



**ANNUAL REPORT**

<b>Drinking-Water System Number:</b>	220001423
<b>Drinking-Water System Name:</b>	KENORA AREA WATER TREATMENT PLANT
<b>Drinking-Water System Owner:</b>	CITY OF KENORA
<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>Does your Drinking-Water System serve more than 10,000 people? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> <p>City Hall – 1 Main Street South              Kenora Water Treatment Plant – 9 7th Street South              City of Kenora – Website  <a href="http://www.kenora.ca">http://www.kenora.ca</a></p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served: <input type="text" value="N/A"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Number of Interested Authorities you report to: <input type="text" value="N/A"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes <input type="checkbox"/> No <input type="checkbox"/></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
Rocky Heights Distribution System	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



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 Kenora Water Treatment Plant is categorized as Large Municipal Residential. It is designated a Class III plant. The total number of service connections at this time is 5136. The water plant has a rated capacity of 292 Litres per second. The process is chemically assisted and includes filtration to meet the treatment requirements of O.Reg 170/03 for surface water. The plant uses chloramination to provide secondary disinfection prior to distribution.

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

Chlorine, Ammonium Sulphate, Aluminum Sulphate, Polyelectrolyte, Sodium Hydroxide, Sodium Silicofluoride.

**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**

Replacement of Filter Effluent Turbidimeters – \$20,000  
Repair and Replacement of 2 Clarifier Blowers – \$10,000  
Replacement Various Pressure Transmitters – \$5,000  
Replacement of 2 Air Scour Valves and Actuators - \$12,000

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
Sep 20 2017	Pressure Loss	N/A	N/A	Electrical equipment failure caused an assumed pressure loss (neither measured nor recorded). Component was replaced and pressure area was placed on a BWA. Two sets of bacteriological samples were taken and BWA was lifted when results were received and confirmed absent.	Sep 25 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 Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	52	0 – 11	0 – 345	N/A	N/A
Treated	52	Absent	Absent	52	0 – 1
Distribution	312	Absent	Absent	103	0 – 16

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	Number of Online Samples	Range of Results
<b>Turbidity</b>	<b>365</b>	<b>0.040 - 0.169 NTU</b>	<b>8760</b>	<b>0.040 – 0.119 NTU</b>
<b>Chlorine</b>	<b>365</b>	<b>1.03 – 1.77 mg/L</b>	<b>8760</b>	<b>1.06 – 1.67 mg/L</b>
<b>Fluoride (If the DWS provides fluoridation)</b>	<b>365</b>	<b>0.01 - 0.74 mg/L</b>	<b>8760</b>	<b>0.02 – 0.67 mg/L</b>

*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
<b>Nov 3/2004</b>	<b>Total suspended solids</b>	<b>No samples were taken as effluent was not discharged to lake in 2017.</b>	<b>N/A</b>	<b>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
<b>Antimony</b>	<b>Jan 30/2017</b>	<b>&lt;0.60</b>	<b>µg/L</b>	<b>No</b>
<b>Arsenic</b>	<b>Jan 30/2017</b>	<b>&lt;1.0</b>	<b>µg/L</b>	<b>No</b>
<b>Barium</b>	<b>Jan 30/2017</b>	<b>&lt;10</b>	<b>µg/L</b>	<b>No</b>
<b>Boron</b>	<b>Jan 30/2017</b>	<b>&lt;50</b>	<b>µg/L</b>	<b>No</b>
<b>Cadmium</b>	<b>Jan 30/2017</b>	<b>&lt;0.10</b>	<b>µg/L</b>	<b>No</b>
<b>Chromium</b>	<b>Jan 30/2017</b>	<b>&lt;1.0</b>	<b>µg/L</b>	<b>No</b>
<b>*Lead</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Mercury</b>	<b>Jan 30/2017</b>	<b>&lt;0.10</b>	<b>µg/L</b>	<b>No</b>
<b>Selenium</b>	<b>Jan 30/2017</b>	<b>&lt;1.0</b>	<b>µg/L</b>	<b>No</b>
<b>Sodium</b>	<b>Jan 30/2017</b>	<b>13.3</b>	<b>mg/L</b>	<b>No</b>
<b>Uranium</b>	<b>Jan 30/2017</b>	<b>&lt;2.0</b>	<b>µg/L</b>	<b>No</b>
<b>Fluoride</b>	<b>Jan 5/2015</b>	<b>0.550</b>	<b>mg/L</b>	<b>No</b>
<b>Nitrite</b>	<b>Jan 9/2017</b>	<b>&lt;0.010</b>	<b>mg/L</b>	<b>No</b>
	<b>Apr 10/2017</b>	<b>&lt;0.010</b>	<b>mg/L</b>	<b>No</b>
	<b>Jul 10/2017</b>	<b>&lt;0.010</b>	<b>mg/L</b>	<b>No</b>
	<b>Oct 10/2017</b>	<b>0.022</b>	<b>mg/L</b>	<b>No</b>



<b>Nitrate</b>	<b>Jan 9/2017</b>	<b>0.205</b>	<b>mg/L</b>	<b>No</b>
	<b>Apr 10/2017</b>	<b>0.182</b>	<b>mg/L</b>	<b>No</b>
	<b>Jul 10/2017</b>	<b>&lt;0.020</b>	<b>mg/L</b>	<b>No</b>
	<b>Oct 10/2017</b>	<b>&lt;0.040</b>	<b>mg/L</b>	<b>No</b>

\*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)

<b>Location Type</b>	<b>Number of Samples</b>	<b>Range of Lead Results (min#) – (max #)</b>	<b>Number of Exceedances</b>
<b>Plumbing</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Distribution</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

**Summary of Organic parameters sampled during this reporting period or the most recent sample results**

<b>Parameter</b>	<b>Sample Date</b>	<b>Result Value</b>	<b>Unit of Measure</b>	<b>Exceedance</b>
<b>Alachlor</b>	<b>Jan 30/2017</b>	<b>&lt;0.10</b>	<b>µg/L</b>	<b>No</b>
<b>Atrazine + N-dealkylated metabolites</b>	<b>Jan 30/2017</b>	<b>&lt;0.20</b>	<b>µg/L</b>	<b>No</b>
<b>Azinphos-methyl</b>	<b>Jan 30/2017</b>	<b>&lt;0.10</b>	<b>µg/L</b>	<b>No</b>
<b>Benzene</b>	<b>Jan 30/2017</b>	<b>&lt;0.50</b>	<b>µg/L</b>	<b>No</b>
<b>Benzo(a)pyrene</b>	<b>Jan 30/2017</b>	<b>&lt;0.010</b>	<b>µg/L</b>	<b>No</b>
<b>Bromoxynil</b>	<b>Jan 30/2017</b>	<b>&lt;0.20</b>	<b>µg/L</b>	<b>No</b>
<b>Carbaryl</b>	<b>Jan 30/2017</b>	<b>&lt;0.20</b>	<b>µg/L</b>	<b>No</b>
<b>Carbofuran</b>	<b>Jan 30/2017</b>	<b>&lt;0.20</b>	<b>µg/L</b>	<b>No</b>
<b>Carbon Tetrachloride</b>	<b>Jan 30/2017</b>	<b>&lt;0.20</b>	<b>µg/L</b>	<b>No</b>
<b>Chlorpyrifos</b>	<b>Jan 30/2017</b>	<b>&lt;0.10</b>	<b>µg/L</b>	<b>No</b>
<b>Diazinon</b>	<b>Jan 30/2017</b>	<b>&lt;0.10</b>	<b>µg/L</b>	<b>No</b>
<b>Dicamba</b>	<b>Jan 30/2017</b>	<b>&lt;0.20</b>	<b>µg/L</b>	<b>No</b>
<b>1,2-Dichlorobenzene</b>	<b>Jan 30/2017</b>	<b>&lt;0.50</b>	<b>µg/L</b>	<b>No</b>
<b>1,4-Dichlorobenzene</b>	<b>Jan 30/2017</b>	<b>&lt;0.50</b>	<b>µg/L</b>	<b>No</b>
<b>1,2-Dichloroethane</b>	<b>Jan 30/2017</b>	<b>&lt;0.50</b>	<b>µg/L</b>	<b>No</b>
<b>1,1-Dichloroethylene (vinylidene chloride)</b>	<b>Jan 30/2017</b>	<b>&lt;0.50</b>	<b>µg/L</b>	<b>No</b>
<b>Dichloromethane</b>	<b>Jan 30/2017</b>	<b>&lt;5.0</b>	<b>µg/L</b>	<b>No</b>
<b>2-4 Dichlorophenol</b>	<b>Jan 30/2017</b>	<b>&lt;0.30</b>	<b>µg/L</b>	<b>No</b>
<b>2,4-Dichlorophenoxy acetic acid (2,4-D)</b>	<b>Jan 30/2017</b>	<b>&lt;0.20</b>	<b>µg/L</b>	<b>No</b>
<b>Diclofop-methyl</b>	<b>Jan 30/2017</b>	<b>&lt;0.20</b>	<b>µg/L</b>	<b>No</b>
<b>Dimethoate</b>	<b>Jan 30/2017</b>	<b>&lt;0.10</b>	<b>µg/L</b>	<b>No</b>
<b>Diquat</b>	<b>Jan 30/2017</b>	<b>&lt;1.00</b>	<b>µg/L</b>	<b>No</b>
<b>Diuron</b>	<b>Jan 30/2017</b>	<b>&lt;1.00</b>	<b>µg/L</b>	<b>No</b>



Glyphosate	Jan 30/2017	<5.00	µg/L	No
Malathion	Jan 30/2017	<0.10	µg/L	No
2-Methyl-4-chlorophenoxyacetic acid	Jan 30/2017	<0.20	µg/L	No
Metolachlor	Jan 30/2017	<0.10	µg/L	No
Metribuzin	Jan 30/2017	<0.10	µg/L	No
Monochlorobenzene	Jan 30/2017	<0.50	µg/L	No
Paraquat	Jan 30/2017	<1.00	µg/L	No
Pentachlorophenol	Jan 30/2017	<0.50	µg/L	No
Phorate	Jan 30/2017	<0.10	µg/L	No
Picloram	Jan 30/2017	<0.20	µg/L	No
Polychlorinated Biphenyls (PCB)	Jan 30/2017	<0.035	µg/L	No
Prometryne	Jan 30/2017	<0.10	µg/L	No
Simazine	Jan 30/2017	<0.10	µg/L	No
THM (NOTE: show latest annual average)	Jan 9/2017 Apr 10/2017 Jul 10/2017 Oct 10/2017	49.6	µg/L	No
HAA (NOTE: show latest annual average)	Jan 9/2017 Apr 10/2017 Jul 10/2017 Oct 10/2017	43.9	µg/L	N/A until 2020
Terbufos	Jan 30/2017	<0.20	µg/L	No
Tetrachloroethylene	Jan 30/2017	<0.50	µg/L	No
2,3,4,6-Tetrachlorophenol	Jan 30/2017	<0.50	µg/L	No
Triallate	Jan 30/2017	<0.10	µg/L	No
Trichloroethylene	Jan 30/2017	<0.50	µg/L	No
2,4,6-Trichlorophenol	Jan 30/2017	<0.50	µg/L	No
Trifluralin	Jan 30/2017	<0.10	µg/L	No
Vinyl Chloride	Jan 30/2017	<0.20	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
Sodium	13.3	mg/L	Jan 30/2017