Coliform of 8 TC/100ml in a sample taken at 100 Madawaska Blvd. on 2016/08/16. Re-sampled at same location plus upstream and downstream on the distribution system resulting Zero TC/ 100 mL.</p>
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**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.**

	<b>Number of Samples</b>	<b>Range of E.Coli Or Fecal Results (min #)-(max #)</b>	<b>Range of Total Coliform Results (min #)-(max #)</b>	<b>Number of HPC Samples</b>	<b>Range of HPC Results (min #)-(max #)</b>
<b>Raw</b>	51	0 - 14	10 – 420	N/A	
<b>Treated</b>	51	absent	absent	52	<2 - 4
<b>Distribution</b>	306	absent	0 - 8	208	<2 -8

**Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.**

	<b>Number of Grab Samples</b>	<b>Range of Results</b>
<b>Turbidity</b>	8760	0.03 - 0.26 NTU
<b>Chlorine (Free)</b>	8760	1.54 – 2.5
<b>Fluoride</b> (If the DWS provides fluoridation)	8760	0.27 - 0.73

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

***NOTE:** Record the unit of measure if it is **not** milligrams per litre.*

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

<b>Parameter</b>	<b>Date Sampled</b>	<b>Result</b>	<b>Unit of Measure</b>
Benzo(a)pyrene	Jan. 12/16	<0.005	mg/L
Total organic Carbon	Jan. 12/16	2.2	mg/L
Dissolved Organic Carbon	Jan. 12/16	2.1	mg/L

Colour	Jan. 12/16	12	TCU
Nitrite	Jan. 12/16	<0.1	mg/L
Nitrate	Jan. 12/16	0.1	mg/L
Benzo(a)pyrene	Apr. 13/16	<0.005	mg/L
Total organic Carbon	Apr. 13/16	2.7	mg/L
Dissolved Organic Carbon	Apr. 13/16	2.6	mg/L
Colour	Apr. 13/16	3	TCU
Nitrite	Apr. 13/16	<0.1	mg/L
Nitrate	Apr. 13/16	0.2	mg/L
Benzo(a)pyrene	Jul. 13/16	<0.005	mg/L
Total organic Carbon	Jul. 13/16	2.2	mg/L
Dissolved Organic Carbon	Jul. 13/16	2.1	mg/L
Colour	Jul. 13/16	3	TCU
Nitrite	Jul. 13/16	<0.1	mg/L
Nitrate	Jul. 13/16	0.1	mg/L
Benzo(a)pyrene	Oct. 11/16	<0.005	mg/L
Total organic Carbon	Oct. 11/16	3.6	mg/L
Dissolved Organic Carbon	Oct. 11/16	3.5	mg/L
Colour	Oct. 11/16	8	TCU
Nitrite	Oct. 11/16	<0.1	mg/L
Nitrate	Oct. 11/16	0.1	mg/L

**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	12-Jan-16	<0.0001	mg/L	no
Arsenic	12-Jan-16	<0.0001	mg/L	no
Barium	12-Jan-16	0.020	mg/L	no
Boron	12-Jan-16	0.005	mg/L	no
Cadmium	12-Jan-16	<0.00002	mg/L	no
Chromium	12-Jan-16	<0.002	mg/L	no
*Lead	12-Jan-16	0.00002	mg/L	no
Mercury	12-Jan-16	<0.00002	mg/L	no
Selenium	12-Jan-16	<0.001	mg/L	no
Sodium	13-Jan-15	6.7	mg/L	no
Uranium	12-Jan-16	<0.00005	mg/L	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**



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

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results mg/L (min#) – (max #)	Number of Exceedances (>0.01mg/L)
Plumbing	0	n/a	
Distribution	1	.00008	0

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	12-Jan-16	<0.3	µg/L	no
Aldicarb	12-Jan-16	<3	µg/L	no
Aldrin + Dieldrin	12-Jan-16	<0.02	µg/L	no
Atrazine + N-dealkylated metabolites	12-Jan-16	<0.5	µg/L	no
Azinphos-methyl	12-Jan-16	<1	µg/L	no
Bendiocarb	12-Jan-16	<3	µg/L	no
Benzene	12-Jan-16	<0.5	µg/L	no
Benzo(a)pyrene	12-Jan-16	<0.005	µg/L	no
Bromoxynil	12-Jan-16	<0.3	µg/L	no
Carbaryl	12-Jan-16	<3	µg/L	no
Carbofuran	12-Jan-16	<1	µg/L	no
Carbon Tetrachloride	12-Jan-16	<0.2	µg/L	no
Chlordane (Total)	12-Jan-16	<0.04	µg/L	no
Chlorpyrifos	12-Jan-16	<0.5	µg/L	no
Cyanazine	12-Jan-16	<0.5	µg/L	no
Diazinon	12-Jan-16	<1	µg/L	no
Dicamba	12-Jan-16	<5	µg/L	no
1,2-Dichlorobenzene	12-Jan-16	<0.1	µg/L	no
1,4-Dichlorobenzene	12-Jan-16	<0.2	µg/L	no
Dichlorodiphenyltrichloroethane (DDT) + metabolites	12-Jan-16	<0.1	µg/L	no
1,2-Dichloroethane	12-Jan-16	<0.1	µg/L	no
1,1-Dichloroethene (vinylidene chloride)	12-Jan-16	<0.1	µg/L	no
Dichloromethane	12-Jan-16	<0.3	µg/L	no
2-4 Dichlorophenol	12-Jan-16	<0.1	µg/L	no
2,4-Dichlorophenoxy acetic acid (2,4-D)	12-Jan-16	<5	µg/L	no
Diclofop-methyl	12-Jan-16	<0.5	µg/L	no
Dimethoate	12-Jan-16	<1	µg/L	no
Dinoseb	12-Jan-16	<0.5	µg/L	no
Diquat	12-Jan-16	<5	µg/L	no
Diuron	12-Jan-16	<5	µg/L	no
Glyphosate	12-Jan-16	<25	µg/L	no
Heptachlor + Heptachlor Epoxide	12-Jan-16	<0.1	µg/L	no
Lindane (Total)	12-Jan-16	<0.1	µg/L	no
Malathion	12-Jan-16	<5	µg/L	no
Methoxychlor	12-Jan-16	<0.1	µg/L	no
Metolachlor	12-Jan-16	<3	µg/L	no



Metribuzin	12-Jan-16	<3	µg/L	no
Monochlorobenzene	12-Jan-16	<0.2	µg/L	no
Paraquat	12-Jan-16	<1	µg/L	no
Parathion	12-Jan-16	<3	µg/L	no
Pentachlorophenol	12-Jan-16	<0.1	µg/L	no
Phorate	12-Jan-16	<0.3	µg/L	no
Picloram	12-Jan-16	<5	µg/L	no
Polychlorinated Biphenyls(PCB)	12-Jan-16	<0.05	µg/L	no
Prometryne	12-Jan-16	<0.1	µg/L	no
Simazine	12-Jan-16	<0.5	µg/L	no
THM (NOTE: show latest annual average)	12-Jan-16	36.27	µg/L	no
Temephos	12-Jan-16	<10	µg/L	no
Terbufos	12-Jan-16	<0.3	µg/L	no
Tetrachloroethylene	12-Jan-16	<0.2	µg/L	no
2,3,4,6-Tetrachlorophenol	12-Jan-16	<0.1	µg/L	no
Triallate	12-Jan-16	<10	µg/L	no
Trichloroethylene	12-Jan-16	<0.1	µg/L	no
2,4,6-Trichlorophenol	12-Jan-16	<0.1	µg/L	no
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	12-Jan-16	<10	µg/L	no
Trifluralin	12-Jan-16	<0.5	µg/L	no
Vinyl Chloride	12-Jan-16	<0.2	µg/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
		µg/L	