



**OPTIONAL ANNUAL REPORT TEMPLATE**

<b>Drinking-Water System Number:</b>	220001432
<b>Drinking-Water System Name:</b>	City of Dryden Water Treatment
<b>Drinking-Water System Owner:</b>	City of Dryden
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1/2017 → December 31/2017

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p><b>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ X ]</b></p> <p><b>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ X ] No [ ]</b></p> <p><b>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</b></p> <div style="border: 1px solid black; padding: 5px;"> <p>A hard copy is available for inspection at the Public Works office at 159 King St. or on the web at <a href="http://www.dryden.ca/city_services/public_works/sewer_and_water/waterworks_annual_reports/">http://www.dryden.ca/city_services/public_works/sewer_and_water/waterworks_annual_reports/</a></p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p><b>Number of Designated Facilities served:</b></p> <div style="border: 1px solid black; padding: 2px; width: fit-content;">None</div> <p><b>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ] N/A</b></p> <p><b>Number of Interested Authorities you report to:</b></p> <div style="border: 1px solid black; padding: 2px; width: fit-content;">None</div> <p><b>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ] N/A</b></p>
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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:**

Drinking Water System Name	Drinking Water System Number
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**



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 \_\_\_\_\_

**Describe your Drinking-Water System**

The City of Dryden Water Treatment Plant is a Class II conventional surface water treatment plant. Raw water is pumped from Wabigoon Lake approximately 2km to the treatment plant where Aluminum Sulphate (alum) is added for coagulation. A second Raw water line has been added to provide redundancy. The water then flows to one of two solids contact units where polymer is added and flocculation and sedimentation occurs. The heavier settled floc is dumped to the sanitary sewer. Hydrated lime is added for PH adjustment just before the effluent is gravity fed to four dual media rapid sand filters. The filters are equipped with automatic filter to waste valves. In the event of high filter effluent turbidity, the valves open automatically sending the high turbid water to waste. Filtered water then flows to the Clearwell. Chlorine is added in the Clear-well for primary disinfection. The water then flows to the reservoir and then to the Pump-well where it is pumped to the distribution system. Chlorine residual and turbidity are monitored with continuous on-line analyzers just prior to the water leaving the plant. The distribution system consists of 60 kilometers of water mains of various sizes and materials, 411 valves, 285 fire hydrants and 2400 service connections, supplying a service population of 6555.

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

Aluminum Sulphate (alum), Polymer (Nalclear 8181), Hydrated Lime and Chlorine Gas.

**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**

WTP- Replace 5 Turbidity Analyzers in the Water Treatment Plant. One on each of the 4 filters and one on the final effluent. - \$21,201.00  
 WTP – A safe retrieval system was installed to allow Operators safe entry/exit into the Solids Contact Units and the Waste Tanks for cleaning and inspection. - \$9,406.00



WTP - A Condition Assessment Project was completed on the Water Treatment Plant to determine the future needs of the Plant as it approaches it's 42<sup>nd</sup> anniversary. - \$45,850.00  
 Distribution – Install 3 mainline water valves - \$19,812.00  
 New Hydrant Installation – Ave. - \$7,488.00  
 Distribution Hydrant Flushing – Spring & Fall - \$13,7829.00  
 Operator Training- \$38,648.00  
 SCADA Maintenance Contract - \$10,300.00

**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
June 6, 2017	Physical	Turbidity	NTU	Restore Alum supply	June 6, 2017

**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.**

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	53	0→13 MPN/100mls	0→387 MPN/100mls	None	N/A
Treated	54	0 cfu/100mls	0 cfu/100mls	53	0→2 cfu/ ml
Distribution	319	0 cfu/100mls	0 cfu/100mls	106	0→222 cfu/ ml

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

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	8760	0.02 → 1.0 NTU
Chlorine	8760	1.07 → 1.70 Mg/l
Fluoride (If the DWS provides fluoridation)	N/A	N/A

*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.**

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure	Limit
<b>Jan 20, 2011 Licence-223-101</b>	<b>Backwash Suspended Solids</b>	<b>12 Monthly Composite samples</b>	2.0 → 9.2	<b>Mg/L</b>	<b>25 Mg/L</b>

**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	Jan. 9	<0.6	Ug/l	No
Arsenic	Jan. 9	<1.0	Ug/l	No
Barium	Jan. 9	<10.0	Ug/l	No
Boron	Jan. 9	<50.0	Ug/l	No
Cadmium	Jan. 9	<0.10	Ug/l	No
Chromium	Jan. 9	<1.0	Ug/l	No
*Lead	Jan. 9		Ug/l	No
Mercury	Jan. 9	<.10	Ug/l	No
Selenium	Jan. 9	<1.0	Ug/l	No
Sodium	Jan. 9	2.97	Mg/l	No
Uranium	Jan. 9	<2.0	Ug/l	No
Fluoride (RawWater)	Jan. 9	<.02	Mg/l	No
Nitrite	Jan. 9	<0.01	Mg/l	No
Nitrate	Jan. 9	0.064	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**

(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 (min#) – (max #)	Number of Exceedances
Plumbing	N/A		
Distribution	6	0 → <1.0 ug/L	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	Feb. 1	<0.10	Ug/l	No
Aldicarb	N/A	<1	Ug/l	No
MCPA	Feb. 1	<0.20	Ug/l	No
Atrazine + N-dealkylated metabolites	Feb. 1	<0.2	Ug/l	No
Azinphos-methyl	Feb. 1	<0.1	Ug/l	No
Bendiocarb		N/A	Ug/l	No
Benzene	Jan. 9	<0.5	Ug/l	No
Benzo(a)pyrene	Feb. 1	<0.01	Ug/l	No
Bromoxynil	Jan. 9	<0.2	Ug/l	No
Carbaryl	Feb. 1	<0.2	Ug/l	No
Carbofuran	Feb. 1	<0.2	Ug/l	No
Carbon Tetrachloride	Feb. 1	<0.2	Ug/l	No
Chlordane (Total)		N/A	Ug/l	No
Chlorpyrifos	Feb. 1	<0.1	Ug/l	No
Cyanazine		N/A	Ug/l	No
Diazinon	Feb. 1	<0.1	Ug/l	No
Dicamba	Jan. 9	<0.2	Ug/l	No
1,2-Dichlorobenzene	Feb. 1	<0.5	Ug/l	No
1,4-Dichlorobenzene	Feb. 1	<0.5	Ug/l	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Feb. 1	<0.1	Ug/l	No
1,2-Dichloroethane	Jan. 9	<0.5	Ug/l	No
1,1-Dichloroethylene (vinylidene chloride)	Jan. 9	<0.5	Ug/l	No
Dichloromethane	Jan. 9	<5	Ug/l	No
2-4 Dichlorophenol	Jan. 9	<0.3	Ug/l	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan. 9	<0.2	Ug/l	No
Diclofop-methyl	Feb. 1	<0.2	Ug/l	No

Dimethoate	Feb. 1	<0.1	Ug/l	No
Dinoseb		N/A	Ug/l	No
Diquat	Feb. 1	<1.0	Ug/l	No
Diuron	Feb. 1	<1.0	Ug/l	No
Glyphosate	Feb. 1	<5	Ug/l	No
Heptachlor + Heptachlor Epoxide		N/A	Ug/l	No
Lindane (Total)		N/A	Ug/l	No
Malathion	Feb. 1	<0.1	Ug/l	No
Methoxychlor		N/A	Ug/l	No
Metolachlor	Feb. 1	<0.1	Ug/l	No
Metribuzin	Feb. 1	<0.1	Ug/l	No
Monochlorobenzene	Jan. 9	<0.5	Ug/l	No
Paraquat	Jan. 9	<1.0	Ug/l	No
Parathion		N/A	Ug/l	No
Pentachlorophenol	Jan. 9	<0.5	Ug/l	No
Phorate	Feb. 1	<0.1	Ug/l	No
Picloram	Jan. 9	<0.2	Ug/l	No
Polychlorinated Biphenyls(PCB)		N/A	Ug/l	No
Prometryne	Feb. 1	<0.1	Ug/l	No
Simazine	Feb. 1	<0.1	Ug/l	No
THM (NOTE: show latest annual average)	Jan. 9	35.1	Ug/l	No
Temephos		N/A	Ug/l	No
Terbufos	Jan. 9	<0.2	Ug/l	No
Tetrachloroethylene	Jan. 9	<0.5	Ug/l	No
2,3,4,6-Tetrachlorophenol	Jan. 9	<0.5	Ug/l	No
Triallate	Feb. 1	<0.1	Ug/l	No
Trichloroethylene	Jan. 9	<0.5	Ug/l	No
2,4,6-Trichlorophenol	Jan. 9	<0.5	Ug/l	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)		N/A	Ug/l	No
Trifluralin	Feb. 1	<0.1	Ug/l	No
Vinyl Chloride	Jan. 9	<0.2	Ug/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
None	n/a	n/a	n/a