

Request for Decision

2016 Water Works Summary Report

Presented To: Finance and
Administration
Committee

Presented: Tuesday, Mar 28, 2017

Report Date Thursday, Mar 02, 2017

Type: Routine Management
Reports

Resolution

THAT the City of Greater Sudbury accepts the 2016 Water Works Summary Report in accordance with Ontario Regulation 170/30;

AND THAT the 2016 Water Works Summary Report be made available for public review on the City's website.

Finance Implications

No financial implications

Background

Attached is the 2016 Water Works Summary Report for Council's information. The Safe Drinking Water Act requires that by March 31, of the following year that a summary report be given to Council which, for each of the systems operated must:

- List the requirements of any Act, Regulation, System Approval or Order that the system failed to meet at any time during the period covered by the report;
- The duration of any such failure; and
- For each failure, provide a description of the corrective action taken.

The summary report must also include the following information for the purpose of enabling Council to assess the capabilities of each system in meeting existing and planned usages. Specifically:

- A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly averages, maximum daily flows, and daily instantaneous peak flow rates; and
- A comparison of the summary of the above flows to the rated capacity and flow rates approved in the system approval.

Signed By

Division Review

Nick Benkovich
Director of Water/Wastewater
Digitally Signed Mar 2, 17

Recommended by the Department

Tony Cecutti
General Manager of Growth and
Infrastructure
Digitally Signed Mar 2, 17

Recommended by the C.A.O.

Ed Archer
Chief Administrative Officer
Digitally Signed Mar 14, 17



2016 Annual Water Quality Reports

Per: Ontario Regulation 170/03, s. 11 (1);
Ontario Regulation 247/06, s. 10 (1)





2016 Annual Water Quality Report

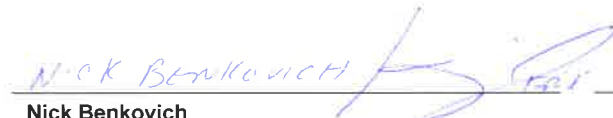
v.1.0

Reviewed by:


Julie Friel
Water Treatment Supervisor III


Date

Approved by:


Nick Benkovich
Director, Water & Wastewater Services


Date



2016

Annual Water Quality Report

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Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	210001665
Drinking-Water System	Dowling Drinking Water System
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2016-01-01 To 2016-12-31

<u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u> Does your Drinking-Water System serve more than 10,000 people? Yes ☐ No ☒ Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐ Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection. www.greatersudbury.ca TDS-Engineering Department	<u>Complete for all other Categories.</u> Number of Designated Facilities served: 0 Did you provide a copy of your annual report to all Designated Facilities you serve? Yes ☐ No ☒ Number of Interested Authorities you report to: 0 Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes ☐ No ☒
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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

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/Citizen Service Centre
- ☐ Public access/notice via other method _____

Describe your Drinking-Water System

The Dowling Drinking Water System encompasses all municipal water distribution within Dowling. The system includes Dowling Well #1 (Riverside) located on Riverside Dr., Dowling Well #2 (Lionel) located on Lionel Avenue and the Dowling Tank located off of Hwy. 144. Each of the wells is housed in individual structures. The wells pump water from an unconfined aquifer within a primarily sand and gravel formation. The discharge at each well site undergoes primary treatment in the form of Ultra-Violet irradiation, secondary disinfection by chlorination, and fluoridation before it enters the distribution system. Continuous analyzers for free chlorine residual, fluoride, turbidity and UV equipment are monitored by an onsite PLC. A standby power generator with an automatic transfer switch is located at Lionel well and supplies power to both wells. The distribution system includes an online continuous free chlorine analyzer. The entire water system is in compliance with O. Reg. 170/03 and is monitored 24/7 from the Wanapitei WTP.

List all water treatment chemicals used over this reporting period

Chlorine Gas UN#1017, Hydrofluosilicic Acid UN#1778

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

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

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

AWQI #	Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action

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: LIONEL WELL#2					
	52	0 to 0	0 to 0		
Raw: RIVERSIDE WELL#1					
	52	0 to 0	0 to 1		
Treated: LIONEL WELL					
	52	0 to 0	0 to 0	52	1 to 20
Treated: RIVERSIDE WELL					
	52	0 to 0	0 to 0	52	1 to 10
Distribution					
	154	0 to 0	0 to 0	39	1 to 20

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 #)
Chlorine Residual Distribution System	8,760	0.58 - 1.71

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

LIONEL WELL

Turbidity	8,760	0.02 - 1.42	NTU
Chlorine	8,760	0.54 - 2.94	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.05 - 1.07	mg/L

RIVERSIDE WELL

Turbidity	8,760	0.00 - 2.00	NTU
Chlorine	8,760	0.54 - 3.79	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 0.98	mg/L

***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 or order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

LIONEL WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2016/12/11	0.0005	mg/L	No
Arsenic	2016/12/11	0.001	mg/L	No
Barium	2016/12/11	0.021	mg/L	No
Boron	2016/12/11	0.016	mg/L	No
Cadmium	2016/12/11	0.0001	mg/L	No
Chromium	2016/12/11	0.001	mg/L	No
Mercury	2016/12/11	0.0001	mg/L	No
Selenium	2016/12/11	0.001	mg/L	No
Uranium	2016/12/11	0.001	mg/L	No
Nitrite	2016/03/08	0.05	mg/L	No
	2016/06/08	0.05	mg/L	No
	2016/09/06	0.05	mg/L	No
	2016/12/11	0.05	mg/L	No

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

Nitrate	2016/03/08	0.69	mg/L	No
	2016/06/08	0.66	mg/L	No
	2016/09/06	0.1	mg/L	No
	2016/12/11	0.47	mg/L	No
Sodium	2015/11/03	29.20	mg/L	Yes
	2015/11/12	30.30	mg/L	Yes

RIVERSIDE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2016/12/11	0.0009	mg/L	No
Arsenic	2016/12/11	0.001	mg/L	No
Barium	2016/12/11	0.0162	mg/L	No
Boron	2016/12/11	0.011	mg/L	No
Cadmium	2016/12/11	0.0001	mg/L	No
Chromium	2016/12/11	0.001	mg/L	No
Mercury	2016/12/11	0.0001	mg/L	No
Selenium	2016/12/11	0.001	mg/L	No
Uranium	2016/12/11	0.001	mg/L	No
Nitrite	2016/03/08	0.05	mg/L	No
	2016/06/08	0.05	mg/L	No
	2016/09/06	0.05	mg/L	No
	2016/12/11	0.05	mg/L	No
Nitrate	2016/03/08	0.85	mg/L	No
	2016/06/08	0.85	mg/L	No
	2016/09/06	0.1	mg/L	No
	2016/12/11	0.79	mg/L	No
Sodium	2015/11/03	35.00	mg/L	Yes
	2015/11/12	35.60	mg/L	Yes

Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results (min#) - (max#)	Number of Exceedances
Plumbing		mg/L	
Distribution	3	0.0001 - 0.00188 mg/L	0

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: show latest annual average)	2016	0.0102	mg/L	No

LIONEL WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2016/12/11	0.0005	mg/L	No

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

Atrazine + N-dealkylated metabolites	2016/12/11	0.0009	mg/L	No
Azinphos-methyl	2016/12/11	0.0003	mg/L	No
Benzene	2016/12/11	0.0002	mg/L	No
Benzo(a)pyrene	2016/12/11	0.000005	mg/L	No
Bromoxynil	2016/12/11	0.00009	mg/L	No
Carbaryl	2016/12/11	0.001	mg/L	No
Carbofuran	2016/12/11	0.001	mg/L	No
Carbon Tetrachloride	2016/12/11	0.0002	mg/L	No
Chlorpyrifos	2016/12/11	0.0003	mg/L	No
Diazinon	2016/12/11	0.0003	mg/L	No
Dicamba	2016/12/11	0.00008	mg/L	No
1,2-Dichlorobenzene	2016/12/11	0.0002	mg/L	No
1,4-Dichlorobenzene	2016/12/11	0.0003	mg/L	No
1,2-Dichloroethane	2016/12/11	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2016/12/11	0.0003	mg/L	No
Dichloromethane	2016/12/11	0.001	mg/L	No
2-4 Dichlorophenol	2016/12/11	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2016/12/11	0.00008	mg/L	No
Diclofop-methyl	2016/12/11	0.00008	mg/L	No
Dimethoate	2016/12/11	0.0003	mg/L	No
Diquat	2016/12/11	0.007	mg/L	No
Diuron	2016/12/11	0.006	mg/L	No
Glyphosate	2016/12/11	0.02	mg/L	No
Malathion	2016/12/11	0.0003	mg/L	No
Metolachlor	2016/12/11	0.0002	mg/L	No
Metribuzin	2016/12/11	0.0002	mg/L	No
Monochlorobenzene	2016/12/11	0.0005	mg/L	No
Paraquat	2016/12/11	0.001	mg/L	No
Pentachlorophenol	2016/12/11	0.0003	mg/L	No
Phorate	2016/12/11	0.0002	mg/L	No
Picloram	2016/12/11	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2016/12/11	0.00006	mg/L	No
Prometryne	2016/12/11	0.0001	mg/L	No
Simazine	2016/12/11	0.0003	mg/L	No
Terbufos	2016/12/11	0.0002	mg/L	No
Tetrachloroethylene	2016/12/11	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2016/12/11	0.0003	mg/L	No
Triallate	2016/12/11	0.0002	mg/L	No
Trichloroethylene	2016/12/11	0.0002	mg/L	No
2,4,6-Trichlorophenol	2016/12/11	0.0002	mg/L	No
Trifluralin	2016/12/11	0.0002	mg/L	No
Vinyl Chloride	2016/12/11	0.0002	mg/L	No
MCPA	2016/12/11	0.01	mg/L	No

RIVERSIDE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2016/12/11	0.0004	mg/L	No
Atrazine + N-dealkylated metabolites	2016/12/11	0.0009	mg/L	No
Azinphos-methyl	2016/12/11	0.0003	mg/L	No
Benzene	2016/12/11	0.0002	mg/L	No
Benzo(a)pyrene	2016/12/11	0.000005	mg/L	No

Bromoxynil	2016/12/11	0.00009	mg/L	No
Carbaryl	2016/12/11	0.001	mg/L	No
Carbofuran	2016/12/11	0.001	mg/L	No
Carbon Tetrachloride	2016/12/11	0.0002	mg/L	No
Chlorpyrifos	2016/12/11	0.0003	mg/L	No
Diazinon	2016/12/11	0.0003	mg/L	No
Dicamba	2016/12/11	0.00008	mg/L	No
1,2-Dichlorobenzene	2016/12/11	0.0002	mg/L	No
1,4-Dichlorobenzene	2016/12/11	0.0003	mg/L	No
1,2-Dichloroethane	2016/12/11	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2016/12/11	0.0003	mg/L	No
Dichloromethane	2016/12/11	0.001	mg/L	No
2-4 Dichlorophenol	2016/12/11	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2016/12/11	0.00008	mg/L	No
Diclofop-methyl	2016/12/11	0.00008	mg/L	No
Dimethoate	2016/12/11	0.0003	mg/L	No
Diquat	2016/12/11	0.007	mg/L	No
Diuron	2016/12/11	0.006	mg/L	No
Glyphosate	2016/12/11	0.02	mg/L	No
Malathion	2016/12/11	0.0003	mg/L	No
Metolachlor	2016/12/11	0.0002	mg/L	No
Metribuzin	2016/12/11	0.0002	mg/L	No
Monochlorobenzene	2016/12/11	0.0005	mg/L	No
Paraquat	2016/12/11	0.001	mg/L	No
Pentachlorophenol	2016/12/11	0.0003	mg/L	No
Phorate	2016/12/11	0.0002	mg/L	No
Picloram	2016/12/11	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2016/12/11	0.00006	mg/L	No
Prometryne	2016/12/11	0.0001	mg/L	No
Simazine	2016/12/11	0.0003	mg/L	No
Terbufos	2016/12/11	0.0002	mg/L	No
Tetrachloroethylene	2016/12/11	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2016/12/11	0.0003	mg/L	No
Triallate	2016/12/11	0.0002	mg/L	No
Trichloroethylene	2016/12/11	0.0002	mg/L	No
2,4,6-Trichlorophenol	2016/12/11	0.0002	mg/L	No
Trifluralin	2016/12/11	0.0002	mg/L	No
Vinyl Chloride	2016/12/11	0.0002	mg/L	No
MCPA	2016/12/11	0.01	mg/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	UOM	Date of Sample	Location

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	240000020
Drinking-Water System	Falconbridge Well Supply
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2016-01-01 To 2016-12-31

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 ☒

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

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

www.greatersudbury.ca
TDS-Engineering Department

Complete for all other Categories.

Number of Designated Facilities served:

0

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes ☐ No ☒

Number of Interested Authorities you report to:

0

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes ☐ No ☒

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

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 ☐

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

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/Citizen Service Centre
- ☐ Public access/notice via other method _____

Describe your Drinking-Water System

The Falconbridge system consists of three drilled wells, Numbers 5, 6, and 7, located north of the Sudbury Airport. All three wells share a common treatment building that includes a stand-by power generator, chlorine gas for disinfection and chemical addition for corrosion control. Continuous analyzers for free chlorine residual and turbidity are monitored by an onsite PLC. Fluoride is added to the water before it enters the Falconbridge Municipal distribution system at a designated fluoridation building. Water is supplied south to the Town of Falconbridge and north to the Nickel Rim Mine reservoir and the Sudbury Airport. The remainder of the system consists of an Elevated Storage Tank, Booster Pumping Station and a Pressure Regulating Valve, all located within the town of Falconbridge. The City provides water to Glencore and two industrial clients along the South transmission line. The distribution system includes an online continuous free chlorine analyzer and fluoride analyzer. The entire water system is in compliance with O. Reg. 170/03 and is monitored 24/7 from the Wanapitei WTP.

List all water treatment chemicals used over this reporting period

Chlorine Gas UN#1017, Phosphate, Hydrofluosilicic Acid UN#1778

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

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

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

AWQI #	Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action
129337	2016/05/02	Fluoride	1.55	mg/L	Resample/Re-test;	2016/05/03

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: FALCONBRIDGE WELL #5					
	52	0 to 0	0 to 0		
Raw: FALCONBRIDGE WELL #6					
	52	0 to 0	0 to 0		
Raw: FALCONBRIDGE WELL #7					
	52	0 to 0	0 to 0		
Treated: FALCONBRIDGE WELLS TREATED					
	156	0 to 0	0 to 0	156	1 to 690
Distribution					
	203	0 to 0	0 to 0	52	1 to 30

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

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 #)
Chlorine Residual Distribution System	8,760	0.67 - 3.17

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

FALCONBRIDGE WELLS TREATED

Turbidity	8,760	0.01 - 0.86	NTU
Chlorine	8,760	0.70 - 4.29	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.55	mg/L

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 or order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

FALCONBRIDGE WELLS TREATED

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/08	0.0005	mg/L	No
Arsenic	2014/12/08	0.0033	mg/L	No
Barium	2014/12/08	0.006	mg/L	No
Boron	2014/12/08	0.0057	mg/L	No
Cadmium	2014/12/08	0.0001	mg/L	No
Chromium	2014/12/08	0.0019	mg/L	No
Mercury	2014/12/08	0.0001	mg/L	No
Selenium	2014/12/08	0.001	mg/L	No
Uranium	2014/12/08	0.001	mg/L	No
Nitrite	2016/03/07	0.05	mg/L	No
	2016/06/07	0.05	mg/L	No
	2016/09/06	0.05	mg/L	No
	2016/12/12	0.05	mg/L	No
Nitrate	2016/03/07	0.1	mg/L	No
	2016/06/07	0.1	mg/L	No
	2016/09/06	0.1	mg/L	No
	2016/12/12	0.1	mg/L	No
Sodium	2015/11/02	22.30	mg/L	Yes

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

Sodium	2015/11/02	21.70	mg/L	Yes
	2015/11/02	25.30	mg/L	Yes
	2015/11/08	28.20	mg/L	Yes
	2015/11/08	21.10	mg/L	Yes
	2015/11/08	21.40	mg/L	Yes

Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results (min#) - (max#)	Number of Exceedances
Plumbing		mg/L	
Distribution	4	0.0001 - 0.00161 mg/L	0

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: show latest annual average)	2016	0.0049	mg/L	No

FALCONBRIDGE WELLS TREATED

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/08	0.0005	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/08	0.0009	mg/L	No
Azinphos-methyl	2014/12/08	0.0003	mg/L	No
Benzene	2014/12/08	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/08	0.000009	mg/L	No
Bromoxynil	2014/12/08	0.0005	mg/L	No
Carbaryl	2014/12/08	0.001	mg/L	No
Carbofuran	2014/12/08	0.001	mg/L	No
Carbon Tetrachloride	2014/12/08	0.0002	mg/L	No
Chlorpyrifos	2014/12/08	0.0003	mg/L	No
Diazinon	2014/12/08	0.0003	mg/L	No
Dicamba	2014/12/08	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/08	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/08	0.0002	mg/L	No
Dichloromethane	2014/12/08	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/08	0.0006	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/08	0.0002	mg/L	No
Diclofop-methyl	2014/12/08	0.0002	mg/L	No
Dimethoate	2014/12/08	0.0003	mg/L	No
Diquat	2014/12/08	0.007	mg/L	No
Diuron	2014/12/08	0.005	mg/L	No
Glyphosate	2014/12/08	0.02	mg/L	No

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

Malathion	2014/12/08	0.0003	mg/L	No
Metolachlor	2014/12/08	0.0002	mg/L	No
Metribuzin	2014/12/08	0.0002	mg/L	No
Monochlorobenzene	2014/12/08	0.0002	mg/L	No
Paraquat	2014/12/08	0.001	mg/L	No
Pentachlorophenol	2014/12/08	0.0006	mg/L	No
Phorate	2014/12/08	0.0003	mg/L	No
Picloram	2014/12/08	0.00005	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/08	0.00003	mg/L	No
Prometryne	2014/12/08	0.0002	mg/L	No
Simazine	2014/12/08	0.0003	mg/L	No
Terbufos	2014/12/08	0.0002	mg/L	No
Tetrachloroethylene	2014/12/08	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/08	0.0006	mg/L	No
Triallate	2014/12/08	0.0002	mg/L	No
Trichloroethylene	2014/12/08	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/08	0.0005	mg/L	No
Trifluralin	2014/12/08	0.0002	mg/L	No
Vinyl Chloride	2014/12/08	0.0002	mg/L	No
MCPA				

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	UOM	Date of Sample	Location

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)

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

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	220003519
Drinking-Water System	Onaping-Levack Well Supply
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2016-01-01 To 2016-12-31

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 ☒

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

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

www.greatersudbury.ca
TDS-Engineering Department

Complete for all other Categories.

Number of Designated Facilities served:

0

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes ☐ No ☒

Number of Interested Authorities you report to:

0

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes ☐ No ☒

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

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/Citizen Service Centre
- ☐ Public access/notice via other method _____

Describe your Drinking-Water System

The Onaping/Levack system includes three drilled wells, Numbers 3, 4 and 5 with a common treatment building. Well pumps 3 and 4 are housed in a separate building while well pump 5 is situated in the treatment building. The treatment building provides chlorine gas injection for disinfection, fluoridation, chemical addition for corrosion control, Sodium Hydroxide for pH control and a stand-by power generator. Continuous analyzers for free chlorine residual, fluoride, turbidity and pH are monitored by an onsite PLC. The system is equipped with an elevated storage tank having re-chlorination capabilities, a Pressure Control /Booster building with stand-by power, a pressure sustaining valve, a distribution online continuous free chlorine analyzer and the distribution piping. The entire water system is in compliance with O. Reg. 170/03 and is monitored 24/7 from the Wanapitei WTP.

List all water treatment chemicals used over this reporting period

Chlorine Gas UN#1017, Hydrofluosilicic Acid UN#1778, Polyphosphate, Sodium Hydroxide UN#1824

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

Onaping Well Rehabilitation #5 well inspection, column assembly and impeller \$62 000
 Onaping Booster station new Variable Frequency Drive for a pump \$6 655

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

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

AWQI #	Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action
128654	2016/03/22	Fluoride	1.58	mg/L	Resample/Re-test;	2016/03/22

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: WICKWAS WELL #3					
	52	0 to 0	0 to 0		
Raw: WICKWAS WELL #4					
	52	0 to 0	0 to 0		
Raw: WICKWAS WELL #5					
	45	0 to 0	0 to 0		
Treated: WICKWAS TREATED PUMPHOUSE					
	52	0 to 0	0 to 0	52	1 to 10
Distribution					
	156	0 to 0	0 to 0	39	1 to 10

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 #)
Chlorine Residual Distribution System	8,760	1.08 - 2.83

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

WICKWAS TREATED PUMPHOUSE

Turbidity	8,760	0.01 - 10.0	NTU
Chlorine	8,760	0.71 - 3.83	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.02 - 1.58	mg/L

***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 or order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
2009/03/09	Sodium	2016/01/04	45.5	mg/L
2009/03/09	Sodium	2016/01/04	45.6	mg/L
2009/03/09	Sodium	2016/01/04	53.8	mg/L
2009/03/09	Sodium	2016/02/01	59.9	mg/L
2009/03/09	Sodium	2016/02/01	49.4	mg/L
2009/03/09	Sodium	2016/02/01	68.8	mg/L
2009/03/09	Sodium	2016/02/09	54.5	mg/L
2009/03/09	Sodium	2016/02/09	48.8	mg/L
2009/03/09	Sodium	2016/02/09	62.9	mg/L
2009/03/09	Sodium	2016/03/01	69.4	mg/L
2009/03/09	Sodium	2016/03/01	46.7	mg/L
2009/03/09	Sodium	2016/03/01	40.6	mg/L
2009/03/09	Sodium	2016/03/14	58.8	mg/L
2009/03/09	Sodium	2016/03/14	54	mg/L
2009/03/09	Sodium	2016/03/14	66.4	mg/L
2009/03/09	Sodium	2016/04/05	74.3	mg/L
2009/03/09	Sodium	2016/04/05	56.9	mg/L
2009/03/09	Sodium	2016/04/05	85.3	mg/L
2009/03/09	Sodium	2016/05/04	61.6	mg/L
2009/03/09	Sodium	2016/05/04	56.9	mg/L
2009/03/09	Sodium	2016/05/04	74.3	mg/L
2009/03/09	Sodium	2016/06/01	58.6	mg/L
2009/03/09	Sodium	2016/06/01	48.2	mg/L
2009/03/09	Sodium	2016/06/01	74.2	mg/L
2009/03/09	Sodium	2016/07/05	63.6	mg/L
2009/03/09	Sodium	2016/07/05	60.4	mg/L
2009/03/09	Sodium	2016/07/05	79.3	mg/L
2009/03/09	Sodium	2016/08/04	88.1	mg/L
2009/03/09	Sodium	2016/08/04	75.3	mg/L
2009/03/09	Sodium	2016/08/04	101	mg/L
2009/03/09	Sodium	2016/09/06	75.8	mg/L
2009/03/09	Sodium	2016/09/06	61.5	mg/L
2009/03/09	Sodium	2016/09/06	92.6	mg/L
2009/03/09	Sodium	2016/10/03	83	mg/L
2009/03/09	Sodium	2016/10/03	70.6	mg/L
2009/03/09	Sodium	2016/11/08	59.1	mg/L
2009/03/09	Sodium	2016/11/08	60	mg/L
2009/03/09	Sodium	2016/11/08	72.2	mg/L
2009/03/09	Sodium	2016/12/05	66.8	mg/L
2009/03/09	Sodium	2016/12/05	45.1	mg/L
2009/03/09	Sodium	2016/12/05	80.8	mg/L

WICKWAS TREATED PUMPHOUSE

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
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Drinking-Water Systems Regulation O. Reg. 170/03

Antimony	2014/12/09	0.0005	mg/L	No
Arsenic	2014/12/09	0.001	mg/L	No
Barium	2014/12/09	0.0965	mg/L	No
Boron	2014/12/09	0.0071	mg/L	No
Cadmium	2014/12/09	0.0001	mg/L	No
Chromium	2014/12/09	0.0012	mg/L	No
Mercury	2014/12/09	0.0001	mg/L	No
Selenium	2014/12/09	0.001	mg/L	No
Uranium	2014/12/09	0.001	mg/L	No
Nitrite	2016/03/08	0.05	mg/L	No
	2016/06/08	0.05	mg/L	No
	2016/09/06	0.05	mg/L	No
	2016/12/11	0.05	mg/L	No
Nitrate	2016/03/08	1.6	mg/L	No
	2016/06/08	0.8	mg/L	No
	2016/09/06	0.1	mg/L	No
	2016/12/11	0.75	mg/L	No
Sodium	2015/11/17	65.70	mg/L	Yes
	2015/11/24	52.90	mg/L	Yes

Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results (min#) - (max#)	Number of Exceedances
Plumbing	51	0.0001 - 0.0065 mg/L	0
Distribution	8	0.0001 - 0.00041 mg/L	0

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: show latest annual average)	2016	0.0091	mg/L	No

WICKWAS TREATED PUMPHOUSE

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/09	0.0004	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/09	0.0009	mg/L	No
Azinphos-methyl	2014/12/09	0.0003	mg/L	No
Benzene	2014/12/09	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/09	0.000009	mg/L	No
Bromoxynil	2014/12/09	0.0005	mg/L	No
Carbaryl	2014/12/09	0.001	mg/L	No
Carbofuran	2014/12/09	0.001	mg/L	No
Carbon Tetrachloride	2014/12/09	0.0002	mg/L	No
Chlorpyrifos	2014/12/09	0.0003	mg/L	No
Diazinon	2014/12/09	0.0003	mg/L	No

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

Dicamba	2014/12/09	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/09	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/09	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/09	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/09	0.0002	mg/L	No
Dichloromethane	2014/12/09	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/09	0.0006	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/09	0.0002	mg/L	No
Diclofop-methyl	2014/12/09	0.0002	mg/L	No
Dimethoate	2014/12/09	0.0003	mg/L	No
Diquat	2014/12/09	0.007	mg/L	No
Diuron	2014/12/09	0.005	mg/L	No
Glyphosate	2014/12/09	0.02	mg/L	No
Malathion	2014/12/09	0.0003	mg/L	No
Metolachlor	2014/12/09	0.0002	mg/L	No
Metribuzin	2014/12/09	0.0002	mg/L	No
Monochlorobenzene	2014/12/09	0.0002	mg/L	No
Paraquat	2014/12/09	0.001	mg/L	No
Pentachlorophenol	2014/12/09	0.0006	mg/L	No
Phorate	2014/12/09	0.0003	mg/L	No
Picloram	2014/12/09	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/09	0.00005	mg/L	No
Prometryne	2014/12/09	0.0002	mg/L	No
Simazine	2014/12/09	0.0003	mg/L	No
Terbufos	2014/12/09	0.0002	mg/L	No
Tetrachloroethylene	2014/12/09	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/09	0.0006	mg/L	No
Triallate	2014/12/09	0.0002	mg/L	No
Trichloroethylene	2014/12/09	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/09	0.0005	mg/L	No
Trifluralin	2014/12/09	0.0002	mg/L	No
Vinyl Chloride	2014/12/09	0.0002	mg/L	No
MCPA				

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	UOM	Date of Sample	Location

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)

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

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	220003485
Drinking-Water System	Sudbury Drinking Water System -Garson
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2016-01-01 To 2016-12-31

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 ☒

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

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

www.greatersudbury.ca
TDS-Engineering Department

Complete for all other Categories.

Number of Designated Facilities served:

0

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes ☐ No ☒

Number of Interested Authorities you report to:

0

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes ☐ No ☒

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

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 ☐

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

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/Citizen Service Centre
☐ Public access/notice via other method _____

Describe your Drinking-Water System

The Garson system includes three wells, Garson Well #2 located near the intersection of Spruce St. and Falconbridge Hwy., plus Garson Wells #1 & 3 located on Falconbridge Hwy. The system's wells take water from an unconfined aquifer in a sand and gravel formation at Garson Well #2, and a sand, gravel, boulder formation at Garson #1 & 3. All the well groundwater is disinfected by chlorination and fluoridated at the well sites before it enters the distribution system. A common chemical room and a chlorine contact chamber is installed at the Garson #1 & 3 site. Garson Well #2 includes an oversized pipe on discharge that provides chlorine contact time. Continuous analyzers for free chlorine residual, fluoride and turbidity are monitored by an onsite PLC. A standby power generator with an automatic transfer switch is located at the Garson #1 & 3 site. The Garson Distribution System encompasses all municipal distribution in the north east part of Garson, east of the intersection of O'Neil Drive W. and Falconbridge Road and North to include the Old Skead Rd. area of Garson. The distribution system includes an online continuous chlorine analyzer. In the case of a complete system failure, a pressure sustaining valve, at the corner of O'Neil Drive W. and Falconbridge Hwy, ensures a water supply to Garson by connecting the Garson and Sudbury/Wanapitei Systems. The entire water system is in compliance with O. Reg. 170/03 and is monitored 24/7 from the Wanapitei WTP.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite UN#1791, Hydrofluosilicic Acid UN#1778

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

Capital distribution replacement, repair or relining:
Mary St. \$249,333

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

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

AWQI #	Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action
131550	2016/10/17	Fluoride	2.0	mg/L	Resample/Re-test;	2016/10/20

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: GARSON WELL #1					
	52	0 to 0	0 to 0		
Raw: GARSON WELL #2					
	52	0 to 0	0 to 0		
Raw: GARSON WELL #3					
	52	0 to 0	0 to 0		
Treated: GARSON #1 & #3 WELL TREATED					
	52	0 to 0	0 to 0	52	1 to 30
Treated: GARSON #2 WELL TREATED					
	52	0 to 0	0 to 0	52	2 to 30
Distribution					
	208	0 to 0	0 to 0	56	1 to 10

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 #)
Chlorine Residual Distribution System	8,760	0.81 - 2.75

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

GARSON #1 & #3 WELL TREATED

Turbidity	8,760	0.02 - 2.00	NTU
Chlorine	8,760	0.54 - 2.66	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 2.00	mg/L

GARSON #2 WELL TREATED

Turbidity	8,760	0.03 - 2.00	NTU
Chlorine	8,760	0.60 - 3.54	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.00 - 1.44	mg/L

***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 or order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

GARSON #1 & #3 WELL TREATED

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/09	0.0005	mg/L	No
Arsenic	2014/12/09	0.0031	mg/L	No
Barium	2014/12/09	0.0423	mg/L	No
Boron	2014/12/09	0.0026	mg/L	No
Cadmium	2014/12/09	0.0001	mg/L	No
Chromium	2014/12/09	0.0023	mg/L	No
Mercury	2014/12/09	0.0001	mg/L	No
Selenium	2014/12/09	0.001	mg/L	No
Uranium	2014/12/09	0.0012	mg/L	No
Nitrite	2016/03/07	0.05	mg/L	No
	2016/06/07	0.05	mg/L	No
	2016/09/06	0.05	mg/L	No
	2016/12/12	0.05	mg/L	No

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

Nitrate	2016/03/07	0.58	mg/L	No
	2016/06/07	0.58	mg/L	No
	2016/09/06	0.1	mg/L	No
	2016/12/12	0.53	mg/L	No
Sodium	2015/06/23	24.50	mg/L	Yes
	2015/07/03	22.20	mg/L	Yes
	2015/11/02	18.20	mg/L	No

GARSON #2 WELL TREATED

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/08	0.0005	mg/L	No
Arsenic	2014/12/08	0.0028	mg/L	No
Barium	2014/12/08	0.0391	mg/L	No
Boron	2014/12/08	0.0105	mg/L	No
Cadmium	2014/12/08	0.0001	mg/L	No
Chromium	2014/12/08	0.0017	mg/L	No
Mercury	2014/12/08	0.0001	mg/L	No
Selenium	2014/12/08	0.001	mg/L	No
Uranium	2014/12/08	0.001	mg/L	No
Nitrite	2016/03/07	0.05	mg/L	No
	2016/06/07	0.05	mg/L	No
	2016/09/06	0.05	mg/L	No
	2016/12/12	0.05	mg/L	No
Nitrate	2016/03/07	0.93	mg/L	No
	2016/06/07	0.87	mg/L	No
	2016/09/06	0.1	mg/L	No
	2016/12/12	0.88	mg/L	No
Sodium	2015/11/02	58.50	mg/L	Yes
	2015/11/08	56.40	mg/L	Yes

Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results (min#) - (max#)	Number of Exceedances
Plumbing		mg/L	
Distribution	6	0.0001 - 0.00032 mg/L	0

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: show latest annual average)	2016	0.0057	mg/L	No

GARSON #2 WELL TREATED

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
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Drinking-Water Systems Regulation O. Reg. 170/03

Alachlor	2014/12/08	0.0005	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/08	0.0009	mg/L	No
Azinphos-methyl	2014/12/08	0.0004	mg/L	No
Benzene	2014/12/08	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/08	0.000009	mg/L	No
Bromoxynil	2014/12/08	0.0005	mg/L	No
Carbaryl	2014/12/08	0.001	mg/L	No
Carbofuran	2014/12/08	0.001	mg/L	No
Carbon Tetrachloride	2014/12/08	0.0002	mg/L	No
Chlorpyrifos	2014/12/08	0.0004	mg/L	No
Diazinon	2014/12/08	0.0004	mg/L	No
Dicamba	2014/12/08	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/08	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/08	0.0002	mg/L	No
Dichloromethane	2014/12/08	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/08	0.0005	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/08	0.0002	mg/L	No
Diclofop-methyl	2014/12/08	0.0002	mg/L	No
Dimethoate	2014/12/08	0.0004	mg/L	No
Diquat	2014/12/08	0.007	mg/L	No
Diuron	2014/12/08	0.005	mg/L	No
Glyphosate	2014/12/08	0.02	mg/L	No
Malathion	2014/12/08	0.0004	mg/L	No
Metolachlor	2014/12/08	0.0002	mg/L	No
Metribuzin	2014/12/08	0.0002	mg/L	No
Monochlorobenzene	2014/12/08	0.0002	mg/L	No
Paraquat	2014/12/08	0.001	mg/L	No
Pentachlorophenol	2014/12/08	0.0005	mg/L	No
Phorate	2014/12/08	0.0004	mg/L	No
Picloram	2014/12/08	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/08	0.00005	mg/L	No
Prometryne	2014/12/08	0.0002	mg/L	No
Simazine	2014/12/08	0.0004	mg/L	No
Terbufos	2014/12/08	0.0002	mg/L	No
Tetrachloroethylene	2014/12/08	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/08	0.0005	mg/L	No
Triallate	2014/12/08	0.0002	mg/L	No
Trichloroethylene	2014/12/08	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/08	0.0005	mg/L	No
Trifluralin	2014/12/08	0.0002	mg/L	No
Vinyl Chloride	2014/12/08	0.0002	mg/L	No
MCPA				

GARSON #1 & #3 WELL TREATED

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/09	0.0005	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/09	0.0009	mg/L	No
Azinphos-methyl	2014/12/09	0.0004	mg/L	No
Benzene	2014/12/09	0.0002	mg/L	No

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

Benzo(a)pyrene	2014/12/09	0.000009	mg/L	No
Bromoxynil	2014/12/09	0.0005	mg/L	No
Carbaryl	2014/12/09	0.001	mg/L	No
Carbofuran	2014/12/09	0.001	mg/L	No
Carbon Tetrachloride	2014/12/09	0.0002	mg/L	No
Chlorpyrifos	2014/12/09	0.0004	mg/L	No
Diazinon	2014/12/09	0.0004	mg/L	No
Dicamba	2014/12/09	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/09	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/09	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/09	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/09	0.0002	mg/L	No
Dichloromethane	2014/12/09	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/09	0.0005	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/09	0.0002	mg/L	No
Diclofop-methyl	2014/12/09	0.0002	mg/L	No
Dimethoate	2014/12/09	0.0004	mg/L	No
Diquat	2014/12/09	0.007	mg/L	No
Diuron	2014/12/09	0.005	mg/L	No
Glyphosate	2014/12/09	0.02	mg/L	No
Malathion	2014/12/09	0.0004	mg/L	No
Metolachlor	2014/12/09	0.0002	mg/L	No
Metribuzin	2014/12/09	0.0002	mg/L	No
Monochlorobenzene	2014/12/09	0.0002	mg/L	No
Paraquat	2014/12/09	0.001	mg/L	No
Pentachlorophenol	2014/12/09	0.0005	mg/L	No
Phorate	2014/12/09	0.0004	mg/L	No
Picloram	2014/12/09	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/09	0.00004	mg/L	No
Prometryne	2014/12/09	0.0002	mg/L	No
Simazine	2014/12/09	0.0004	mg/L	No
Terbufos	2014/12/09	0.0002	mg/L	No
Tetrachloroethylene	2016/09/06	0.0027	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/09	0.0005	mg/L	No
Triallate	2014/12/09	0.0002	mg/L	No
Trichloroethylene	2014/12/09	0.00086	mg/L	No
2,4,6-Trichlorophenol	2014/12/09	0.0005	mg/L	No
Trifluralin	2014/12/09	0.0002	mg/L	No
Vinyl Chloride	2014/12/09	0.0002	mg/L	No
MCPA				

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	UOM	Date of Sample	Location

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	220003537
Drinking-Water System	Sudbury Drinking Water System - David St.
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2016-01-01 To 2016-12-31

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 ☐

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

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

www.greatersudbury.ca
TDS-Engineering Department

Complete for all other Categories.

Number of Designated Facilities served:

0

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes ☐ No ☒

Number of Interested Authorities you report to:

0

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes ☐ No ☒

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
Sudbury Drinking Water System - Wanapitei	210001111

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 ☒

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

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/Citizen Service Centre
- ☐ Public access/notice via other method _____

Describe your Drinking-Water System

The David St. Water Treatment Plant is a surface water plant which draws water from Ramsey Lake. Proportionally, the plant services approximately 40% of Sudbury, however, most of the water produced at the David St. WTP is normally delivered to the south, west and downtown areas of Sudbury as well as supplying water to the Ellis reservoir. Treatment incorporated is in the form of membrane ultrafiltration, disinfection by chlorination, Ultra-Violet irradiation, fluoridation, pH adjustment and corrosion control with a polyphosphate. The distribution system includes an online continuous chlorine analyzer & related appurtenances. The plant is in full treatment compliance with O. Reg. 170/03 and is monitored 24/7 from the Wanapitei WTP.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite UN#1791, Hydrofluosilicic Acid UN#1778, Polyphosphate, Sodium Hydroxide UN#1824, Sodium Bisulfate UN#2693, Citric Acid UN#3625, Sodium Permanganate UN#3214

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

Capital distribution replacement, repair or relining:
 St. Nicholas, Wembly to Edmund \$355,763
 Dundas Street, Maclachlan, Bancroft to Hargreaves Avenue and Spruce to dead end \$305,236
 Gutcher Avenue/Lorne Street \$249,397

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

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

AWQI #	Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action
128429	2016/02/27	UV	0	mj/cm ²	Resample/Re-test;	2016/02/26
128485	2016/03/05	Fluoride	1.65	mg/L	Resample/Re-test;	2016/03/07
128916	2016/03/31	Fluoride	1.80	mg/L	Resample/Re-test;	2016/03/31
132122	2016/12/25	Fluoride	1.84	mg/L	Flushing mains/pipes;	2016/12/25
132146	2016/12/31	Chlorine Residual	>4.0	mg/L	Resample/Re-test;	2016/12/31

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: RAMSEY LAKE					
	52	0 to 30	0 to 1500		
Treated: SUDBURY (DAVID ST) Water Treatment Plant					
	52	0 to 0	0 to 0	52	1 to 20
Distribution					
	1,375	0 to 0	0 to 0	343	1 to 140

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 #)
Chlorine Residual Distribution System	8,760	0.65 - 2.32

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

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

SUDBURY (DAVID ST) Water Treatment Plant

Turbidity	8,760	0.01 - 5.01	NTU
Chlorine	8,760	0.24 - 4.92	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.03 - 1.84	mg/L

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 or order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

SUDBURY (DAVID ST) Water Treatment Plant

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2016/12/05	0.001	mg/L	No
Arsenic	2016/12/05	0.001	mg/L	No
Barium	2016/12/05	0.0128	mg/L	No
Boron	2016/12/05	0.012	mg/L	No
Cadmium	2016/12/05	0.0001	mg/L	No
Chromium	2016/12/05	0.001	mg/L	No
Mercury	2016/12/05	0.0001	mg/L	No
Selenium	2016/12/05	0.001	mg/L	No
Uranium	2016/12/05	0.001	mg/L	No
Nitrite	2016/03/07	0.05	mg/L	No
	2016/06/07	0.05	mg/L	No
	2016/09/06	0.05	mg/L	No
	2016/12/05	0.05	mg/L	No
Nitrate	2016/03/07	0.1	mg/L	No
	2016/06/07	0.1	mg/L	No
	2016/09/06	0.1	mg/L	No
	2016/12/05	0.1	mg/L	No
Sodium	2015/11/02	52.80	mg/L	Yes
	2015/11/06	52.30	mg/L	Yes

Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results (min#) - (max#)	Number of Exceedances
Plumbing	45	0.0001 - 0.0070 mg/L	0
Distribution	8	0.0001 - 0.0004 mg/L	0

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

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: show latest annual average)	2016	0.0772	mg/L	No

SUDBURY (DAVID ST) Water Treatment Plant

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2016/12/05	0.0005	mg/L	No
Atrazine + N-dealkylated metabolites	2016/12/05	0.0009	mg/L	No
Azinphos-methyl	2016/12/05	0.0003	mg/L	No
Benzene	2016/12/05	0.0002	mg/L	No
Benzo(a)pyrene	2016/12/05	0.000005	mg/L	No
Bromoxynil	2016/12/05	0.00009	mg/L	No
Carbaryl	2016/12/05	0.001	mg/L	No
Carbofuran	2016/12/05	0.001	mg/L	No
Carbon Tetrachloride	2016/12/05	0.0002	mg/L	No
Chlorpyrifos	2016/12/05	0.0003	mg/L	No
Diazinon	2016/12/05	0.0003	mg/L	No
Dicamba	2016/12/05	0.00008	mg/L	No
1,2-Dichlorobenzene	2016/12/05	0.0002	mg/L	No
1,4-Dichlorobenzene	2016/12/05	0.0003	mg/L	No
1,2-Dichloroethane	2016/12/05	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2016/12/05	0.0003	mg/L	No
Dichloromethane	2016/12/05	0.001	mg/L	No
2-4 Dichlorophenol	2016/12/05	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2016/12/05	0.00008	mg/L	No
Diclofop-methyl	2016/12/05	0.00008	mg/L	No
Dimethoate	2016/12/05	0.0003	mg/L	No
Diquat	2016/12/05	0.007	mg/L	No
Diuron	2016/12/05	0.006	mg/L	No
Glyphosate	2016/12/05	0.02	mg/L	No
Malathion	2016/12/05	0.0003	mg/L	No
Metolachlor	2016/12/05	0.0002	mg/L	No
Metribuzin	2016/12/05	0.0002	mg/L	No
Monochlorobenzene	2016/12/05	0.0005	mg/L	No
Paraquat	2016/12/05	0.001	mg/L	No
Pentachlorophenol	2016/12/05	0.0003	mg/L	No
Phorate	2016/12/05	0.0002	mg/L	No
Picloram	2016/12/05	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2016/12/05	0.00006	mg/L	No
Prometryne	2016/12/05	0.0001	mg/L	No
Simazine	2016/12/05	0.0003	mg/L	No
Terbufos	2016/12/05	0.0002	mg/L	No
Tetrachloroethylene	2016/12/05	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2016/12/05	0.0003	mg/L	No
Triallate	2016/12/05	0.0002	mg/L	No
Trichloroethylene	2016/12/05	0.0002	mg/L	No
2,4,6-Trichlorophenol	2016/12/05	0.0002	mg/L	No
Trifluralin	2016/12/05	0.0002	mg/L	No
Vinyl Chloride	2016/12/05	0.0002	mg/L	No
MCPA	2016/12/05	0.01	mg/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	UOM	Date of Sample	Location

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)

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

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	210001111
Drinking-Water System	Sudbury Drinking Water System - Wanapitei
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2016-01-01 To 2016-12-31

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 ☐

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

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

www.greatersudbury.ca
TDS-Engineering Department

Complete for all other Categories.

Number of Designated Facilities served:

0

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes ☐ No ☒

Number of Interested Authorities you report to:

0

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes ☐ No ☒

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
Markstay-Warren	220013606
Sudbury Drinking Water System - Garson	220003485
Sudbury Drinking Water System - David St.	220003537

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/Citizen Service Centre**
☐ **Public access/notice via other method** _____

Describe your Drinking-Water System

The Wanapitei Water Treatment Plant is a surface water plant which draws water from the Wanapitei River. Proportionally, the plant services approximately 60% of Sudbury, with the water being produced supplying the northeastern and northwestern areas of the City but includes Markstay, Coniston and parts of Garson (west of Falconbridge Road at O'Neil Drive) as well as supplying water to the Ellis Reservoir. The raw water is pumped from the Wanapitei River via the Wanapitei intake, a concrete intake structure that protrudes into the Wanapitei River. The raw intake pump house is situated north of Hwy. 17, in the community of Wahnapiatae. The raw water passes through a coarse aluminum bar screen then through two finer stainless steel screens inside the station before being pumped to the treatment plant to the west. The Wanapitei WTP utilizes a conventional water treatment process complete with Coagulation / Flocculation, Sedimentation and Filtration by dual media filters. Chlorine and/or Chlorine Dioxide are used for disinfection purposes and Ultra-Violet irradiation was added to the end of the process in 2010. Corrosion control, pH adjustment plus the addition of fluoride complete the process. The distribution system includes an online continuous chlorine analyzer & various other appurtenances. The plant is in full treatment compliance with O. Reg. 170/03.

List all water treatment chemicals used over this reporting period

Chlorine Gas UN#1017, Hydrofluosilicic Acid UN#1778, Polyphosphate, Sodium Chlorite UN#1908, PAS-Aluminum Sulfate UN#3264, Hydrated Lime, Polyelectrolyte, Chlorine Dioxide (generated onsite)

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

Wanapitei WTP & Pump Station Upgrades including communications, filters to waste, valve upgrades, chemical system upgrades, HVAC, high lift pump upgrades \$9 002 000
 Reactivator inspections and repairs \$34 430
 Health and Safety upgrades \$18 600
 Replacement of 2 sodium hypochlorite pumps \$12 000

 Capital distribution replacement, repair or relining:
 Roger Street, Mildred to Bancroft \$655 567
 Second Ave (Con.) \$730 443
 Arvo Avenue \$360 274

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

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

AWQI #	Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action
131710	2016/11/01	Pressure	40	psi	Resample/Re-test;	2016/11/03

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: WANAPITEI RIVER					
	52	0 to 30	0 to 240		
Treated: HL PUMP STATION, Sudbury (Wanapitei) WTP					
	52	0 to 0	0 to 0	52	1 to 20
Distribution					
	1,375	0 to 0	0 to 0	343	1 to 170

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 #)
Chlorine Residual Distribution System	8,760	0.65 - 2.32

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

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

HL PUMP STATION, Sudbury (Wanapitei) WTP

Turbidity	8,760	0.00 - 5.00	NTU
Chlorine	8,760	0.53 - 3.71	mg/L
Fluoride (If the DWS provides fluoridation)	365	0.13 - 0.89	mg/L

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 or order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

HL PUMP STATION, Sudbury (Wanapitei) WTP

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2016/12/06	0.0006	mg/L	No
Arsenic	2016/12/06	0.001	mg/L	No
Barium	2016/12/06	0.0118	mg/L	No
Boron	2016/12/06	0.005	mg/L	No
Cadmium	2016/12/06	0.0001	mg/L	No
Chromium	2016/12/06	0.001	mg/L	No
Mercury	2016/12/06	0.0001	mg/L	No
Selenium	2016/12/06	0.001	mg/L	No
Uranium	2016/12/06	0.001	mg/L	No
Nitrite	2016/03/08	0.05	mg/L	No
	2016/06/07	0.05	mg/L	No
	2016/09/06	0.05	mg/L	No
	2016/12/06	0.05	mg/L	No
Nitrate	2016/03/08	0.25	mg/L	No
	2016/06/07	0.1	mg/L	No
	2016/09/06	0.1	mg/L	No
	2016/12/06	0.1	mg/L	No
Sodium	2015/11/03	2.16	mg/L	No

Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results (min#) - (max#)	Number of Exceedances
Plumbing	47	0.0001 - 0.0022 mg/L	0
Distribution	9	0.0001 - 0.0003 mg/L	0

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

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: show latest annual average)	2016	0.0619	mg/L	No

HL PUMP STATION, Sudbury (Wanapitei) WTP

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2016/12/06	0.0005	mg/L	No
Atrazine + N-dealkylated metabolites	2016/12/06	0.0009	mg/L	No
Azinphos-methyl	2016/12/06	0.0003	mg/L	No
Benzene	2016/12/06	0.0002	mg/L	No
Benzo(a)pyrene	2016/12/06	0.000005	mg/L	No
Bromoxynil	2016/12/06	0.00009	mg/L	No
Carbaryl	2016/12/06	0.001	mg/L	No
Carbofuran	2016/12/06	0.001	mg/L	No
Carbon Tetrachloride	2016/12/06	0.0002	mg/L	No
Chlorpyrifos	2016/12/06	0.0003	mg/L	No
Diazinon	2016/12/06	0.0003	mg/L	No
Dicamba	2016/12/06	0.00008	mg/L	No
1,2-Dichlorobenzene	2016/12/06	0.0002	mg/L	No
1,4-Dichlorobenzene	2016/12/06	0.0003	mg/L	No
1,2-Dichloroethane	2016/12/06	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2016/12/06	0.0003	mg/L	No
Dichloromethane	2016/12/06	0.001	mg/L	No
2-4 Dichlorophenol	2016/12/06	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2016/12/06	0.00008	mg/L	No
Diclofop-methyl	2016/12/06	0.00008	mg/L	No
Dimethoate	2016/12/06	0.0003	mg/L	No
Diquat	2016/12/06	0.007	mg/L	No
Diuron	2016/12/06	0.006	mg/L	No
Glyphosate	2016/12/06	0.02	mg/L	No
Malathion	2016/12/06	0.0003	mg/L	No
Metolachlor	2016/12/06	0.0002	mg/L	No
Metribuzin	2016/12/06	0.0002	mg/L	No
Monochlorobenzene	2016/12/06	0.0005	mg/L	No
Paraquat	2016/12/06	0.001	mg/L	No
Pentachlorophenol	2016/12/06	0.0003	mg/L	No
Phorate	2016/12/06	0.0002	mg/L	No
Picloram	2016/12/06	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2016/12/06	0.00006	mg/L	No
Prometryne	2016/12/06	0.0001	mg/L	No
Simazine	2016/12/06	0.0003	mg/L	No
Terbufos	2016/12/06	0.0002	mg/L	No
Tetrachloroethylene	2016/12/06	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2016/12/06	0.0003	mg/L	No
Triallate	2016/12/06	0.0002	mg/L	No
Trichloroethylene	2016/12/06	0.0002	mg/L	No
2,4,6-Trichlorophenol	2016/12/06	0.0002	mg/L	No
Trifluralin	2016/12/06	0.0002	mg/L	No
Vinyl Chloride	2016/12/06	0.0002	mg/L	No
MCPA	2016/12/06	0.01	mg/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	UOM	Date of Sample	Location

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	210000737
Drinking-Water System	Bleazard Valley - Capreol Well Supply
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2016-01-01 To 2016-12-31

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 ☐

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

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

www.greatersudbury.ca
TDS-Engineering Department

Complete for all other Categories.

Number of Designated Facilities served:

0

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes ☐ No ☒

Number of Interested Authorities you report to:

0

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes ☐ No ☒

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

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 ☐

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

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/Citizen Service Centre
- ☐ Public access/notice via other method

Describe your Drinking-Water System

The system includes nine Blezard Valley wells, which extend in a well field from Val Therese to Hanmer and two Capreol Wells adjacent to Greens Lake. All of the groundwater wells undergo primary treatment in the form of Ultra-Violet irradiation, secondary disinfection by chlorination, and fluoridation. The Capreol wells also include chemical addition for corrosion control. Continuous analyzers for free chlorine residual, fluoride, turbidity and UV equipment are monitored at each well by onsite PLC's. A standby power generator with an automatic transfer switch is located at several of the wells. In the event that the Capreol wells fail, the Valley wells can supply water to the Capreol Boosters located onsite. In the event that the entire system of wells and boosters fail, water will continue to be supplied from the three storage facilities, but at a reduced pressure. Three water storage tanks are situated in Azilda, Chelmsford and Val Caron and all distribution piping completes the system. The Blezard Valley distribution includes an online continuous chlorine analyzer and encompasses the communities of Chelmsford, Azilda, McCrea Heights, Blezard Valley, Val Caron, Val Therese, Hanmer and Capreol. The entire water system is in compliance with O. Reg. 170/03 and is monitored 24/7 from the Wanapitei WTP.

List all water treatment chemicals used over this reporting period

Chlorine Gas UN#1017, Hydrofluosilicic Acid UN#1778, Polyphosphate

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

Kenneth Well rehabilitation, pump motor and liner \$58 000

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

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

AWQI #	Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action
129061	2016/04/07	Pressure	8	psi	Resample/Re-test;	2016/04/06
129095	2016/04/08	UV	0	mj/cm ²	Resample/Re-test;	2016/04/08
129977	2016/06/28	24in Water main break positive pressure maintained	NA	NA	NO drinking water advisory required	2016/07/02
130167	2016/07/10	Fluoride	>1.5	mg/L	Resample/Re-test;	2016/07/10
131123	2016/09/07	Fluoride	>1.5	mg/L	Resample/Re-test;	2016/09/07
131138	2016/09/08	Fluoride	>1.5	mg/L	Resample/Re-test;	2016/09/08
131312	2016/09/27	Chlorine Residual	>5.0	mg/L	Flushing mains/pipes;	2016/09/27

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: WELL A -DESCHENE WELL					
	52	0 to 0	0 to 0		
Raw: WELL B- KENNETH WELL					
	32	0 to 0	0 to 0		
Raw: WELL C -PHILIPPE WELL					
	52	0 to 0	0 to 1		
Raw: WELL D -FROST WELL					
	46	0 to 0	0 to 0		
Raw: WELL E -NOTRE DAME					
	49	0 to 0	0 to 0		
Raw: WELL F -LINDEN WELL					
	52	0 to 0	0 to 0		
Raw: WELL G -PHARAND WELL					
	51	0 to 0	0 to 1		
Raw: WELL H -MICHELLE WELL					
	52	0 to 0	0 to 1		
Raw: WELL I -I WELL					
	0				
Raw: WELL J - GREEN LAKE					
	52	0 to 0	0 to 0		
Raw: WELL M - GREEN LAKE					
	48	0 to 0	0 to 0		
Raw: WELL Q - CHENIER					
	52	0 to 0	0 to 0		
Raw: WELL R					
	52	0 to 0	0 to 0		

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

Treated: CAPREOL WELL SUPPLY - WELL M&J					
	100	0 to 0	0 to 0	100	1 to 40
Treated: WELL A - DESCHENE WELL					
	52	0 to 0	0 to 0	52	1 to 70
Treated: WELL B - KENNETH WELL					
	32	0 to 0	0 to 0	32	1 to 30
Treated: WELL C - PHILIPPE WELL					
	52	0 to 0	0 to 0	52	1 to 80
Treated: WELL D - FROST WELL					
	46	0 to 0	0 to 0	46	1 to 10
Treated: WELL E - NOTRE DAME WELL					
	49	0 to 0	0 to 0	49	1 to 40
Treated: WELL F - LINDEN WELL					
	52	0 to 0	0 to 0	52	2 to 30
Treated: WELL G - PHARAND WELL					
	51	0 to 0	0 to 0	51	1 to 110
Treated: WELL H - MICHELLE WELL					
	52	0 to 0	0 to 0	52	1 to 10
Treated: WELL I - I WELL					
	0			0	
Treated: WELL Q- CHENIER					
	52	0 to 0	0 to 0	52	1 to 10
Treated: WELL R					
	52	0 to 0	0 to 0	52	1 to 390
Distribution					
	573	0 to 0	0 to 0	141	1 to 80

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 #)
Chlorine Residual Distribution System	8,760	0.84 - 3.03

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

CAPREOL WELL SUPPLY - WELL M&J

Turbidity	8,760	0.00 - 2.00	NTU
Chlorine	8,760	0.53 - 3.48	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.00 - 2.00	mg/L

WELL A - DESCHENE WELL

Turbidity	8,760	0.01 - 1.53	NTU
Chlorine	8,760	0.55 - 5.00	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.25 - 0.90	mg/L

WELL B - KENNETH WELL

Turbidity	8,760	0.03 - 2.00	NTU
Chlorine	8,760	0.54 - 5.00	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.02	mg/L

WELL C - PHILIPPE WELL

Turbidity	8,760	0.02 - 0.54	NTU
Chlorine	8,760	0.75 - 5.00	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 2.00	mg/L

WELL D - FROST WELL

Turbidity	8,760	0.02 - 2.00	NTU
Chlorine	8,760	0.50 - 4.59	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.00 - 1.26	mg/L

WELL E - NOTRE DAME WELL

Turbidity	8,760	0.01 - 2.00	NTU
Chlorine	8,760	0.50 - 2.08	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 2.00	mg/L

WELL F - LINDEN WELL

Turbidity	8,760	0.02 - 2.00	NTU
Chlorine	8,760	0.51 - 4.10	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.35	mg/L

WELL G - PHARAND WELL

Turbidity	8,760	0.02 - 1.32	NTU
Chlorine	8,760	0.59 - 2.65	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.12	mg/L

WELL H - MICHELLE WELL

Turbidity	8,760	0.00 - 2.00	NTU
Chlorine	8,760	0.50 - 2.55	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 0.91	mg/L

WELL I - I WELL

Turbidity			
Chlorine			
Fluoride (If the DWS provides fluoridation)			

WELL Q- CHENIER

Turbidity	8,760	0.01 - 0.97	NTU
Chlorine	8,760	0.50 - 3.38	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.01 - 1.00	mg/L

WELL R

Turbidity	8,760	0.02 - 1.42	NTU
Chlorine	8,760	0.54 - 2.94	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.05 - 1.07	mg/L

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 or order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

WELL A - DESCHENE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/08	0.0005	mg/L	No
Arsenic	2014/12/08	0.001	mg/L	No
Barium	2014/12/08	0.0144	mg/L	No
Boron	2014/12/08	0.0128	mg/L	No
Cadmium	2014/12/08	0.0001	mg/L	No
Chromium	2014/12/08	0.0016	mg/L	No
Mercury	2014/12/08	0.0001	mg/L	No
Selenium	2014/12/08	0.001	mg/L	No
Uranium	2014/12/08	0.001	mg/L	No
Nitrite	2016/03/08	0.05	mg/L	No
	2016/06/06	0.05	mg/L	No
	2016/09/07	0.05	mg/L	No
	2016/12/12	0.05	mg/L	No

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Nitrate	2016/03/08	2.22	mg/L	No
	2016/06/06	2.09	mg/L	No
	2016/09/07	2.44	mg/L	No
	2016/12/12	2.44	mg/L	No
Sodium	2015/11/03	16.00	mg/L	No

WELL B - KENNETH WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/09	0.0005	mg/L	No
Arsenic	2014/12/09	0.001	mg/L	No
Barium	2014/12/09	0.0487	mg/L	No
Boron	2014/12/09	0.0108	mg/L	No
Cadmium	2014/12/09	0.0001	mg/L	No
Chromium	2014/12/09	0.003	mg/L	No
Mercury	2014/12/09	0.0001	mg/L	No
Selenium	2014/12/09	0.001	mg/L	No
Uranium	2014/12/09	0.001	mg/L	No
Nitrite	2016/03/08	0.05	mg/L	No
	2016/06/06	0.05	mg/L	No
	2016/12/13	0.05	mg/L	No
Nitrate	2016/03/08	0.24	mg/L	No
	2016/06/06	0.33	mg/L	No
	2016/12/13	0.3	mg/L	No
Sodium				

WELL C - PHILIPPE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/08	0.0005	mg/L	No
Arsenic	2014/12/08	0.0012	mg/L	No
Barium	2014/12/08	0.0089	mg/L	No
Boron	2014/12/08	0.0047	mg/L	No
Cadmium	2014/12/08	0.0001	mg/L	No
Chromium	2014/12/08	0.0018	mg/L	No
Mercury	2014/12/08	0.0001	mg/L	No
Selenium	2014/12/08	0.001	mg/L	No
Uranium	2014/12/08	0.001	mg/L	No
Nitrite	2016/03/08	0.05	mg/L	No
	2016/06/06	0.05	mg/L	No
	2016/09/07	0.05	mg/L	No
	2016/12/13	0.05	mg/L	No
Nitrate	2016/03/08	0.1	mg/L	No
	2016/06/06	0.3	mg/L	No
	2016/09/07	0.1	mg/L	No
	2016/12/13	0.1	mg/L	No
Sodium	2015/11/02	15.70	mg/L	No

WELL D - FROST WELL

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/08	0.0005	mg/L	No
Arsenic	2014/12/08	0.0013	mg/L	No
Barium	2014/12/08	0.038	mg/L	No
Boron	2014/12/08	0.0087	mg/L	No
Cadmium	2014/12/08	0.0001	mg/L	No
Chromium	2014/12/08	0.0016	mg/L	No
Mercury	2014/12/08	0.0001	mg/L	No
Selenium	2014/12/08	0.001	mg/L	No
Uranium	2014/12/08	0.001	mg/L	No
Nitrite	2016/03/08	0.05	mg/L	No
	2016/06/06	0.05	mg/L	No
	2016/09/07	0.05	mg/L	No
	2016/12/13	0.05	mg/L	No
Nitrate	2016/03/08	0.63	mg/L	No
	2016/06/06	0.66	mg/L	No
	2016/09/07	0.71	mg/L	No
	2016/12/13	0.66	mg/L	No
Sodium	2015/11/03	19.00	mg/L	No

WELL E - NOTRE DAME WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/09	0.0005	mg/L	No
Arsenic	2014/12/09	0.001	mg/L	No
Barium	2014/12/09	0.016	mg/L	No
Boron	2014/12/09	0.0029	mg/L	No
Cadmium	2014/12/09	0.0001	mg/L	No
Chromium	2014/12/09	0.0013	mg/L	No
Mercury	2014/12/09	0.0001	mg/L	No
Selenium	2014/12/09	0.001	mg/L	No
Uranium	2014/12/09	0.001	mg/L	No
Nitrite	2016/03/08	0.05	mg/L	No
	2016/06/06	0.05	mg/L	No
	2016/09/07	0.05	mg/L	No
Nitrate	2016/03/08	1.18	mg/L	No
	2016/06/06	1.09	mg/L	No
	2016/09/07	0.72	mg/L	No
Sodium	2015/11/02	11.60	mg/L	No

WELL F - LINDEN WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
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Drinking-Water Systems Regulation O. Reg. 170/03

Antimony	2014/12/09	0.0005	mg/L	No
Arsenic	2014/12/09	0.0015	mg/L	No
Barium	2014/12/09	0.0243	mg/L	No
Boron	2014/12/09	0.002	mg/L	No
Cadmium	2014/12/09	0.0001	mg/L	No
Chromium	2014/12/09	0.001	mg/L	No
Mercury	2014/12/09	0.0001	mg/L	No
Selenium	2014/12/09	0.001	mg/L	No
Uranium	2014/12/09	0.001	mg/L	No
Nitrite	2016/03/09	0.05	mg/L	No
	2016/06/06	0.05	mg/L	No
	2016/09/08	0.05	mg/L	No
	2016/12/13	0.05	mg/L	No
Nitrate	2016/03/09	0.1	mg/L	No
	2016/06/06	0.3	mg/L	No
	2016/09/08	0.3	mg/L	No
	2016/12/13	0.2	mg/L	No
Sodium	2015/11/02	13.50	mg/L	No

WELL G - PHARAND WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/10	0.0005	mg/L	No
Arsenic	2014/12/10	0.001	mg/L	No
Barium	2014/12/10	0.0324	mg/L	No
Boron	2014/12/10	0.0186	mg/L	No
Cadmium	2014/12/10	0.0001	mg/L	No
Chromium	2014/12/10	0.0023	mg/L	No
Mercury	2014/12/10	0.0001	mg/L	No
Selenium	2014/12/10	0.001	mg/L	No
Uranium	2014/12/10	0.001	mg/L	No
Nitrite	2016/03/14	0.05	mg/L	No
	2016/06/06	0.05	mg/L	No
	2016/09/08	0.05	mg/L	No
	2016/12/13	0.05	mg/L	No
Nitrate	2016/03/14	3.13	mg/L	No
	2016/06/06	3	mg/L	No
	2016/09/08	3.38	mg/L	No
	2016/12/13	3.2	mg/L	No
Sodium	2015/11/02	72.60	mg/L	Yes
	2015/11/12	70.10	mg/L	Yes

WELL H - MICHELLE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
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Antimony	2014/12/08	0.0005	mg/L	No
Arsenic	2014/12/08	0.001	mg/L	No
Barium	2014/12/08	0.0123	mg/L	No
Boron	2014/12/08	0.0081	mg/L	No
Cadmium	2014/12/08	0.0001	mg/L	No
Chromium	2014/12/08	0.0013	mg/L	No
Mercury	2014/12/08	0.0001	mg/L	No
Selenium	2014/12/08	0.001	mg/L	No
Uranium	2014/12/08	0.001	mg/L	No
Nitrite	2016/03/08	0.05	mg/L	No
	2016/06/07	0.05	mg/L	No
	2016/09/07	0.05	mg/L	No
	2016/12/13	0.05	mg/L	No
Nitrate	2016/03/08	1.32	mg/L	No
	2016/06/07	1.16	mg/L	No
	2016/09/07	1.23	mg/L	No
	2016/12/13	1.15	mg/L	No
Sodium	2015/06/02	30.90	mg/L	Yes
	2015/06/02	34.40	mg/L	Yes
	2015/11/02	28.90	mg/L	Yes
	2015/11/12	26.20	mg/L	Yes

WELL I - I WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony				
Arsenic				
Barium				
Boron				
Cadmium				
Chromium				
Mercury				
Selenium				
Uranium				
Nitrite				
Nitrate				
Sodium				

WELL J - Capreol

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
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Antimony	2016/12/08	0.0005	mg/L	No
Arsenic	2016/12/08	0.001	mg/L	No
Barium	2016/12/08	0.0137	mg/L	No
Boron	2016/12/08	0.006	mg/L	No
Cadmium	2016/12/08	0.0001	mg/L	No
Chromium	2016/12/08	0.001	mg/L	No
Mercury	2016/12/08	0.0001	mg/L	No
Selenium	2016/12/08	0.001	mg/L	No
Uranium	2016/12/08	0.001	mg/L	No
Nitrite	2016/03/09	0.05	mg/L	No
	2016/06/08	0.05	mg/L	No
	2016/09/08	0.05	mg/L	No
	2016/12/08	0.05	mg/L	No
Nitrate	2016/03/09	0.1	mg/L	No
	2016/06/08	0.1	mg/L	No
	2016/09/08	0.1	mg/L	No
	2016/12/08	0.1	mg/L	No
Sodium	2015/11/04	10.60	mg/L	No

WELL M - Capreol

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2015/12/09	0.0005	mg/L	No
Arsenic	2015/12/09	0.001	mg/L	No
Barium	2015/12/09	0.0354	mg/L	No
Boron	2015/12/09	0.0067	mg/L	No
Cadmium	2015/12/09	0.0001	mg/L	No
Chromium	2015/12/09	0.001	mg/L	No
Mercury	2015/12/09	0.0001	mg/L	No
Selenium	2015/12/09	0.001	mg/L	No
Uranium	2015/12/09	0.001	mg/L	No
Nitrite	2016/03/09	0.05	mg/L	No
	2016/06/08	0.05	mg/L	No
	2016/09/08	0.05	mg/L	No
Nitrate	2016/03/09	0.1	mg/L	No
	2016/06/08	0.1	mg/L	No
	2016/09/08	0.1	mg/L	No
Sodium	2015/11/04	10.90	mg/L	No

WELL Q- CHENIER

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/10	0.0005	mg/L	No
Arsenic	2014/12/10	0.001	mg/L	No
Barium	2014/12/10	0.0174	mg/L	No
Boron	2014/12/10	0.0127	mg/L	No
Cadmium	2014/12/10	0.0001	mg/L	No
Chromium	2014/12/10	0.0014	mg/L	No
Mercury	2014/12/10	0.0001	mg/L	No
Selenium	2014/12/10	0.001	mg/L	No

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Uranium	2014/12/10	0.001	mg/L	No
Nitrite	2016/03/09	0.05	mg/L	No
	2016/06/07	0.05	mg/L	No
	2016/09/08	0.05	mg/L	No
	2016/12/08	0.05	mg/L	No
Nitrate	2016/03/09	0.93	mg/L	No
	2016/06/07	1.09	mg/L	No
	2016/09/08	1.06	mg/L	No
	2016/12/08	1.16	mg/L	No
Sodium	2015/11/03	8.15	mg/L	No

WELL R

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2014/12/10	0.0005	mg/L	No
Arsenic	2014/12/10	0.001	mg/L	No
Barium	2014/12/10	0.0234	mg/L	No
Boron	2014/12/10	0.0106	mg/L	No
Cadmium	2014/12/10	0.0001	mg/L	No
Chromium	2014/12/10	0.0016	mg/L	No
Mercury	2014/12/10	0.0001	mg/L	No
Selenium	2014/12/10	0.001	mg/L	No
Uranium	2014/12/10	0.001	mg/L	No
Nitrite	2016/03/09	0.05	mg/L	No
	2016/06/07	0.05	mg/L	No
	2016/09/08	0.05	mg/L	No
	2016/12/08	0.05	mg/L	No
Nitrate	2016/03/09	0.1	mg/L	No
	2016/06/07	0.38	mg/L	No
	2016/09/08	0.31	mg/L	No
	2016/12/08	0.32	mg/L	No
Sodium	2015/11/03	26.60	mg/L	Yes
	2015/11/13	27.20	mg/L	Yes

Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results (min#) - (max#)	Number of Exceedances
Plumbing		mg/L	
Distribution	8	0.0001 - 0.00098 mg/L	0

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

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Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: show latest annual average)	2016	0.0138	mg/L	No

WELL A - DESCHENE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/08	0.0005	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/08	0.0009	mg/L	No
Azinphos-methyl	2014/12/08	0.0003	mg/L	No
Benzene	2014/12/08	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/08	0.000009	mg/L	No
Bromoxynil	2014/12/08	0.0005	mg/L	No
Carbaryl	2014/12/08	0.001	mg/L	No
Carbofuran	2014/12/08	0.001	mg/L	No
Carbon Tetrachloride	2014/12/08	0.0002	mg/L	No
Chlorpyrifos	2014/12/08	0.0003	mg/L	No
Diazinon	2014/12/08	0.0003	mg/L	No
Dicamba	2014/12/08	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/08	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/08	0.0002	mg/L	No
Dichloromethane	2014/12/08	0.001	mg/L	No
2,4 Dichlorophenol	2014/12/08	0.0006	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/08	0.0002	mg/L	No
Diclofop-methyl	2014/12/08	0.0002	mg/L	No
Dimethoate	2014/12/08	0.0003	mg/L	No
Diquat	2014/12/08	0.007	mg/L	No
Diuron	2014/12/08	0.005	mg/L	No
Glyphosate	2014/12/08	0.02	mg/L	No
Malathion	2014/12/08	0.0003	mg/L	No
Metolachlor	2014/12/08	0.0002	mg/L	No
Metribuzin	2014/12/08	0.0002	mg/L	No
Monochlorobenzene	2014/12/08	0.0002	mg/L	No
Paraquat	2014/12/08	0.001	mg/L	No
Pentachlorophenol	2014/12/08	0.0006	mg/L	No
Phorate	2014/12/08	0.0003	mg/L	No
Picloram	2014/12/08	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/08	0.00005	mg/L	No
Prometryne	2014/12/08	0.0002	mg/L	No
Simazine	2014/12/08	0.0003	mg/L	No
Terbufos	2014/12/08	0.0002	mg/L	No
Tetrachloroethylene	2014/12/08	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/08	0.0006	mg/L	No
Triallate	2014/12/08	0.0002	mg/L	No
Trichloroethylene	2014/12/08	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/08	0.0005	mg/L	No
Trifluralin	2014/12/08	0.0002	mg/L	No
Vinyl Chloride	2014/12/08	0.0002	mg/L	No
MCPA				

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WELL B - KENNETH WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/09	0.0004	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/09	0.0009	mg/L	No
Azinphos-methyl	2014/12/09	0.0003	mg/L	No
Benzene	2014/12/09	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/09	0.000009	mg/L	No
Bromoxynil	2014/12/09	0.0005	mg/L	No
Carbaryl	2014/12/09	0.001	mg/L	No
Carbofuran	2014/12/09	0.001	mg/L	No
Carbon Tetrachloride	2014/12/09	0.0002	mg/L	No
Chlorpyrifos	2014/12/09	0.0003	mg/L	No
Diazinon	2014/12/09	0.0003	mg/L	No
Dicamba	2014/12/09	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/09	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/09	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/09	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/09	0.0002	mg/L	No
Dichloromethane	2014/12/09	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/09	0.0005	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/09	0.0002	mg/L	No
Diclofop-methyl	2014/12/09	0.0002	mg/L	No
Dimethoate	2014/12/09	0.0003	mg/L	No
Diquat	2014/12/09	0.007	mg/L	No
Diuron	2014/12/09	0.005	mg/L	No
Glyphosate	2014/12/09	0.02	mg/L	No
Malathion	2014/12/09	0.0003	mg/L	No
Metolachlor	2014/12/09	0.0002	mg/L	No
Metribuzin	2014/12/09	0.0002	mg/L	No
Monochlorobenzene	2014/12/09	0.0002	mg/L	No
Paraquat	2014/12/09	0.001	mg/L	No
Pentachlorophenol	2014/12/09	0.0005	mg/L	No
Phorate	2014/12/09	0.0003	mg/L	No
Picloram	2014/12/09	0.00005	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/09	0.00004	mg/L	No
Prometryne	2014/12/09	0.0002	mg/L	No
Simazine	2014/12/09	0.0003	mg/L	No
Terbufos	2014/12/09	0.0002	mg/L	No
Tetrachloroethylene	2014/12/09	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/09	0.0005	mg/L	No
Triallate	2014/12/09	0.0002	mg/L	No
Trichloroethylene	2014/12/09	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/09	0.0005	mg/L	No
Trifluralin	2014/12/09	0.0002	mg/L	No
Vinyl Chloride	2014/12/09	0.0002	mg/L	No
MCPA				

WELL C - PHILIPPE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/08	0.0005	mg/L	No

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Atrazine + N-dealkylated metabolites	2014/12/08	0.0009	mg/L	No
Azinphos-methyl	2014/12/08	0.0003	mg/L	No
Benzene	2014/12/08	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/08	0.000009	mg/L	No
Bromoxynil	2014/12/08	0.0005	mg/L	No
Carbaryl	2014/12/08	0.001	mg/L	No
Carbofuran	2014/12/08	0.001	mg/L	No
Carbon Tetrachloride	2014/12/08	0.0002	mg/L	No
Chlorpyrifos	2014/12/08	0.0003	mg/L	No
Diazinon	2014/12/08	0.0003	mg/L	No
Dicamba	2014/12/08	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/08	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/08	0.0002	mg/L	No
Dichloromethane	2014/12/08	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/08	0.0006	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/08	0.0002	mg/L	No
Diclofop-methyl	2014/12/08	0.0002	mg/L	No
Dimethoate	2014/12/08	0.0003	mg/L	No
Diquat	2014/12/08	0.007	mg/L	No
Diuron	2014/12/08	0.005	mg/L	No
Glyphosate	2014/12/08	0.02	mg/L	No
Malathion	2014/12/08	0.0003	mg/L	No
Metolachlor	2014/12/08	0.0002	mg/L	No
Metribuzin	2014/12/08	0.0002	mg/L	No
Monochlorobenzene	2014/12/08	0.0002	mg/L	No
Paraquat	2014/12/08	0.001	mg/L	No
Pentachlorophenol	2014/12/08	0.0006	mg/L	No
Phorate	2014/12/08	0.0003	mg/L	No
Picloram	2014/12/08	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/08	0.00005	mg/L	No
Prometryne	2014/12/08	0.0002	mg/L	No
Simazine	2014/12/08	0.0003	mg/L	No
Terbufos	2014/12/08	0.0002	mg/L	No
Tetrachloroethylene	2014/12/08	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/08	0.0006	mg/L	No
Triallate	2014/12/08	0.0002	mg/L	No
Trichloroethylene	2014/12/08	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/08	0.0005	mg/L	No
Trifluralin	2014/12/08	0.0002	mg/L	No
Vinyl Chloride	2014/12/08	0.0002	mg/L	No
MCPA				

WELL D - FROST WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/08	0.0005	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/08	0.0009	mg/L	No
Azinphos-methyl	2014/12/08	0.0003	mg/L	No
Benzene	2014/12/08	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/08	0.000009	mg/L	No

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Bromoxynil	2014/12/08	0.0005	mg/L	No
Carbaryl	2014/12/08	0.001	mg/L	No
Carbofuran	2014/12/08	0.001	mg/L	No
Carbon Tetrachloride	2014/12/08	0.0002	mg/L	No
Chlorpyrifos	2014/12/08	0.0003	mg/L	No
Diazinon	2014/12/08	0.0003	mg/L	No
Dicamba	2014/12/08	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/08	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/08	0.0002	mg/L	No
Dichloromethane	2014/12/08	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/08	0.0006	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/08	0.0002	mg/L	No
Diclofop-methyl	2014/12/08	0.0002	mg/L	No
Dimethoate	2014/12/08	0.0003	mg/L	No
Diquat	2014/12/08	0.007	mg/L	No
Diuron	2014/12/08	0.005	mg/L	No
Glyphosate	2014/12/08	0.02	mg/L	No
Malathion	2014/12/08	0.0003	mg/L	No
Metolachlor	2014/12/08	0.0002	mg/L	No
Metribuzin	2014/12/08	0.0002	mg/L	No
Monochlorobenzene	2014/12/08	0.0002	mg/L	No
Paraquat	2014/12/08	0.001	mg/L	No
Pentachlorophenol	2014/12/08	0.0006	mg/L	No
Phorate	2014/12/08	0.0003	mg/L	No
Picloram	2014/12/08	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/08	0.00007	mg/L	No
Prometryne	2014/12/08	0.0002	mg/L	No
Simazine	2014/12/08	0.0003	mg/L	No
Terbufos	2014/12/08	0.0002	mg/L	No
Tetrachloroethylene	2014/12/08	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/08	0.0006	mg/L	No
Triallate	2014/12/08	0.0002	mg/L	No
Trichloroethylene	2014/12/08	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/08	0.0005	mg/L	No
Trifluralin	2014/12/08	0.0002	mg/L	No
Vinyl Chloride	2014/12/08	0.0002	mg/L	No
MCPA				

WELL E - NOTRE DAME WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/09	0.0004	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/09	0.0009	mg/L	No
Azinphos-methyl	2014/12/09	0.0003	mg/L	No
Benzene	2014/12/09	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/09	0.000009	mg/L	No
Bromoxynil	2014/12/09	0.0005	mg/L	No
Carbaryl	2014/12/09	0.001	mg/L	No
Carbofuran	2014/12/09	0.001	mg/L	No
Carbon Tetrachloride	2014/12/09	0.0002	mg/L	No

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Chlorpyrifos	2014/12/09	0.0003	mg/L	No
Diazinon	2014/12/09	0.0003	mg/L	No
Dicamba	2014/12/09	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/09	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/09	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/09	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/09	0.0002	mg/L	No
Dichloromethane	2014/12/09	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/09	0.0006	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/09	0.0002	mg/L	No
Diclofop-methyl	2014/12/09	0.0002	mg/L	No
Dimethoate	2014/12/09	0.0003	mg/L	No
Diquat	2014/12/09	0.007	mg/L	No
Diuron	2014/12/09	0.005	mg/L	No
Glyphosate	2014/12/09	0.02	mg/L	No
Malathion	2014/12/09	0.0003	mg/L	No
Metolachlor	2014/12/09	0.0002	mg/L	No
Metribuzin	2014/12/09	0.0002	mg/L	No
Monochlorobenzene	2014/12/09	0.0002	mg/L	No
Paraquat	2014/12/09	0.001	mg/L	No
Pentachlorophenol	2014/12/09	0.0006	mg/L	No
Phorate	2014/12/09	0.0003	mg/L	No
Picloram	2014/12/09	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/09	0.00004	mg/L	No
Prometryne	2014/12/09	0.0002	mg/L	No
Simazine	2014/12/09	0.0003	mg/L	No
Terbufos	2014/12/09	0.0002	mg/L	No
Tetrachloroethylene	2014/12/09	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/09	0.0006	mg/L	No
Triallate	2014/12/09	0.0002	mg/L	No
Trichloroethylene	2014/12/09	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/09	0.0005	mg/L	No
Trifluralin	2014/12/09	0.0002	mg/L	No
Vinyl Chloride	2014/12/09	0.0002	mg/L	No
MCPA				

WELL F - LINDEN WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/09	0.0004	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/09	0.0009	mg/L	No
Azinphos-methyl	2014/12/09	0.0003	mg/L	No
Benzene	2014/12/09	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/09	0.000009	mg/L	No
Bromoxynil	2014/12/09	0.0005	mg/L	No
Carbaryl	2014/12/09	0.001	mg/L	No
Carbofuran	2014/12/09	0.001	mg/L	No
Carbon Tetrachloride	2014/12/09	0.0002	mg/L	No
Chlorpyrifos	2014/12/09	0.0003	mg/L	No
Diazinon	2014/12/09	0.0003	mg/L	No
Dicamba	2014/12/09	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/09	0.0002	mg/L	No

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1,4-Dichlorobenzene	2014/12/09	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/09	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/09	0.0002	mg/L	No
Dichloromethane	2014/12/09	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/09	0.0005	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/09	0.0002	mg/L	No
Diclofop-methyl	2014/12/09	0.0002	mg/L	No
Dimethoate	2014/12/09	0.0003	mg/L	No
Diquat	2014/12/09	0.007	mg/L	No
Diuron	2014/12/09	0.005	mg/L	No
Glyphosate	2014/12/09	0.02	mg/L	No
Malathion	2014/12/09	0.0003	mg/L	No
Metolachlor	2014/12/09	0.0002	mg/L	No
Metribuzin	2014/12/09	0.0002	mg/L	No
Monochlorobenzene	2014/12/09	0.0002	mg/L	No
Paraquat	2014/12/09	0.001	mg/L	No
Pentachlorophenol	2014/12/09	0.0005	mg/L	No
Phorate	2014/12/09	0.0003	mg/L	No
Picloram	2014/12/09	0.00005	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/09	0.00004	mg/L	No
Prometryne	2014/12/09	0.0002	mg/L	No
Simazine	2014/12/09	0.0003	mg/L	No
Terbufos	2014/12/09	0.0002	mg/L	No
Tetrachloroethylene	2014/12/09	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/09	0.0005	mg/L	No
Triallate	2014/12/09	0.0002	mg/L	No
Trichloroethylene	2014/12/09	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/09	0.0005	mg/L	No
Trifluralin	2014/12/09	0.0002	mg/L	No
Vinyl Chloride	2014/12/09	0.0002	mg/L	No
MCPA				

WELL G - PHARAND WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/10	0.0004	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/10	0.0009	mg/L	No
Azinphos-methyl	2014/12/10	0.0003	mg/L	No
Benzene	2014/12/10	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/10	0.000009	mg/L	No
Bromoxynil	2014/12/10	0.0005	mg/L	No
Carbaryl	2014/12/10	0.001	mg/L	No
Carbofuran	2014/12/10	0.001	mg/L	No
Carbon Tetrachloride	2014/12/10	0.0002	mg/L	No
Chlorpyrifos	2014/12/10	0.0003	mg/L	No
Diazinon	2014/12/10	0.0003	mg/L	No
Dicamba	2014/12/10	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/10	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/10	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/10	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/10	0.0002	mg/L	No

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Dichloromethane	2014/12/10	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/10	0.0005	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/10	0.0002	mg/L	No
Diclofop-methyl	2014/12/10	0.0002	mg/L	No
Dimethoate	2014/12/10	0.0003	mg/L	No
Diquat	2014/12/10	0.007	mg/L	No
Diuron	2014/12/10	0.005	mg/L	No
Glyphosate	2014/12/10	0.02	mg/L	No
Malathion	2014/12/10	0.0003	mg/L	No
Metolachlor	2014/12/10	0.0002	mg/L	No
Metribuzin	2014/12/10	0.0002	mg/L	No
Monochlorobenzene	2014/12/10	0.0002	mg/L	No
Paraquat	2014/12/10	0.001	mg/L	No
Pentachlorophenol	2014/12/10	0.0005	mg/L	No
Phorate	2014/12/10	0.0003	mg/L	No
Picloram	2014/12/10	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/10	0.00006	mg/L	No
Prometryne	2014/12/10	0.0002	mg/L	No
Simazine	2014/12/10	0.0003	mg/L	No
Terbufos	2014/12/10	0.0002	mg/L	No
Tetrachloroethylene	2014/12/10	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/10	0.0005	mg/L	No
Triallate	2014/12/10	0.0002	mg/L	No
Trichloroethylene	2014/12/10	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/10	0.0005	mg/L	No
Trifluralin	2014/12/10	0.0002	mg/L	No
Vinyl Chloride	2014/12/10	0.0002	mg/L	No
MCPA				

WELL H - MICHELLE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/08	0.0005	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/08	0.0009	mg/L	No
Azinphos-methyl	2014/12/08	0.0003	mg/L	No
Benzene	2014/12/08	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/08	0.000009	mg/L	No
Bromoxynil	2014/12/08	0.0005	mg/L	No
Carbaryl	2014/12/08	0.001	mg/L	No
Carbofuran	2014/12/08	0.001	mg/L	No
Carbon Tetrachloride	2014/12/08	0.0002	mg/L	No
Chlorpyrifos	2014/12/08	0.0003	mg/L	No
Diazinon	2014/12/08	0.0003	mg/L	No
Dicamba	2014/12/08	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/08	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/08	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/08	0.0002	mg/L	No
Dichloromethane	2014/12/08	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/08	0.0006	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/08	0.0002	mg/L	No

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Diclofop-methyl	2014/12/08	0.0002	mg/L	No
Dimethoate	2014/12/08	0.0003	mg/L	No
Diquat	2014/12/08	0.007	mg/L	No
Diuron	2014/12/08	0.005	mg/L	No
Glyphosate	2014/12/08	0.02	mg/L	No
Malathion	2014/12/08	0.0003	mg/L	No
Metolachlor	2014/12/08	0.0002	mg/L	No
Metribuzin	2014/12/08	0.0002	mg/L	No
Monochlorobenzene	2014/12/08	0.0002	mg/L	No
Paraquat	2014/12/08	0.001	mg/L	No
Pentachlorophenol	2014/12/08	0.0006	mg/L	No
Phorate	2014/12/08	0.0003	mg/L	No
Picloram	2014/12/08	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/08	0.00004	mg/L	No
Prometryne	2014/12/08	0.0002	mg/L	No
Simazine	2014/12/08	0.0003	mg/L	No
Terbufos	2014/12/08	0.0002	mg/L	No
Tetrachloroethylene	2014/12/08	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/08	0.0006	mg/L	No
Triallate	2014/12/08	0.0002	mg/L	No
Trichloroethylene	2014/12/08	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/08	0.0005	mg/L	No
Trifluralin	2014/12/08	0.0002	mg/L	No
Vinyl Chloride	2014/12/08	0.0002	mg/L	No
MCPA				

WELL I - I WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				
Benzene				
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride				
Chlorpyrifos				
Diazinon				
Dicamba				
1,2-Dichlorobenzene				
1,4-Dichlorobenzene				
1,2-Dichloroethane				
1,1-Dichloroethylene (vinylidene chloride)				
Dichloromethane				
2-4 Dichlorophenol				
2,4-Dichlorophenoxy acetic acid (2,4-D)				
Diclofop-methyl				
Dimethoate				
Diquat				
Diuron				

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Glyphosate				
Malathion				
Metolachlor				
Metribuzin				
Monochlorobenzene				
Paraquat				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				
Terbufos				
Tetrachloroethylene				
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene				
2,4,6-Trichlorophenol				
Trifluralin				
Vinyl Chloride				
MCPA				

WELL M - Capreol

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2015/12/09	0.0004	mg/L	No
Atrazine + N-dealkylated metabolites	2015/12/09	0.0009	mg/L	No
Azinphos-methyl	2015/12/09	0.0003	mg/L	No
Benzene	2015/12/09	0.0002	mg/L	No
Benzo(a)pyrene	2015/12/09	0.000005	mg/L	No
Bromoxynil	2015/12/09	0.00009	mg/L	No
Carbaryl	2015/12/09	0.001	mg/L	No
Carbofuran	2015/12/09	0.001	mg/L	No
Carbon Tetrachloride	2015/12/09	0.0002	mg/L	No
Chlorpyrifos	2015/12/09	0.0003	mg/L	No
Diazinon	2015/12/09	0.0003	mg/L	No
Dicamba	2015/12/09	0.00008	mg/L	No
1,2-Dichlorobenzene	2015/12/09	0.0002	mg/L	No
1,4-Dichlorobenzene	2015/12/09	0.0002	mg/L	No
1,2-Dichloroethane	2015/12/09	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2015/12/09	0.0002	mg/L	No
Dichloromethane	2015/12/09	0.001	mg/L	No
2-4 Dichlorophenol	2015/12/09	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2015/12/09	0.00008	mg/L	No
Diclofop-methyl	2015/12/09	0.00008	mg/L	No
Dimethoate	2015/12/09	0.0003	mg/L	No
Diquat	2015/12/09	0.007	mg/L	No
Diuron	2015/12/09	0.006	mg/L	No
Glyphosate	2015/12/09	0.02	mg/L	No
Malathion	2015/12/09	0.0003	mg/L	No
Metolachlor	2015/12/09	0.0002	mg/L	No
Metribuzin	2015/12/09	0.0002	mg/L	No

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Monochlorobenzene	2015/12/09	0.0002	mg/L	No
Paraquat	2015/12/09	0.001	mg/L	No
Pentachlorophenol	2015/12/09	0.0006	mg/L	No
Phorate	2015/12/09	0.0002	mg/L	No
Picloram	2015/12/09	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2015/12/09	0.00008	mg/L	No
Prometryne	2015/12/09	0.0001	mg/L	No
Simazine	2015/12/09	0.0003	mg/L	No
Terbufos	2015/12/09	0.0001	mg/L	No
Tetrachloroethylene	2015/12/09	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2015/12/09	0.0006	mg/L	No
Triallate	2015/12/09	0.0002	mg/L	No
Trichloroethylene	2015/12/09	0.0002	mg/L	No
2,4,6-Trichlorophenol	2015/12/09	0.0005	mg/L	No
Trifluralin	2015/12/09	0.0002	mg/L	No
Vinyl Chloride	2015/12/09	0.0002	mg/L	No
MCPA				

WELL J - Capreol

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2016/12/08	0.0004	mg/L	No
Atrazine + N-dealkylated metabolites	2016/12/08	0.0009	mg/L	No
Azinphos-methyl	2016/12/08	0.0003	mg/L	No
Benzene	2016/12/08	0.0002	mg/L	No
Benzo(a)pyrene	2016/12/08	0.000005	mg/L	No
Bromoxynil	2016/12/08	0.0001	mg/L	No
Carbaryl	2016/12/08	0.001	mg/L	No
Carbofuran	2016/12/08	0.001	mg/L	No
Carbon Tetrachloride	2016/12/08	0.0002	mg/L	No
Chlorpyrifos	2016/12/08	0.0003	mg/L	No
Diazinon	2016/12/08	0.0003	mg/L	No
Dicamba	2016/12/08	0.00008	mg/L	No
1,2-Dichlorobenzene	2016/12/08	0.0002	mg/L	No
1,4-Dichlorobenzene	2016/12/08	0.0003	mg/L	No
1,2-Dichloroethane	2016/12/08	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2016/12/08	0.0003	mg/L	No
Dichloromethane	2016/12/08	0.001	mg/L	No
2-4 Dichlorophenol	2016/12/08	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2016/12/08	0.00008	mg/L	No
Diclofop-methyl	2016/12/08	0.00008	mg/L	No
Dimethoate	2016/12/08	0.0003	mg/L	No
Diquat	2016/12/08	0.007	mg/L	No
Diuron	2016/12/08	0.006	mg/L	No
Glyphosate	2016/12/08	0.02	mg/L	No
Malathion	2016/12/08	0.0003	mg/L	No
Metolachlor	2016/12/08	0.0002	mg/L	No
Metribuzin	2016/12/08	0.0002	mg/L	No
Monochlorobenzene	2016/12/08	0.0005	mg/L	No
Paraquat	2016/12/08	0.001	mg/L	No
Pentachlorophenol	2016/12/08	0.0003	mg/L	No
Phorate	2016/12/08	0.0002	mg/L	No

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

Picloram	2016/12/08	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2016/12/08	0.00006	mg/L	No
Prometryne	2016/12/08	0.0001	mg/L	No
Simazine	2016/12/08	0.0003	mg/L	No
Terbufos	2016/12/08	0.0002	mg/L	No
Tetrachloroethylene	2016/12/08	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2016/12/08	0.0003	mg/L	No
Triallate	2016/12/08	0.0002	mg/L	No
Trichloroethylene	2016/12/08	0.0002	mg/L	No
2,4,6-Trichlorophenol	2016/12/08	0.0002	mg/L	No
Trifluralin	2016/12/08	0.0002	mg/L	No
Vinyl Chloride	2016/12/08	0.0002	mg/L	No
MCPA	2016/12/08	0.01	mg/L	No

WELL Q- CHENIER

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/10	0.0004	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/10	0.0009	mg/L	No
Azinphos-methyl	2014/12/10	0.0003	mg/L	No
Benzene	2014/12/10	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/10	0.000009	mg/L	No
Bromoxynil	2014/12/10	0.0005	mg/L	No
Carbaryl	2014/12/10	0.001	mg/L	No
Carbofuran	2014/12/10	0.001	mg/L	No
Carbon Tetrachloride	2014/12/10	0.0002	mg/L	No
Chlorpyrifos	2014/12/10	0.0003	mg/L	No
Diazinon	2014/12/10	0.0003	mg/L	No
Dicamba	2014/12/10	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/10	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/10	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/10	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/10	0.0002	mg/L	No
Dichloromethane	2014/12/10	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/10	0.0005	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/10	0.0002	mg/L	No
Diclofop-methyl	2014/12/10	0.0002	mg/L	No
Dimethoate	2014/12/10	0.0003	mg/L	No
Diquat	2014/12/10	0.007	mg/L	No
Diuron	2014/12/10	0.005	mg/L	No
Glyphosate	2014/12/10	0.02	mg/L	No
Malathion	2014/12/10	0.0003	mg/L	No
Metolachlor	2014/12/10	0.0002	mg/L	No
Metribuzin	2014/12/10	0.0002	mg/L	No
Monochlorobenzene	2014/12/10	0.0002	mg/L	No
Paraquat	2014/12/10	0.001	mg/L	No
Pentachlorophenol	2014/12/10	0.0005	mg/L	No
Phorate	2014/12/10	0.0003	mg/L	No
Picloram	2014/12/10	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/10	0.00005	mg/L	No
Prometryne	2014/12/10	0.0002	mg/L	No
Simazine	2014/12/10	0.0003	mg/L	No

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

Terbufos	2014/12/10	0.0002	mg/L	No
Tetrachloroethylene	2014/12/10	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/10	0.0005	mg/L	No
Triallate	2014/12/10	0.0002	mg/L	No
Trichloroethylene	2014/12/10	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/10	0.0005	mg/L	No
Trifluralin	2014/12/10	0.0002	mg/L	No
Vinyl Chloride	2014/12/10	0.0002	mg/L	No
MCPA				

WELL R

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2014/12/10	0.0004	mg/L	No
Atrazine + N-dealkylated metabolites	2014/12/10	0.0009	mg/L	No
Azinphos-methyl	2014/12/10	0.0003	mg/L	No
Benzene	2014/12/10	0.0002	mg/L	No
Benzo(a)pyrene	2014/12/10	0.000009	mg/L	No
Bromoxynil	2014/12/10	0.0005	mg/L	No
Carbaryl	2014/12/10	0.001	mg/L	No
Carbofuran	2014/12/10	0.001	mg/L	No
Carbon Tetrachloride	2014/12/10	0.0002	mg/L	No
Chlorpyrifos	2014/12/10	0.0003	mg/L	No
Diazinon	2014/12/10	0.0003	mg/L	No
Dicamba	2014/12/10	0.0002	mg/L	No
1,2-Dichlorobenzene	2014/12/10	0.0002	mg/L	No
1,4-Dichlorobenzene	2014/12/10	0.0002	mg/L	No
1,2-Dichloroethane	2014/12/10	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2014/12/10	0.0002	mg/L	No
Dichloromethane	2014/12/10	0.001	mg/L	No
2-4 Dichlorophenol	2014/12/10	0.0005	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2014/12/10	0.0002	mg/L	No
Diclofop-methyl	2014/12/10	0.0002	mg/L	No
Dimethoate	2014/12/10	0.0003	mg/L	No
Diquat	2014/12/10	0.007	mg/L	No
Diuron	2014/12/10	0.005	mg/L	No
Glyphosate	2014/12/10	0.02	mg/L	No
Malathion	2014/12/10	0.0003	mg/L	No
Metolachlor	2014/12/10	0.0002	mg/L	No
Metribuzin	2014/12/10	0.0002	mg/L	No
Monochlorobenzene	2014/12/10	0.0002	mg/L	No
Paraquat	2014/12/10	0.001	mg/L	No
Pentachlorophenol	2014/12/10	0.0005	mg/L	No
Phorate	2014/12/10	0.0003	mg/L	No
Picloram	2014/12/10	0.00006	mg/L	No
Polychlorinated Biphenyls(PCB)	2014/12/10	0.00005	mg/L	No
Prometryne	2014/12/10	0.0002	mg/L	No
Simazine	2014/12/10	0.0003	mg/L	No
Terbufos	2014/12/10	0.0002	mg/L	No
Tetrachloroethylene	2014/12/10	0.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	2014/12/10	0.0005	mg/L	No
Triallate	2014/12/10	0.0002	mg/L	No

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Trichloroethylene	2014/12/10	0.0002	mg/L	No
2,4,6-Trichlorophenol	2014/12/10	0.0005	mg/L	No
Trifluralin	2014/12/10	0.0002	mg/L	No
Vinyl Chloride	2014/12/10	0.0002	mg/L	No
MCPA				

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	UOM	Date of Sample	Location

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	260006789
Drinking-Water System	Vermilion Distribution System
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2016-01-01 To 2016-12-31

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 ☒

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

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

www.greatersudbury.ca
TDS-Engineering Department

Complete for all other Categories.

Number of Designated Facilities served:

0

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes ☐ No ☒

Number of Interested Authorities you report to:

0

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes ☐ No ☒

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
Atikameksheng Anishnawbek	

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 ☐

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

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/Citizen Service Centre
- ☐ Public access/notice via other method _____

Describe your Drinking-Water System

The City of Greater Sudbury purchases water from Vale to supply the Vermilion Distribution System. The City owned distribution system supplies the communities of Lively, Naughton, Whitefish and Copper Cliff. Additional service was provided in 2005 to supply Atikameksheng Anishnawbek, formerly known as the Whitefish First Nations Reserve. Water is treated by Vale at the Vermillion Water Treatment Plant to comply with O. Reg. 170/03. The City of Greater Sudbury has the responsibility of water quality monitoring within the Vermilion Distribution. The system includes the Walden water storage tank and Walden metering chamber; both located in the Walden Industrial Park and includes an online continuous chlorine analyzer.

List all water treatment chemicals used over this reporting period

No chemical addition. Distribution system only.

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

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

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

AWQI #	Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action

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 #)
Distribution	261	0 to 0	0 to 0	65	1 to 10

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 #)
Chlorine Residual Distribution System	8,760	0.79 - 2.87

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 or order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony				
Arsenic				
Barium				
Boron				
Cadmium				
Chromium				
Mercury				
Selenium				
Uranium				
Nitrite				
Nitrate				
Sodium				

Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results (min#) - (max#)	Number of Exceedances
Plumbing		mg/L	
Distribution	8	0.0001 - 0.00048 mg/L	0

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: show latest annual average)	2016	0.0710	mg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				

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Benzene				
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride				
Chlorpyrifos				
Diazinon				
Dicamba				
1,2-Dichlorobenzene				
1,4-Dichlorobenzene				
1,2-Dichloroethane				
1,1-Dichloroethylene (vinylidene chloride)				
Dichloromethane				
2-4 Dichlorophenol				
2,4-Dichlorophenoxy acetic acid (2,4-D)				
Diclofop-methyl				
Dimethoate				
Diquat				
Diuron				
Glyphosate				
Malathion				
Metolachlor				
Metribuzin				
Monochlorobenzene				
Paraquat				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				
Terbufos				
Tetrachloroethylene				
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene				
2,4,6-Trichlorophenol				
Trifluralin				
Vinyl Chloride				
MCPA				

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	UOM	Date of Sample	Location

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)