



2018 Annual Water Quality Reports

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



PURPOSE

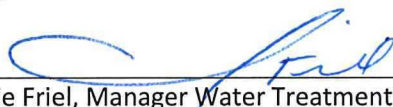
The purpose of the Annual Water Quality Report (AWQR) is to provide residents with pertinent information regarding the quality of their potable water. This report is to be completed by February 28th of each year covering from January 1st to December 31st of the preceding year as mandated by the Ontario Drinking Water System Regulation (O.Reg.170/03, S(11)) under the Safe Drinking Water Act 2002.

Within this report you will find:

- A brief description of the seven separate potable water systems;
- A summary of chemical usage for each treatment site;
- A summary of water quality testing results for microbiological, inorganic chemical and organic chemical parameters and,
- A summary of capital improvements made to the water systems during the reporting period.

A separate report titled the Annual Water Works Summary Report (AWWSR) is completed by March 31st of each year that covers water flows, water takings, system operations and lead testing programs covering the preceding year. The AWWSR is also stored within the same repository as the AWQR making it available to all residents.

Report reviewed by:


Julie Friel, Manager Water Treatment

12 FEB 2019
Date

Report Approved by:


Mike Jensen, Director Water/Wastewater Treatment and Compliance

12 FEB 2019
Date

Table of Contents

Section 1 Dowling	2
Section 2 Falconbridge	9
Section 3 Onaping	15
Section 4 Garson	22
Section 5 David	29
Section 6 Wanapitei	35
Section 7 Blezard Valley Capreol	41
Section 8 Vermilion	67

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	210001665
Drinking-Water System Name:	Dowling Drinking Water System
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2018-01-01 To 2018-12-31

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.

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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 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

- 1) Hot Water Tanks - \$7,450.96
- 2) Well Rehab - \$145,259.00

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					
	42	0 to 0	0 to 0		
Raw: RIVERSIDE WELL#1					
	53	0 to 0	0 to 0		
Treated: LIONEL WELL					
	42	0 to 0	0 to 0	42	10 to 80
Treated: RIVERSIDE WELL					
	53	0 to 0	0 to 0	53	10 to 10
Distribution					
	148	0 to 0	0 to 0	41	10 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	0.20 - 2.95

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

LIONEL WELL

Turbidity	8,760	0.03 - 2.00	NTU
Chlorine	8,760	0.54 - 3.74	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.11	mg/L

RIVERSIDE WELL

Turbidity	8,760	0.03 - 0.79	NTU
Chlorine	8,760	0.54 - 3.79	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 0.81	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	2018/12/10	0.00075	mg/L	No
Arsenic	2018/12/10	0.001	mg/L	No
Barium	2018/12/10	0.0187	mg/L	No
Boron	2018/12/10	0.013	mg/L	No
Cadmium	2018/12/10	0.0001	mg/L	No
Chromium	2018/12/10	0.001	mg/L	No
Mercury	2018/12/10	0.0001	mg/L	No
Selenium	2018/12/10	0.0005	mg/L	No
Uranium	2018/12/10	0.001	mg/L	No
Nitrite	2018/03/21	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/05	0.03	mg/L	No
	2018/12/10	0.008	mg/L	No

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

Nitrate	2018/03/21	0.31	mg/L	No
	2018/06/05	0.6	mg/L	No
	2018/09/05	0.52	mg/L	No
	2018/12/10	0.526	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	2018/12/10	0.0005	mg/L	No
Arsenic	2018/12/10	0.001	mg/L	No
Barium	2018/12/10	0.013	mg/L	No
Boron	2018/12/10	0.008	mg/L	No
Cadmium	2018/12/10	0.0001	mg/L	No
Chromium	2018/12/10	0.001	mg/L	No
Mercury	2018/12/10	0.0001	mg/L	No
Selenium	2018/12/10	0.0005	mg/L	No
Uranium	2018/12/10	0.001	mg/L	No
Nitrite	2018/03/05	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/05	0.03	mg/L	No
	2018/12/10	0.008	mg/L	No
Nitrate	2018/03/05	0.8	mg/L	No
	2018/06/05	0.7	mg/L	No
	2018/09/05	0.81	mg/L	No
	2018/12/10	0.505	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		mg/L	

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)	2018	0.0076	mg/L	No

LIONEL WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2018/12/10	0.000236	mg/L	No

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

Atrazine + N-dealkylated metabolites	2018/12/10	0.0005	mg/L	No
Azinphos-methyl	2018/12/10	0.000177	mg/L	No
Benzene	2018/12/10	0.0001	mg/L	No
Benzo(a)pyrene	2018/12/10	0.00001	mg/L	No
Bromoxynil	2018/12/10	0.0000986	mg/L	No
Carbaryl	2018/12/10	0.001	mg/L	No
Carbofuran	2018/12/10	0.001	mg/L	No
Carbon Tetrachloride	2018/12/10	0.0002	mg/L	No
Chlorpyrifos	2018/12/10	0.000177	mg/L	No
Diazinon	2018/12/10	0.000177	mg/L	No
Dicamba	2018/12/10	0.0000863	mg/L	No
1,2-Dichlorobenzene	2018/12/10	0.0002	mg/L	No
1,4-Dichlorobenzene	2018/12/10	0.0003	mg/L	No
1,2-Dichloroethane	2018/12/10	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2018/12/10	0.0003	mg/L	No
Dichloromethane	2018/12/10	0.001	mg/L	No
2-4 Dichlorophenol	2018/12/10	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2018/12/10	0.00037	mg/L	No
Diclofop-methyl	2018/12/10	0.000123	mg/L	No
Dimethoate	2018/12/10	0.000177	mg/L	No
Diquat	2018/12/10	0.002	mg/L	No
Diuron	2018/12/10	0.0006	mg/L	No
Glyphosate	2018/12/10	0.02	mg/L	No
Malathion	2018/12/10	0.000177	mg/L	No
Metolachlor	2018/12/10	0.000118	mg/L	No
Metribuzin	2018/12/10	0.000118	mg/L	No
Monochlorobenzene	2018/12/10	0.0005	mg/L	No
Paraquat	2018/12/10	0.004	mg/L	No
Pentachlorophenol	2018/12/10	0.0003	mg/L	No
Phorate	2018/12/10	0.000118	mg/L	No
Picloram	2018/12/10	0.0000863	mg/L	No
Polychlorinated Biphenyls(PCB)	2018/12/10	0.00006	mg/L	No
Prometryne	2018/12/10	0.0000591	mg/L	No
Simazine	2018/12/10	0.000177	mg/L	No
Terbufos	2018/12/10	0.000118	mg/L	No
Tetrachloroethylene	2018/12/10	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2018/12/10	0.0002	mg/L	No
Triallate	2018/12/10	0.000118	mg/L	No
Trichloroethylene	2018/12/10	0.0002	mg/L	No
2,4,6-Trichlorophenol	2018/12/10	0.0002	mg/L	No
Trifluralin	2018/12/10	0.000118	mg/L	No
Vinyl Chloride	2018/12/10	0.0001	mg/L	No
MCPA	2018/12/10	0.00616	mg/L	No

RIVERSIDE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2018/12/10	0.000232	mg/L	No
Atrazine + N-dealkylated metabolites	2018/12/10	0.0005	mg/L	No
Azinphos-methyl	2018/12/10	0.000174	mg/L	No
Benzene	2018/12/10	0.0001	mg/L	No
Benzo(a)pyrene	2018/12/10	0.00001	mg/L	No

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

Bromoxynil	2018/12/10	0.0000967	mg/L	No
Carbaryl	2018/12/10	0.001	mg/L	No
Carbofuran	2018/12/10	0.001	mg/L	No
Carbon Tetrachloride	2018/12/10	0.0002	mg/L	No
Chlorpyrifos	2018/12/10	0.000174	mg/L	No
Diazinon	2018/12/10	0.000174	mg/L	No
Dicamba	2018/12/10	0.0000846	mg/L	No
1,2-Dichlorobenzene	2018/12/10	0.0002	mg/L	No
1,4-Dichlorobenzene	2018/12/10	0.0003	mg/L	No
1,2-Dichloroethane	2018/12/10	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2018/12/10	0.0003	mg/L	No
Dichloromethane	2018/12/10	0.001	mg/L	No
2-4 Dichlorophenol	2018/12/10	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2018/12/10	0.00042	mg/L	No
Diclofop-methyl	2018/12/10	0.000121	mg/L	No
Dimethoate	2018/12/10	0.000174	mg/L	No
Diquat	2018/12/10	0.002	mg/L	No
Diuron	2018/12/10	0.0006	mg/L	No
Glyphosate	2018/12/10	0.02	mg/L	No
Malathion	2018/12/10	0.000174	mg/L	No
Metolachlor	2018/12/10	0.000116	mg/L	No
Metribuzin	2018/12/10	0.000116	mg/L	No
Monochlorobenzene	2018/12/10	0.0005	mg/L	No
Paraquat	2018/12/10	0.005	mg/L	No
Pentachlorophenol	2018/12/10	0.0003	mg/L	No
Phorate	2018/12/10	0.000116	mg/L	No
Picloram	2018/12/10	0.0000846	mg/L	No
Polychlorinated Biphenyls(PCB)	2018/12/10	0.00006	mg/L	No
Prometryne	2018/12/10	0.0000581	mg/L	No
Simazine	2018/12/10	0.000174	mg/L	No
Terbufos	2018/12/10	0.000116	mg/L	No
Tetrachloroethylene	2018/12/10	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2018/12/10	0.0002	mg/L	No
Triallate	2018/12/10	0.000116	mg/L	No
Trichloroethylene	2018/12/10	0.0002	mg/L	No
2,4,6-Trichlorophenol	2018/12/10	0.0002	mg/L	No
Trifluralin	2018/12/10	0.000116	mg/L	No
Vinyl Chloride	2018/12/10	0.0001	mg/L	No
MCPA	2018/12/10	0.00604	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 Name:	Falconbridge Well Supply
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2018-01-01 To 2018-12-31

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, Polyphosphate, 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

1) Well Rehab - \$59,425.00

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: FALCONBRIDGE WELL #5					
	52	0 to 0	0 to 0		
Raw: FALCONBRIDGE WELL #6					
	42	0 to 0	0 to 0		
Raw: FALCONBRIDGE WELL #7					
	47	0 to 0	0 to 0		
Treated: FALCONBRIDGE WELLS TREATED					
	141	0 to 0	0 to 0	141	10 to 1500
Distribution					
	199	0 to 0	0 to 0	52	10 to 40

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	0.49 - 2.58

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

FALCONBRIDGE WELLS TREATED

Turbidity	8,760	0.01 - 5.01	NTU
Chlorine	8,760	0.50 - 4.51	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.34	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	2017/12/14	0.0005	mg/L	No
Arsenic	2017/12/14	0.0033	mg/L	No
Barium	2017/12/14	0.0064	mg/L	No
Boron	2017/12/14	0.0023	mg/L	No
Cadmium	2017/12/14	0.0001	mg/L	No
Chromium	2017/12/14	0.001	mg/L	No
Mercury	2017/12/14	0.0001	mg/L	No
Selenium	2017/12/14	0.001	mg/L	No
Uranium	2017/12/14	0.001	mg/L	No
Nitrite	2018/03/04	0.03	mg/L	No
	2018/06/04	0.03	mg/L	No
	2018/09/04	0.03	mg/L	No
	2018/12/10	0.008	mg/L	No
Nitrate	2018/03/04	0.18	mg/L	No
	2018/06/04	0.18	mg/L	No
	2018/09/04	0.12	mg/L	No
	2018/12/10	0.02	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		mg/L	

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)	2018	0.0042	mg/L	No

FALCONBRIDGE WELLS TREATED

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/14	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/14	0.0005	mg/L	No
Azinphos-methyl	2017/12/14	0.0002	mg/L	No
Benzene	2017/12/14	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/14	0.000005	mg/L	No
Bromoxynil	2017/12/14	0.00009	mg/L	No
Carbaryl	2017/12/14	0.001	mg/L	No
Carbofuran	2017/12/14	0.001	mg/L	No
Carbon Tetrachloride	2017/12/14	0.0002	mg/L	No
Chlorpyrifos	2017/12/14	0.0002	mg/L	No
Diazinon	2017/12/14	0.0002	mg/L	No
Dicamba	2017/12/14	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/14	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/14	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/14	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/14	0.0003	mg/L	No
Dichloromethane	2017/12/14	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/14	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/14	0.00008	mg/L	No
Diclofop-methyl	2017/12/14	0.00015	mg/L	No
Dimethoate	2017/12/14	0.0002	mg/L	No
Diquat	2017/12/14	0.0007	mg/L	No
Diuron	2017/12/14	0.006	mg/L	No
Glyphosate	2017/12/14	0.02	mg/L	No

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

Malathion	2017/12/14	0.0002	mg/L	No
Metolachlor	2017/12/14	0.0001	mg/L	No
Metribuzin	2017/12/14	0.0001	mg/L	No
Monochlorobenzene	2017/12/14	0.0005	mg/L	No
Paraquat	2017/12/14	0.0004	mg/L	No
Pentachlorophenol	2017/12/14	0.0003	mg/L	No
Phorate	2017/12/14	0.0001	mg/L	No
Picloram	2017/12/14	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/14	0.00006	mg/L	No
Prometryne	2017/12/14	0.00006	mg/L	No
Simazine	2017/12/14	0.0002	mg/L	No
Terbufos	2017/12/14	0.0001	mg/L	No
Tetrachloroethylene	2017/12/14	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/14	0.0002	mg/L	No
Triallate	2017/12/14	0.0001	mg/L	No
Trichloroethylene	2017/12/14	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/14	0.0002	mg/L	No
Trifluralin	2017/12/14	0.0001	mg/L	No
Vinyl Chloride	2017/12/14	0.0001	mg/L	No
MCPA	2017/12/14	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:	220003519
Drinking-Water System Name:	Onaping-Levack Well Supply
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2018-01-01 To 2018-12-31

<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 ☐

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 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

- 1) Corrosion Control Upgrades - \$8,331.41
- 2) Well Rehab - \$163,933.60

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: WICKWAS WELL #3					
	46	0 to 0	0 to 0		
Raw: WICKWAS WELL #4					
	39	0 to 0	0 to 1		
Raw: WICKWAS WELL #5					
	53	0 to 0	0 to 0		
Treated: WICKWAS TREATED PUMPHOUSE					
	53	0 to 0	0 to 0	53	10 to 20
Distribution					
	155	0 to 0	0 to 0	41	10 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	0.71 - 2.90

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

WICKWAS TREATED PUMPHOUSE

Turbidity	8,760	0.01 - 10.00	NTU
Chlorine	8,760	0.71 - 3.47	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.02 - 1.33	mg/L

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

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

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	2018/01/08	65	mg/L
2009/03/09	Sodium	2018/01/08	67.7	mg/L
2009/03/09	Sodium	2018/02/06	71.7	mg/L
2009/03/09	Sodium	2018/02/22	66.1	mg/L
2009/03/09	Sodium	2018/03/15	65.4	mg/L
2009/03/09	Sodium	2018/03/15	84.7	mg/L
2009/03/09	Sodium	2018/04/04	60	mg/L
2009/03/09	Sodium	2018/04/04	56	mg/L
2009/03/09	Sodium	2018/05/01	64.5	mg/L
2009/03/09	Sodium	2018/05/01	57.9	mg/L
2009/03/09	Sodium	2018/05/07	64.4	mg/L
2009/03/09	Sodium	2018/06/05	50.8	mg/L
2009/03/09	Sodium	2018/06/05	54.4	mg/L
2009/03/09	Sodium	2018/06/05	59.5	mg/L
2009/03/09	Sodium	2018/07/03	51.1	mg/L
2009/03/09	Sodium	2018/07/03	58.4	mg/L
2009/03/09	Sodium	2018/07/03	53.2	mg/L
2009/03/09	Sodium	2018/08/07	56.7	mg/L
2009/03/09	Sodium	2018/08/07	47.3	mg/L
2009/03/09	Sodium	2018/08/07	73.7	mg/L
2009/03/09	Sodium	2018/09/05	62.1	mg/L
2009/03/09	Sodium	2018/09/05	70.2	mg/L
2009/03/09	Sodium	2018/09/05	63.7	mg/L
2009/03/09	Sodium	2018/10/02	60.5	mg/L
2009/03/09	Sodium	2018/10/02	53	mg/L
2009/03/09	Sodium	2018/10/02	79.1	mg/L
2009/03/09	Sodium	2018/11/06	59.9	mg/L
2009/03/09	Sodium	2018/11/06	71	mg/L
2009/03/09	Sodium	2018/11/06	62.8	mg/L
2009/03/09	Sodium	2018/12/04	62.8	mg/L
2009/03/09	Sodium	2018/12/04	75	mg/L
2009/03/09	Sodium	2018/12/04	75.9	mg/L
2009/03/09	Sodium	2018/12/17	65.3	mg/L
2009/03/09	Sodium	2018/12/17	75.4	mg/L
2009/03/09	Sodium	2018/12/17	72.9	mg/L

WICKWAS TREATED PUMPHOUSE

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2017/12/13	0.0005	mg/L	No
Arsenic	2017/12/13	0.001	mg/L	No
Barium	2017/12/13	0.0678	mg/L	No
Boron	2017/12/13	0.012	mg/L	No
Cadmium	2017/12/13	0.0001	mg/L	No
Chromium	2017/12/13	0.001	mg/L	No
Mercury	2017/12/13	0.0001	mg/L	No
Selenium	2017/12/13	0.001	mg/L	No
Uranium	2017/12/13	0.001	mg/L	No

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

Nitrite	2018/03/05	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/05	0.03	mg/L	No
	2018/12/10	0.008	mg/L	No
Nitrate	2018/03/05	0.82	mg/L	No
	2018/06/05	1.25	mg/L	No
	2018/09/05	0.74	mg/L	No
	2018/12/10	0.695	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	10	0.0001 - 0.00326 mg/L	0
Distribution	44	0.0001 - 0.00058 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)	2018	0.0099	mg/L	No

WICKWAS TREATED PUMPHOUSE

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/13	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/13	0.0005	mg/L	No
Azinphos-methyl	2017/12/13	0.0002	mg/L	No
Benzene	2017/12/13	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/13	0.000005	mg/L	No
Bromoxynil	2017/12/13	0.0001	mg/L	No
Carbaryl	2017/12/13	0.001	mg/L	No
Carbofuran	2017/12/13	0.001	mg/L	No
Carbon Tetrachloride	2017/12/13	0.0002	mg/L	No
Chlorpyrifos	2017/12/13	0.0002	mg/L	No
Diazinon	2017/12/13	0.0002	mg/L	No
Dicamba	2017/12/13	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/13	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/13	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/13	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/13	0.0003	mg/L	No
Dichloromethane	2017/12/13	0.001	mg/L	No
2,4 Dichlorophenol	2017/12/13	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/13	0.00008	mg/L	No

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

Diclofop-methyl	2017/12/13	0.00008	mg/L	No
Dimethoate	2017/12/13	0.0002	mg/L	No
Diquat	2017/12/13	0.0007	mg/L	No
Diuron	2017/12/13	0.006	mg/L	No
Glyphosate	2017/12/13	0.02	mg/L	No
Malathion	2017/12/13	0.0002	mg/L	No
Metolachlor	2017/12/13	0.0001	mg/L	No
Metribuzin	2017/12/13	0.0001	mg/L	No
Monochlorobenzene	2017/12/13	0.0005	mg/L	No
Paraquat	2017/12/13	0.0003	mg/L	No
Pentachlorophenol	2017/12/13	0.0003	mg/L	No
Phorate	2017/12/13	0.0001	mg/L	No
Picloram	2017/12/13	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/13	0.00006	mg/L	No
Prometryne	2017/12/13	0.00006	mg/L	No
Simazine	2017/12/13	0.0002	mg/L	No
Terbufos	2017/12/13	0.0001	mg/L	No
Tetrachloroethylene	2017/12/13	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/13	0.0003	mg/L	No
Triallate	2017/12/13	0.0001	mg/L	No
Trichloroethylene	2017/12/13	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/13	0.0002	mg/L	No
Trifluralin	2017/12/13	0.0001	mg/L	No
Vinyl Chloride	2017/12/13	0.0001	mg/L	No
MCPA	2017/12/13	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:	220003485
Drinking-Water System Name:	Sudbury Drinking Water System -Garson
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2018-01-01 To 2018-12-31

<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 ☐

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

1) Well Rehab - \$114,998.00

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
142014	2018/08/22	Total Coliform	2	CFU/100 mL	Resample/Re-test;	2018/08/24

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					
	44	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	10 to 1500
Treated: GARSON #2 WELL TREATED					
	44	0 to 0	0 to 0	44	10 to 10
Distribution					
	216	0 to 0	0 to 2	52	10 to 30

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	0.14 - 3.97

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

GARSON #1 & #3 WELL TREATED

Turbidity	8,760	0.03 - 2.00	NTU
Chlorine	8,760	0.54 - 2.56	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.42	mg/L

GARSON #2 WELL TREATED

Turbidity	8,760	0.02 - 2.00	NTU
Chlorine	8,760	0.52 - 3.01	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.12	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	2017/12/14	0.0005	mg/L	No
Arsenic	2017/12/14	0.0033	mg/L	No
Barium	2017/12/14	0.0423	mg/L	No
Boron	2017/12/14	0.0046	mg/L	No
Cadmium	2017/12/14	0.0001	mg/L	No
Chromium	2017/12/14	0.001	mg/L	No
Mercury	2017/12/14	0.0001	mg/L	No
Selenium	2017/12/14	0.001	mg/L	No
Uranium	2017/12/14	0.0031	mg/L	No
Nitrite	2018/03/04	0.03	mg/L	No
	2018/06/04	0.03	mg/L	No
	2018/09/04	0.03	mg/L	No
	2018/12/10	0.008	mg/L	No

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

Nitrate	2018/03/04	0.7	mg/L	No
	2018/06/04	0.81	mg/L	No
	2018/09/04	0.64	mg/L	No
	2018/12/10	0.614	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	2017/12/14	0.0005	mg/L	No
Arsenic	2017/12/14	0.0034	mg/L	No
Barium	2017/12/14	0.0418	mg/L	No
Boron	2017/12/14	0.011	mg/L	No
Cadmium	2017/12/14	0.0001	mg/L	No
Chromium	2017/12/14	0.001	mg/L	No
Mercury	2017/12/14	0.0001	mg/L	No
Selenium	2017/12/14	0.001	mg/L	No
Uranium	2017/12/14	0.0024	mg/L	No
Nitrite	2018/03/04	0.03	mg/L	No
	2018/09/04	0.03	mg/L	No
	2018/12/10	0.008	mg/L	No
Nitrate	2018/03/04	0.93	mg/L	No
	2018/09/04	0.86	mg/L	No
	2018/12/10	0.87	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		mg/L	

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)	2018	0.0052	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	2017/12/14	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/14	0.0005	mg/L	No
Azinphos-methyl	2017/12/14	0.0002	mg/L	No
Benzene	2017/12/14	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/14	0.000005	mg/L	No
Bromoxynil	2017/12/14	0.00009	mg/L	No
Carbaryl	2017/12/14	0.001	mg/L	No
Carbofuran	2017/12/14	0.001	mg/L	No
Carbon Tetrachloride	2017/12/14	0.0002	mg/L	No
Chlorpyrifos	2017/12/14	0.0002	mg/L	No
Diazinon	2017/12/14	0.0002	mg/L	No
Dicamba	2017/12/14	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/14	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/14	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/14	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/14	0.0003	mg/L	No
Dichloromethane	2017/12/14	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/14	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/14	0.00008	mg/L	No
Diclofop-methyl	2017/12/14	0.00031	mg/L	No
Dimethoate	2017/12/14	0.0002	mg/L	No
Diquat	2017/12/14	0.0007	mg/L	No
Diuron	2017/12/14	0.006	mg/L	No
Glyphosate	2017/12/14	0.02	mg/L	No
Malathion	2017/12/14	0.0002	mg/L	No
Metolachlor	2017/12/14	0.0001	mg/L	No
Metribuzin	2017/12/14	0.0001	mg/L	No
Monochlorobenzene	2017/12/14	0.0005	mg/L	No
Paraquat	2017/12/14	0.0003	mg/L	No
Pentachlorophenol	2017/12/14	0.0003	mg/L	No
Phorate	2017/12/14	0.0001	mg/L	No
Picloram	2017/12/14	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/14	0.00006	mg/L	No
Prometryne	2017/12/14	0.00006	mg/L	No
Simazine	2017/12/14	0.0002	mg/L	No
Terbufos	2017/12/14	0.0001	mg/L	No
Tetrachloroethylene	2017/12/14	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/14	0.0002	mg/L	No
Triallate	2017/12/14	0.0001	mg/L	No
Trichloroethylene	2017/12/14	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/14	0.0002	mg/L	No
Trifluralin	2017/12/14	0.0001	mg/L	No
Vinyl Chloride	2017/12/14	0.0001	mg/L	No
MCPA	2017/12/14	0.01	mg/L	No

GARSON #1 & #3 WELL TREATED

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/14	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/14	0.0005	mg/L	No
Azinphos-methyl	2017/12/14	0.0002	mg/L	No
Benzene	2017/12/14	0.0001	mg/L	No

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

Benzo(a)pyrene	2017/12/14	0.000005	mg/L	No
Bromoxynil	2017/12/14	0.00009	mg/L	No
Carbaryl	2017/12/14	0.001	mg/L	No
Carbofuran	2017/12/14	0.001	mg/L	No
Carbon Tetrachloride	2017/12/14	0.0002	mg/L	No
Chlorpyrifos	2017/12/14	0.0002	mg/L	No
Diazinon	2017/12/14	0.0002	mg/L	No
Dicamba	2017/12/14	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/14	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/14	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/14	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/14	0.0003	mg/L	No
Dichloromethane	2017/12/14	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/14	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/14	0.00008	mg/L	No
Diclofop-methyl	2017/12/14	0.00024	mg/L	No
Dimethoate	2017/12/14	0.0002	mg/L	No
Diquat	2017/12/14	0.0007	mg/L	No
Diuron	2017/12/14	0.006	mg/L	No
Glyphosate	2017/12/14	0.02	mg/L	No
Malathion	2017/12/14	0.0002	mg/L	No
Metolachlor	2017/12/14	0.0001	mg/L	No
Metribuzin	2017/12/14	0.0001	mg/L	No
Monochlorobenzene	2017/12/14	0.0005	mg/L	No
Paraquat	2017/12/14	0.0003	mg/L	No
Pentachlorophenol	2017/12/14	0.0003	mg/L	No
Phorate	2017/12/14	0.0001	mg/L	No
Picloram	2017/12/14	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/14	0.00006	mg/L	No
Prometryne	2017/12/14	0.00006	mg/L	No
Simazine	2017/12/14	0.0002	mg/L	No
Terbufos	2017/12/14	0.0001	mg/L	No
Tetrachloroethylene	2018/09/04	0.0028	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/14	0.0002	mg/L	No
Triallate	2017/12/14	0.0001	mg/L	No
Trichloroethylene	2017/12/14	0.00078	mg/L	No
2,4,6-Trichlorophenol	2017/12/14	0.0002	mg/L	No
Trifluralin	2017/12/14	0.0001	mg/L	No
Vinyl Chloride	2017/12/14	0.0001	mg/L	No
MCPA	2017/12/14	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:	220003537
Drinking-Water System Name:	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 2018-01-01 To 2018-12-31

<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
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

- 1) Pneumatic Actuator - \$5,284.80
- 2) Turbidity Meters - \$29,399.27
- 3) Pump Testing / Installation - \$48,655.00
- 4) Water Main Lining - \$1,755,100.00

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
140420	2018/07/07	Total Coliform	33	CFU/100 mL	Resample/Re-test;	2018/07/12

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					
	53	0 to 50	0 to 150		
Treated: SUDBURY (DAVID ST) Water Treatment Plant					
	53	0 to 0	0 to 0	53	10 to 20
Distribution					
	1,429	0 to 0	0 to 33	330	10 to 1500

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	0.51 - 3.13

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	0.56 - 4.81	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.10 - 1.42	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	2018/12/06	0.0005	mg/L	No
Arsenic	2018/12/06	0.0012	mg/L	No
Barium	2018/12/06	0.0153	mg/L	No
Boron	2018/12/06	0.002	mg/L	No
Cadmium	2018/12/06	0.0001	mg/L	No
Chromium	2018/12/06	0.001	mg/L	No
Mercury	2018/12/06	0.0001	mg/L	No
Selenium	2018/12/06	0.0005	mg/L	No
Uranium	2018/12/06	0.001	mg/L	No
Nitrite	2018/03/05	0.03	mg/L	No
	2018/06/03	0.03	mg/L	No
	2018/09/04	0.03	mg/L	No
	2018/12/06	0.008	mg/L	No
Nitrate	2018/03/05	0.1	mg/L	No
	2018/06/03	0.1	mg/L	No
	2018/09/04	0.1	mg/L	No
	2018/12/06	0.02	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	9	0.0001 - 0.0755 mg/L	3
Distribution	45	0.0001 - 0.0001 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)	2018	0.0887	mg/L	No

SUDBURY (DAVID ST) Water Treatment Plant

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2018/12/06	0.000224	mg/L	No
Atrazine + N-dealkylated metabolites	2018/12/06	0.0005	mg/L	No
Azinphos-methyl	2018/12/06	0.000168	mg/L	No
Benzene	2018/12/06	0.0001	mg/L	No
Benzo(a)pyrene	2018/12/06	0.000008	mg/L	No
Bromoxynil	2018/12/06	0.0000904	mg/L	No
Carbaryl	2018/12/06	0.001	mg/L	No
Carbofuran	2018/12/06	0.001	mg/L	No
Carbon Tetrachloride	2018/12/06	0.0002	mg/L	No
Chlorpyrifos	2018/12/06	0.000168	mg/L	No
Diazinon	2018/12/06	0.000168	mg/L	No
Dicamba	2018/12/06	0.0000791	mg/L	No
1,2-Dichlorobenzene	2018/12/06	0.0002	mg/L	No
1,4-Dichlorobenzene	2018/12/06	0.0003	mg/L	No
1,2-Dichloroethane	2018/12/06	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2018/12/06	0.0003	mg/L	No
Dichloromethane	2018/12/06	0.001	mg/L	No
2,4 Dichlorophenol	2018/12/06	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2018/12/06	0.000339	mg/L	No
Diclofop-methyl	2018/12/06	0.000113	mg/L	No
Dimethoate	2018/12/06	0.000168	mg/L	No
Diquat	2018/12/06	0.003	mg/L	No
Diuron	2018/12/06	0.006	mg/L	No
Glyphosate	2018/12/06	0.02	mg/L	No
Malathion	2018/12/06	0.000168	mg/L	No
Metolachlor	2018/12/06	0.000112	mg/L	No
Metribuzin	2018/12/06	0.000112	mg/L	No
Monochlorobenzene	2018/12/06	0.0005	mg/L	No
Paraquat	2018/12/06	0.005	mg/L	No
Pentachlorophenol	2018/12/06	0.0003	mg/L	No
Phorate	2018/12/06	0.000112	mg/L	No
Picloram	2018/12/06	0.0000791	mg/L	No
Polychlorinated Biphenyls(PCB)	2018/12/06	0.00006	mg/L	No
Prometryne	2018/12/06	0.0000559	mg/L	No
Simazine	2018/12/06	0.000168	mg/L	No
Terbufos	2018/12/06	0.000112	mg/L	No
Tetrachloroethylene	2018/12/06	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2018/12/06	0.0002	mg/L	No
Triallate	2018/12/06	0.000112	mg/L	No
Trichloroethylene	2018/12/06	0.0002	mg/L	No
2,4,6-Trichlorophenol	2018/12/06	0.0002	mg/L	No
Trifluralin	2018/12/06	0.000112	mg/L	No
Vinyl Chloride	2018/12/06	0.0001	mg/L	No
MCPA	2018/12/06	0.00565	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:	210001111
Drinking-Water System Name:	Sudbury Drinking Water System - Wanapitei
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2018-01-01 To 2018-12-31

<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
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 ☐

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 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 pumphouse 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

- 1) Intake ATS - \$28,193.50
- 2) Repairs to emergency showers - \$15,481.00
- 3) Water Main Lining - \$1,755,100.00

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
139208	2018/05/01	Sodium	24.5	mg/L	Resample/Re-test;	2018/05/07
139423	2018/05/25	Lead	0.0125	mg/L	Resample/Re-test;	2018/05/31
141158	2018/07/29	Total Coliform	2	CFU/100 mL	Resample/Re-test;	2018/07/29
141369	2018/08/04	Total Coliform	123	CFU/100 mL	Resample/Re-test;	2018/08/07
144214	2018/12/01	Total Coliform	1	CFU/100 mL	Resample/Re-test;	2018/12/03

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 28	0 to 139		
Treated: HL PUMP STATION, Sudbury (Wanapitei) WTP					
	52	0 to 0	0 to 0	52	10 to 1500
Distribution					
	1,429	0 to 0	0 to 123	330	10 to 2390

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	0.51 - 3.13

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	0.01 - 1.23	NTU
Chlorine	8,760	0.54 - 2.92	mg/L
Fluoride (If the DWS provides fluoridation)	365	0.15 - 0.85	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	2018/12/06	0.0005	mg/L	No
Arsenic	2018/12/06	0.001	mg/L	No
Barium	2018/12/06	0.0139	mg/L	No
Boron	2018/12/06	0.002	mg/L	No
Cadmium	2018/12/06	0.0001	mg/L	No
Chromium	2018/12/06	0.001	mg/L	No
Mercury	2018/12/06	0.0001	mg/L	No
Selenium	2018/12/06	0.0005	mg/L	No
Uranium	2018/12/06	0.001	mg/L	No
Nitrite	2018/03/06	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/05	0.03	mg/L	No
	2018/12/06	0.008	mg/L	No
Nitrate	2018/03/06	0.22	mg/L	No
	2018/06/05	0.16	mg/L	No
	2018/09/05	0.1	mg/L	No
	2018/12/06	0.12	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	7	0.0001 - 0.0012 mg/L	0
Distribution	35	0.0001 - 0.00013 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)	2018	0.0712	mg/L	No

HL PUMP STATION, Sudbury (Wanapitei) WTP

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2018/12/06	0.000245	mg/L	No
Atrazine + N-dealkylated metabolites	2018/12/06	0.0005	mg/L	No
Azinphos-methyl	2018/12/06	0.000184	mg/L	No
Benzene	2018/12/06	0.0001	mg/L	No
Benzo(a)pyrene	2018/12/06	0.000008	mg/L	No
Bromoxynil	2018/12/06	0.000108	mg/L	No
Carbaryl	2018/12/06	0.001	mg/L	No
Carbofuran	2018/12/06	0.001	mg/L	No
Carbon Tetrachloride	2018/12/06	0.0002	mg/L	No
Chlorpyrifos	2018/12/06	0.000184	mg/L	No
Diazinon	2018/12/06	0.000184	mg/L	No
Dicamba	2018/12/06	0.0000942	mg/L	No
1,2-Dichlorobenzene	2018/12/06	0.0002	mg/L	No
1,4-Dichlorobenzene	2018/12/06	0.0003	mg/L	No
1,2-Dichloroethane	2018/12/06	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2018/12/06	0.0003	mg/L	No
Dichloromethane	2018/12/06	0.001	mg/L	No
2,4 Dichlorophenol	2018/12/06	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2018/12/06	0.000404	mg/L	No
Diclofop-methyl	2018/12/06	0.000135	mg/L	No
Dimethoate	2018/12/06	0.000184	mg/L	No
Diquat	2018/12/06	0.002	mg/L	No
Diuron	2018/12/06	0.006	mg/L	No
Glyphosate	2018/12/06	0.02	mg/L	No
Malathion	2018/12/06	0.000184	mg/L	No
Metolachlor	2018/12/06	0.000123	mg/L	No
Metribuzin	2018/12/06	0.000123	mg/L	No
Monochlorobenzene	2018/12/06	0.0005	mg/L	No
Paraquat	2018/12/06	0.005	mg/L	No
Pentachlorophenol	2018/12/06	0.0003	mg/L	No
Phorate	2018/12/06	0.000123	mg/L	No
Picloram	2018/12/06	0.0000942	mg/L	No
Polychlorinated Biphenyls(PCB)	2018/12/06	0.00006	mg/L	No
Prometryne	2018/12/06	0.0000613	mg/L	No
Simazine	2018/12/06	0.000184	mg/L	No
Terbufos	2018/12/06	0.000123	mg/L	No
Tetrachloroethylene	2018/12/06	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2018/12/06	0.0003	mg/L	No
Triallate	2018/12/06	0.000123	mg/L	No
Trichloroethylene	2018/12/06	0.0002	mg/L	No
2,4,6-Trichlorophenol	2018/12/06	0.0002	mg/L	No
Trifluralin	2018/12/06	0.000123	mg/L	No
Vinyl Chloride	2018/12/06	0.0001	mg/L	No
MCPA	2018/12/06	0.00673	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 Name:	Blezard Valley - Capreol Well Supply
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2018-01-01 To 2018-12-31

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

- 1) Capreol UV System Rehab - \$5,353.99
- 2) Valley UV System Rehab - \$10,624.11
- 3) Well Rehab - \$476,998.00

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
139312	2018/05/14	Fluoride	1.77	mg/L	Resample/Re-test;	2018/05/14
139682	2018/06/07	NDOGN			Resample/Re-test;	2018/06/08
142015	2018/08/22	Total Coliform	86	CFU/100 mL	Resample/Re-test;	2018/08/24

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					
	47	0 to 0	0 to 0		
Raw: WELL B- KENNETH WELL					
	53	0 to 0	0 to 0		
Raw: WELL C -PHILIPPE WELL					
	53	0 to 0	0 to 0		
Raw: WELL D -FROST WELL					
	53	0 to 0	0 to 0		
Raw: WELL E -NOTRE DAME					
	52	0 to 0	0 to 1		
Raw: WELL F -LINDEN WELL					
	44	0 to 0	0 to 0		
Raw: WELL G -PHARAND WELL					
	52	0 to 0	0 to 0		
Raw: WELL H -MICHELLE WELL					
	53	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					
	52	0 to 0	0 to 0		
Raw: WELL Q - CHENIER					
	41	0 to 0	0 to 200		
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					
	104	0 to 0	0 to 0	104	0 to 10
Treated: WELL A - DESCHENE WELL					
	47	0 to 0	0 to 0	47	0 to 20
Treated: WELL B - KENNETH WELL					
	53	0 to 0	0 to 0	53	0 to 10
Treated: WELL C - PHILIPPE WELL					
	53	0 to 0	0 to 0	53	0 to 10
Treated: WELL D - FROST WELL					
	53	0 to 0	0 to 0	53	10 to 10
Treated: WELL E - NOTRE DAME WELL					
	52	0 to 0	0 to 0	52	0 to 20
Treated: WELL F - LINDEN WELL					
	46	0 to 0	0 to 86	45	0 to 10
Treated: WELL G - PHARAND WELL					
	52	0 to 0	0 to 0	52	0 to 70
Treated: WELL H - MICHELLE WELL					
	53	0 to 0	0 to 0	53	0 to 10
Treated: WELL I - I WELL					
	0			0	
Treated: WELL Q- CHENIER					
	41	0 to 0	0 to 0	41	0 to 10
Treated: WELL R					
	52	0 to 0	0 to 0	52	0 to 20
Distribution					
	580	0 to 0	0 to 0	146	0 to 190

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	0.41 - 2.64

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

CAPREOL WELL SUPPLY - WELL M&J

Turbidity	8,760	0.01 - 2.00	NTU
Chlorine	8,760	0.51 - 3.78	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.00 - 1.45	mg/L

WELL A - DESCHENE WELL

Turbidity	8,760	0.02 - 2.00	NTU
Chlorine	8,760	0.55 - 3.38	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.03	mg/L

WELL B - KENNETH WELL

Turbidity	8,760	0.00 - 2.00	NTU
Chlorine	8,760	0.15 - 3.31	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.08	mg/L

WELL C - PHILIPPE WELL

Turbidity	8,760	0.02 - 1.18	NTU
Chlorine	8,760	0.70 - 4.25	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.77	mg/L

WELL D - FROST WELL

Turbidity	8,760	0.02 - 2.00	NTU
Chlorine	8,760	0.55 - 4.57	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 0.97	mg/L

WELL E - NOTRE DAME WELL

Turbidity	8,760	0.02 - 1.52	NTU
Chlorine	8,760	0.25 - 2.60	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.16	mg/L

WELL F - LINDEN WELL

Turbidity	8,760	0.02 - 2.00	NTU
Chlorine	8,760	0.50 - 3.57	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.18	mg/L

WELL G - PHARAND WELL

Turbidity	8,760	0.02 - 2.00	NTU
Chlorine	8,760	0.59 - 2.75	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.25	mg/L

WELL H - MICHELLE WELL

Turbidity	8,760	0.03 - 2.00	NTU
Chlorine	8,760	0.50 - 2.35	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.20 - 1.47	mg/L

WELL I - I WELL

Turbidity			
Chlorine			
Fluoride (If the DWS provides fluoridation)			

WELL Q- CHENIER

Turbidity	8,760	0.01 - 0.61	NTU
Chlorine	8,760	0.31 - 3.42	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.04 - 1.31	mg/L

WELL R

Turbidity	8,760	0.00 - 8.01	NTU
Chlorine	8,760	0.54 - 3.20	mg/L
Fluoride (If the DWS provides fluoridation)	8,760	0.01 - 1.12	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	2017/12/12	0.0005	mg/L	No
Arsenic	2017/12/12	0.001	mg/L	No
Barium	2017/12/12	0.0153	mg/L	No
Boron	2017/12/12	0.014	mg/L	No
Cadmium	2017/12/12	0.0001	mg/L	No
Chromium	2017/12/12	0.001	mg/L	No
Mercury	2017/12/12	0.0001	mg/L	No
Selenium	2017/12/12	0.001	mg/L	No
Uranium	2017/12/12	0.001	mg/L	No
Nitrite	2018/03/05	0.03	mg/L	No
	2018/06/04	0.03	mg/L	No
	2018/09/04	0.03	mg/L	No
	2018/12/10	0.008	mg/L	No

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

Nitrate	2018/03/05	2.55	mg/L	No
	2018/06/04	2.47	mg/L	No
	2018/09/04	2.29	mg/L	No
	2018/12/10	2.34	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	2017/12/12	0.0005	mg/L	No
Arsenic	2017/12/12	0.001	mg/L	No
Barium	2017/12/12	0.0498	mg/L	No
Boron	2017/12/12	0.017	mg/L	No
Cadmium	2017/12/12	0.0001	mg/L	No
Chromium	2017/12/12	0.001	mg/L	No
Mercury	2017/12/12	0.0001	mg/L	No
Selenium	2017/12/12	0.001	mg/L	No
Uranium	2017/12/12	0.001	mg/L	No
Nitrite	2018/03/05	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/04	0.03	mg/L	No
	2018/12/10	0.008	mg/L	No
Nitrate	2018/03/05	0.5	mg/L	No
	2018/06/05	0.54	mg/L	No
	2018/09/04	0.38	mg/L	No
	2018/12/10	0.407	mg/L	No
Sodium	2017/06/15	21.60	mg/L	Yes

WELL C - PHILIPPE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2017/12/29	0.0005	mg/L	No
Arsenic	2017/12/29	0.0015	mg/L	No
Barium	2017/12/29	0.0083	mg/L	No
Boron	2017/12/29	0.0076	mg/L	No
Cadmium	2017/12/29	0.0001	mg/L	No
Chromium	2017/12/29	0.0011	mg/L	No
Mercury	2017/12/29	0.0001	mg/L	No
Selenium	2017/12/29	0.001	mg/L	No
Uranium	2017/12/29	0.001	mg/L	No
Nitrite	2018/03/05	0.03	mg/L	No
	2018/06/04	0.03	mg/L	No
	2018/09/04	0.03	mg/L	No
	2018/12/12	0.008	mg/L	No
Nitrate	2018/03/05	0.24	mg/L	No
	2018/06/04	0.25	mg/L	No
	2018/09/04	0.16	mg/L	No
	2018/12/12	0.16	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	2017/12/18	0.0005	mg/L	No
Arsenic	2017/12/18	0.0016	mg/L	No
Barium	2017/12/18	0.0414	mg/L	No
Boron	2017/12/18	0.0027	mg/L	No
Cadmium	2017/12/18	0.0001	mg/L	No
Chromium	2017/12/18	0.001	mg/L	No
Mercury	2017/12/18	0.0001	mg/L	No
Selenium	2017/12/18	0.001	mg/L	No
Uranium	2017/12/18	0.001	mg/L	No
Nitrite	2018/03/05	0.03	mg/L	No
	2018/06/04	0.03	mg/L	No
	2018/09/05	0.03	mg/L	No
	2018/12/11	0.008	mg/L	No
Nitrate	2018/03/05	0.7	mg/L	No
	2018/06/04	0.73	mg/L	No
	2018/09/05	0.7	mg/L	No
	2018/12/11	0.649	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	2017/12/13	0.0005	mg/L	No
Arsenic	2017/12/13	0.001	mg/L	No
Barium	2017/12/13	0.015	mg/L	No
Boron	2017/12/13	0.01	mg/L	No
Cadmium	2017/12/13	0.0001	mg/L	No
Chromium	2017/12/13	0.001	mg/L	No
Mercury	2017/12/13	0.0001	mg/L	No
Selenium	2017/12/13	0.001	mg/L	No
Uranium	2017/12/13	0.001	mg/L	No
Nitrite	2018/03/07	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/06	0.03	mg/L	No
	2018/12/11	0.008	mg/L	No
Nitrate	2018/03/07	1.23	mg/L	No
	2018/06/05	1.38	mg/L	No
	2018/09/06	0.1	mg/L	No
	2018/12/11	1.35	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	2017/12/12	0.0005	mg/L	No
Arsenic	2017/12/12	0.0019	mg/L	No
Barium	2017/12/12	0.0251	mg/L	No
Boron	2017/12/12	0.0035	mg/L	No
Cadmium	2017/12/12	0.0001	mg/L	No
Chromium	2017/12/12	0.001	mg/L	No
Mercury	2017/12/12	0.0001	mg/L	No
Selenium	2017/12/12	0.001	mg/L	No
Uranium	2017/12/12	0.0016	mg/L	No
Nitrite	2018/03/06	0.03	mg/L	No
	2018/09/05	0.03	mg/L	No
	2018/12/10	0.008	mg/L	No
Nitrate	2018/03/06	0.36	mg/L	No
	2018/09/05	0.37	mg/L	No
	2018/12/10	0.356	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	2017/12/12	0.0005	mg/L	No
Arsenic	2017/12/12	0.001	mg/L	No
Barium	2017/12/12	0.0512	mg/L	No
Boron	2017/12/12	0.0204	mg/L	No
Cadmium	2017/12/12	0.0001	mg/L	No
Chromium	2017/12/12	0.001	mg/L	No
Mercury	2017/12/12	0.0001	mg/L	No
Selenium	2017/12/12	0.001	mg/L	No
Uranium	2017/12/12	0.0011	mg/L	No
Nitrite	2018/03/05	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/04	0.03	mg/L	No
	2018/12/12	0.008	mg/L	No
Nitrate	2018/03/05	3.75	mg/L	No
	2018/06/05	3.31	mg/L	No
	2018/09/04	3.31	mg/L	No
	2018/12/12	3.06	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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Drinking-Water Systems Regulation O. Reg. 170/03

Antimony	2017/12/19	0.0005	mg/L	No
Arsenic	2017/12/19	0.0013	mg/L	No
Barium	2017/12/19	0.0209	mg/L	No
Boron	2017/12/19	0.0047	mg/L	No
Cadmium	2017/12/19	0.0001	mg/L	No
Chromium	2017/12/19	0.001	mg/L	No
Mercury	2017/12/19	0.0001	mg/L	No
Selenium	2017/12/19	0.001	mg/L	No
Uranium	2017/12/19	0.001	mg/L	No
Nitrite	2018/03/05	0.03	mg/L	No
	2018/06/04	0.03	mg/L	No
	2018/09/04	0.03	mg/L	No
	2018/12/11	0.008	mg/L	No
Nitrate	2018/03/05	1.6	mg/L	No
	2018/06/04	1.72	mg/L	No
	2018/09/04	1.53	mg/L	No
	2018/12/11	1.43	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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Drinking-Water Systems Regulation O. Reg. 170/03

Antimony	2018/12/12	0.0025	mg/L	No
Arsenic	2018/12/12	0.001	mg/L	No
Barium	2018/12/12	0.0191	mg/L	No
Boron	2018/12/12	0.0063	mg/L	No
Cadmium	2018/12/12	0.0001	mg/L	No
Chromium	2018/12/12	0.001	mg/L	No
Mercury	2018/12/12	0.0001	mg/L	No
Selenium	2018/12/12	0.0005	mg/L	No
Uranium	2018/12/12	0.001	mg/L	No
Nitrite	2018/03/06	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/05	0.03	mg/L	No
	2018/12/12	0.008	mg/L	No
Nitrate	2018/03/06	0.1	mg/L	No
	2018/06/05	0.1	mg/L	No
	2018/09/05	0.1	mg/L	No
	2018/12/12	0.02	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	2018/12/12	0.0008	mg/L	No
Arsenic	2018/12/12	0.001	mg/L	No
Barium	2018/12/12	0.0355	mg/L	No
Boron	2018/12/12	0.006	mg/L	No
Cadmium	2018/12/12	0.0001	mg/L	No
Chromium	2018/12/12	0.001	mg/L	No
Mercury	2018/12/12	0.0001	mg/L	No
Selenium	2018/12/12	0.0005	mg/L	No
Uranium	2018/12/12	0.001	mg/L	No
Nitrite	2018/03/06	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/05	0.03	mg/L	No
	2018/12/12	0.008	mg/L	No
Nitrate	2018/03/06	0.1	mg/L	No
	2018/06/05	0.1	mg/L	No
	2018/09/05	0.1	mg/L	No
	2018/12/12	0.02	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	2017/12/12	0.0005	mg/L	No
Arsenic	2017/12/12	0.001	mg/L	No
Barium	2017/12/12	0.0239	mg/L	No
Boron	2017/12/12	0.0094	mg/L	No
Cadmium	2017/12/12	0.0001	mg/L	No
Chromium	2017/12/12	0.001	mg/L	No
Mercury	2017/12/12	0.0001	mg/L	No
Selenium	2017/12/12	0.001	mg/L	No

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

Uranium	2017/12/12	0.001	mg/L	No
Nitrite	2018/03/06	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/05	0.03	mg/L	No
	2018/12/11	0.008	mg/L	No
Nitrate	2018/03/06	1.42	mg/L	No
	2018/06/05	1.51	mg/L	No
	2018/09/05	1.44	mg/L	No
	2018/12/11	2.12	mg/L	No
Sodium	2015/11/03	8.15	mg/L	No

WELL R

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2017/12/19	0.0005	mg/L	No
Arsenic	2017/12/19	0.001	mg/L	No
Barium	2017/12/19	0.0242	mg/L	No
Boron	2017/12/19	0.002	mg/L	No
Cadmium	2017/12/19	0.0001	mg/L	No
Chromium	2017/12/19	0.001	mg/L	No
Mercury	2017/12/19	0.0001	mg/L	No
Selenium	2017/12/19	0.001	mg/L	No
Uranium	2017/12/19	0.001	mg/L	No
Nitrite	2018/03/06	0.03	mg/L	No
	2018/06/05	0.03	mg/L	No
	2018/09/05	0.03	mg/L	No
	2018/12/11	0.008	mg/L	No
Nitrate	2018/03/06	0.4	mg/L	No
	2018/06/05	0.47	mg/L	No
	2018/09/05	0.32	mg/L	No
	2018/12/11	0.322	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		mg/L	

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)	2018	0.0176	mg/L	No

WELL A - DESCHENE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/12	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/12	0.0005	mg/L	No
Azinphos-methyl	2017/12/12	0.0002	mg/L	No
Benzene	2017/12/12	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/12	0.000005	mg/L	No
Bromoxynil	2017/12/12	0.00009	mg/L	No
Carbaryl	2017/12/12	0.001	mg/L	No
Carbofuran	2017/12/12	0.001	mg/L	No
Carbon Tetrachloride	2017/12/12	0.0002	mg/L	No
Chlorpyrifos	2017/12/12	0.0002	mg/L	No
Diazinon	2017/12/12	0.0002	mg/L	No
Dicamba	2017/12/12	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/12	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/12	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/12	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/12	0.0003	mg/L	No
Dichloromethane	2017/12/12	0.001	mg/L	No
2,4 Dichlorophenol	2017/12/12	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/12	0.00008	mg/L	No
Diclofop-methyl	2017/12/12	0.00008	mg/L	No
Dimethoate	2017/12/12	0.0002	mg/L	No
Diquat	2017/12/12	0.0007	mg/L	No
Diuron	2017/12/12	0.005	mg/L	No
Glyphosate	2017/12/12	0.02	mg/L	No
Malathion	2017/12/12	0.0002	mg/L	No
Metolachlor	2017/12/12	0.0001	mg/L	No
Metribuzin	2017/12/12	0.0001	mg/L	No
Monochlorobenzene	2017/12/12	0.0005	mg/L	No
Paraquat	2017/12/12	0.0003	mg/L	No
Pentachlorophenol	2017/12/12	0.0003	mg/L	No
Phorate	2017/12/12	0.0001	mg/L	No
Picloram	2017/12/12	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/12	0.00006	mg/L	No
Prometryne	2017/12/12	0.00006	mg/L	No
Simazine	2017/12/12	0.0002	mg/L	No
Terbufos	2017/12/12	0.0001	mg/L	No
Tetrachloroethylene	2017/12/12	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/12	0.0002	mg/L	No
Triallate	2017/12/12	0.0001	mg/L	No
Trichloroethylene	2017/12/12	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/12	0.0002	mg/L	No
Trifluralin	2017/12/12	0.0001	mg/L	No
Vinyl Chloride	2017/12/12	0.0001	mg/L	No
MCPA	2017/12/12	0.01	mg/L	No

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

WELL B - KENNETH WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/12	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/12	0.0005	mg/L	No
Azinphos-methyl	2017/12/12	0.0002	mg/L	No
Benzene	2017/12/12	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/12	0.000005	mg/L	No
Bromoxynil	2017/12/12	0.00009	mg/L	No
Carbaryl	2017/12/12	0.001	mg/L	No
Carbofuran	2017/12/12	0.001	mg/L	No
Carbon Tetrachloride	2017/12/12	0.0002	mg/L	No
Chlorpyrifos	2017/12/12	0.0002	mg/L	No
Diazinon	2017/12/12	0.0002	mg/L	No
Dicamba	2017/12/12	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/12	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/12	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/12	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/12	0.0003	mg/L	No
Dichloromethane	2017/12/12	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/12	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/12	0.00008	mg/L	No
Diclofop-methyl	2017/12/12	0.00008	mg/L	No
Dimethoate	2017/12/12	0.0002	mg/L	No
Diquat	2017/12/12	0.0007	mg/L	No
Diuron	2017/12/12	0.006	mg/L	No
Glyphosate	2017/12/12	0.02	mg/L	No
Malathion	2017/12/12	0.0002	mg/L	No
Metolachlor	2017/12/12	0.0001	mg/L	No
Metribuzin	2017/12/12	0.0001	mg/L	No
Monochlorobenzene	2017/12/12	0.0005	mg/L	No
Paraquat	2017/12/12	0.0003	mg/L	No
Pentachlorophenol	2017/12/12	0.0003	mg/L	No
Phorate	2017/12/12	0.0001	mg/L	No
Picloram	2017/12/12	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/12	0.00006	mg/L	No
Prometryne	2017/12/12	0.00006	mg/L	No
Simazine	2017/12/12	0.0002	mg/L	No
Terbufos	2017/12/12	0.0001	mg/L	No
Tetrachloroethylene	2017/12/12	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/12	0.0002	mg/L	No
Triallate	2017/12/12	0.0001	mg/L	No
Trichloroethylene	2017/12/12	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/12	0.0002	mg/L	No
Trifluralin	2017/12/12	0.0001	mg/L	No
Vinyl Chloride	2017/12/12	0.0001	mg/L	No
MCPA	2017/12/12	0.01	mg/L	No

WELL C - PHILIPPE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/29	0.0002	mg/L	No

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

Atrazine + N-dealkylated metabolites	2017/12/29	0.0005	mg/L	No
Azinphos-methyl	2017/12/29	0.0002	mg/L	No
Benzene	2017/12/29	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/29	0.000005	mg/L	No
Bromoxynil	2017/12/29	0.00009	mg/L	No
Carbaryl	2017/12/29	0.001	mg/L	No
Carbofuran	2017/12/29	0.001	mg/L	No
Carbon Tetrachloride	2017/12/29	0.0002	mg/L	No
Chlorpyrifos	2017/12/29	0.0002	mg/L	No
Diazinon	2017/12/29	0.0002	mg/L	No
Dicamba	2017/12/29	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/29	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/29	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/29	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/29	0.0003	mg/L	No
Dichloromethane	2017/12/29	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/29	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/29	0.00008	mg/L	No
Diclofop-methyl	2017/12/29	0.00008	mg/L	No
Dimethoate	2017/12/29	0.0002	mg/L	No
Diquat	2017/12/29	0.0006	mg/L	No
Diuron	2017/12/29	0.005	mg/L	No
Glyphosate	2017/12/29	0.02	mg/L	No
Malathion	2017/12/29	0.0002	mg/L	No
Metolachlor	2017/12/29	0.0001	mg/L	No
Metribuzin	2017/12/29	0.0001	mg/L	No
Monochlorobenzene	2017/12/29	0.0005	mg/L	No
Paraquat	2017/12/29	0.0003	mg/L	No
Pentachlorophenol	2017/12/29	0.0003	mg/L	No
Phorate	2017/12/29	0.0001	mg/L	No
Picloram	2017/12/29	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/29	0.00007	mg/L	No
Prometryne	2017/12/29	0.00006	mg/L	No
Simazine	2017/12/29	0.0002	mg/L	No
Terbufos	2017/12/29	0.0001	mg/L	No
Tetrachloroethylene	2017/12/29	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/29	0.0003	mg/L	No
Triallate	2017/12/29	0.0001	mg/L	No
Trichloroethylene	2017/12/29	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/29	0.0002	mg/L	No
Trifluralin	2017/12/29	0.0001	mg/L	No
Vinyl Chloride	2017/12/29	0.0001	mg/L	No
MCPA	2017/12/29	0.01	mg/L	No

WELL D - FROST WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/18	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/18	0.0005	mg/L	No
Azinphos-methyl	2017/12/18	0.0002	mg/L	No
Benzene	2017/12/18	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/18	0.000005	mg/L	No

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

Bromoxynil	2017/12/18	0.00009	mg/L	No
Carbaryl	2017/12/18	0.001	mg/L	No
Carbofuran	2017/12/18	0.001	mg/L	No
Carbon Tetrachloride	2017/12/18	0.0002	mg/L	No
Chlorpyrifos	2017/12/18	0.0002	mg/L	No
Diazinon	2017/12/18	0.0002	mg/L	No
Dicamba	2017/12/18	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/18	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/18	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/18	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/18	0.0003	mg/L	No
Dichloromethane	2017/12/18	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/18	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/18	0.00008	mg/L	No
Diclofop-methyl	2017/12/18	0.00008	mg/L	No
Dimethoate	2017/12/18	0.0002	mg/L	No
Diquat	2017/12/18	0.0007	mg/L	No
Diuron	2017/12/18	0.005	mg/L	No
Glyphosate	2017/12/18	0.02	mg/L	No
Malathion	2017/12/18	0.0002	mg/L	No
Metolachlor	2017/12/18	0.0001	mg/L	No
Metribuzin	2017/12/18	0.0001	mg/L	No
Monochlorobenzene	2017/12/18	0.0005	mg/L	No
Paraquat	2017/12/18	0.0003	mg/L	No
Pentachlorophenol	2017/12/18	0.0003	mg/L	No
Phorate	2017/12/18	0.0001	mg/L	No
Picloram	2017/12/18	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/18	0.00006	mg/L	No
Prometryne	2017/12/18	0.00006	mg/L	No
Simazine	2017/12/18	0.0002	mg/L	No
Terbufos	2017/12/18	0.0001	mg/L	No
Tetrachloroethylene	2017/12/18	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/18	0.0003	mg/L	No
Triallate	2017/12/18	0.0001	mg/L	No
Trichloroethylene	2017/12/18	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/18	0.0002	mg/L	No
Trifluralin	2017/12/18	0.0001	mg/L	No
Vinyl Chloride	2017/12/18	0.0001	mg/L	No
MCPA	2017/12/18	0.01	mg/L	No

WELL E - NOTRE DAME WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/13	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/13	0.0005	mg/L	No
Azinphos-methyl	2017/12/13	0.0002	mg/L	No
Benzene	2017/12/13	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/13	0.000005	mg/L	No
Bromoxynil	2017/12/13	0.00009	mg/L	No
Carbaryl	2017/12/13	0.001	mg/L	No
Carbofuran	2017/12/13	0.001	mg/L	No
Carbon Tetrachloride	2017/12/13	0.0002	mg/L	No

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

Chlorpyrifos	2017/12/13	0.0002	mg/L	No
Diazinon	2017/12/13	0.0002	mg/L	No
Dicamba	2017/12/13	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/13	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/13	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/13	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/13	0.0003	mg/L	No
Dichloromethane	2017/12/13	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/13	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/13	0.00008	mg/L	No
Diclofop-methyl	2017/12/13	0.00017	mg/L	No
Dimethoate	2017/12/13	0.0002	mg/L	No
Diquat	2017/12/13	0.0007	mg/L	No
Diuron	2017/12/13	0.006	mg/L	No
Glyphosate	2017/12/13	0.02	mg/L	No
Malathion	2017/12/13	0.0002	mg/L	No
Metolachlor	2017/12/13	0.0001	mg/L	No
Metribuzin	2017/12/13	0.0001	mg/L	No
Monochlorobenzene	2017/12/13	0.0005	mg/L	No
Paraquat	2017/12/13	0.0003	mg/L	No
Pentachlorophenol	2017/12/13	0.0003	mg/L	No
Phorate	2017/12/13	0.0001	mg/L	No
Picloram	2017/12/13	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/13	0.00006	mg/L	No
Prometryne	2017/12/13	0.00006	mg/L	No
Simazine	2017/12/13	0.0002	mg/L	No
Terbufos	2017/12/13	0.0001	mg/L	No
Tetrachloroethylene	2017/12/13	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/13	0.0003	mg/L	No
Triallate	2017/12/13	0.0001	mg/L	No
Trichloroethylene	2017/12/13	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/13	0.0002	mg/L	No
Trifluralin	2017/12/13	0.0001	mg/L	No
Vinyl Chloride	2017/12/13	0.0001	mg/L	No
MCPA	2017/12/13	0.01	mg/L	No

WELL F - LINDEN WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/12	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/12	0.0005	mg/L	No
Azinphos-methyl	2017/12/12	0.0002	mg/L	No
Benzene	2017/12/12	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/12	0.000005	mg/L	No
Bromoxynil	2017/12/12	0.00009	mg/L	No
Carbaryl	2017/12/12	0.001	mg/L	No
Carbofuran	2017/12/12	0.001	mg/L	No
Carbon Tetrachloride	2017/12/12	0.0002	mg/L	No
Chlorpyrifos	2017/12/12	0.0002	mg/L	No
Diazinon	2017/12/12	0.0002	mg/L	No
Dicamba	2017/12/12	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/12	0.0002	mg/L	No

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

1,4-Dichlorobenzene	2017/12/12	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/12	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/12	0.0003	mg/L	No
Dichloromethane	2017/12/12	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/12	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/12	0.00008	mg/L	No
Diclofop-methyl	2017/12/12	0.00008	mg/L	No
Dimethoate	2017/12/12	0.0002	mg/L	No
Diquat	2017/12/12	0.0008	mg/L	No
Diuron	2017/12/12	0.005	mg/L	No
Glyphosate	2017/12/12	0.02	mg/L	No
Malathion	2017/12/12	0.0002	mg/L	No
Metolachlor	2017/12/12	0.0001	mg/L	No
Metribuzin	2017/12/12	0.0001	mg/L	No
Monochlorobenzene	2017/12/12	0.0005	mg/L	No
Paraquat	2017/12/12	0.0004	mg/L	No
Pentachlorophenol	2017/12/12	0.0003	mg/L	No
Phorate	2017/12/12	0.0001	mg/L	No
Picloram	2017/12/12	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/12	0.00006	mg/L	No
Prometryne	2017/12/12	0.00006	mg/L	No
Simazine	2017/12/12	0.0002	mg/L	No
Terbufos	2017/12/12	0.0001	mg/L	No
Tetrachloroethylene	2017/12/12	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/12	0.0003	mg/L	No
Triallate	2017/12/12	0.0001	mg/L	No
Trichloroethylene	2017/12/12	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/12	0.0002	mg/L	No
Trifluralin	2017/12/12	0.0001	mg/L	No
Vinyl Chloride	2017/12/12	0.0001	mg/L	No
MCPA	2017/12/12	0.01	mg/L	No

WELL G - PHARAND WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/12	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/12	0.0005	mg/L	No
Azinphos-methyl	2017/12/12	0.0002	mg/L	No
Benzene	2017/12/12	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/12	0.000005	mg/L	No
Bromoxynil	2017/12/12	0.00009	mg/L	No
Carbaryl	2017/12/12	0.001	mg/L	No
Carbofuran	2017/12/12	0.001	mg/L	No
Carbon Tetrachloride	2017/12/12	0.0002	mg/L	No
Chlorpyrifos	2017/12/12	0.0002	mg/L	No
Diazinon	2017/12/12	0.0002	mg/L	No
Dicamba	2017/12/12	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/12	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/12	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/12	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/12	0.0003	mg/L	No

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

Dichloromethane	2017/12/12	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/12	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/12	0.00008	mg/L	No
Diclofop-methyl	2017/12/12	0.00008	mg/L	No
Dimethoate	2017/12/12	0.0002	mg/L	No
Diquat	2017/12/12	0.0007	mg/L	No
Diuron	2017/12/12	0.005	mg/L	No
Glyphosate	2017/12/12	0.02	mg/L	No
Malathion	2017/12/12	0.0002	mg/L	No
Metolachlor	2017/12/12	0.0001	mg/L	No
Metribuzin	2017/12/12	0.0001	mg/L	No
Monochlorobenzene	2017/12/12	0.0005	mg/L	No
Paraquat	2017/12/12	0.0004	mg/L	No
Pentachlorophenol	2017/12/12	0.0003	mg/L	No
Phorate	2017/12/12	0.0001	mg/L	No
Picloram	2017/12/12	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/12	0.00006	mg/L	No
Prometryne	2017/12/12	0.00006	mg/L	No
Simazine	2017/12/12	0.0002	mg/L	No
Terbufos	2017/12/12	0.0001	mg/L	No
Tetrachloroethylene	2017/12/12	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/12	0.0003	mg/L	No
Triallate	2017/12/12	0.0001	mg/L	No
Trichloroethylene	2017/12/12	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/12	0.0002	mg/L	No
Trifluralin	2017/12/12	0.0001	mg/L	No
Vinyl Chloride	2017/12/12	0.0001	mg/L	No
MCPA	2017/12/12	0.01	mg/L	No

WELL H - MICHELLE WELL

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/19	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/19	0.0005	mg/L	No
Azinphos-methyl	2017/12/19	0.0002	mg/L	No
Benzene	2017/12/19	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/19	0.000005	mg/L	No
Bromoxynil	2017/12/19	0.00009	mg/L	No
Carbaryl	2017/12/19	0.001	mg/L	No
Carbofuran	2017/12/19	0.001	mg/L	No
Carbon Tetrachloride	2017/12/19	0.0002	mg/L	No
Chlorpyrifos	2017/12/19	0.0002	mg/L	No
Diazinon	2017/12/19	0.0002	mg/L	No
Dicamba	2017/12/19	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/19	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/19	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/19	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/19	0.0003	mg/L	No
Dichloromethane	2017/12/19	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/19	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/19	0.00008	mg/L	No

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

Diclofop-methyl	2017/12/19	0.00008	mg/L	No
Dimethoate	2017/12/19	0.0002	mg/L	No
Diquat	2017/12/19	0.0007	mg/L	No
Diuron	2017/12/19	0.006	mg/L	No
Glyphosate	2017/12/19	0.02	mg/L	No
Malathion	2017/12/19	0.0002	mg/L	No
Metolachlor	2017/12/19	0.0001	mg/L	No
Metribuzin	2017/12/19	0.0001	mg/L	No
Monochlorobenzene	2017/12/19	0.0005	mg/L	No
Paraquat	2017/12/19	0.0003	mg/L	No
Pentachlorophenol	2017/12/19	0.0003	mg/L	No
Phorate	2017/12/19	0.0001	mg/L	No
Picloram	2017/12/19	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/19	0.00006	mg/L	No
Prometryne	2017/12/19	0.00005	mg/L	No
Simazine	2017/12/19	0.0002	mg/L	No
Terbufos	2017/12/19	0.0001	mg/L	No
Tetrachloroethylene	2017/12/19	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/19	0.0003	mg/L	No
Triallate	2017/12/19	0.0001	mg/L	No
Trichloroethylene	2017/12/19	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/19	0.0002	mg/L	No
Trifluralin	2017/12/19	0.0001	mg/L	No
Vinyl Chloride	2017/12/19	0.0001	mg/L	No
MCPA	2017/12/19	0.01	mg/L	No

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				

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

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	2018/12/12	0.000234	mg/L	No
Atrazine + N-dealkylated metabolites	2018/12/12	0.0005	mg/L	No
Azinphos-methyl	2018/12/12	0.000176	mg/L	No
Benzene	2018/12/12	0.0001	mg/L	No
Benzo(a)pyrene	2018/12/12	0.00001	mg/L	No
Bromoxynil	2018/12/12	0.000103	mg/L	No
Carbaryl	2018/12/12	0.001	mg/L	No
Carbofuran	2018/12/12	0.001	mg/L	No
Carbon Tetrachloride	2018/12/12	0.0002	mg/L	No
Chlorpyrifos	2018/12/12	0.000176	mg/L	No
Diazinon	2018/12/12	0.000176	mg/L	No
Dicamba	2018/12/12	0.00009	mg/L	No
1,2-Dichlorobenzene	2018/12/12	0.0002	mg/L	No
1,4-Dichlorobenzene	2018/12/12	0.0003	mg/L	No
1,2-Dichloroethane	2018/12/12	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2018/12/12	0.0003	mg/L	No
Dichloromethane	2018/12/12	0.001	mg/L	No
2-4 Dichlorophenol	2018/12/12	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2018/12/12	0.000386	mg/L	No
Diclofop-methyl	2018/12/12	0.000129	mg/L	No
Dimethoate	2018/12/12	0.000176	mg/L	No
Diquat	2018/12/12	0.002	mg/L	No
Diuron	2018/12/12	0.0006	mg/L	No
Glyphosate	2018/12/12	0.02	mg/L	No
Malathion	2018/12/12	0.000176	mg/L	No
Metolachlor	2018/12/12	0.000117	mg/L	No
Metribuzin	2018/12/12	0.000117	mg/L	No

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

Monochlorobenzene	2018/12/12	0.0005	mg/L	No
Paraquat	2018/12/12	0.005	mg/L	No
Pentachlorophenol	2018/12/12	0.0003	mg/L	No
Phorate	2018/12/12	0.000117	mg/L	No
Picloram	2018/12/12	0.00009	mg/L	No
Polychlorinated Biphenyls(PCB)	2018/12/12	0.00006	mg/L	No
Prometryne	2018/12/12	0.0000585	mg/L	No
Simazine	2018/12/12	0.000176	mg/L	No
Terbufos	2018/12/12	0.000117	mg/L	No
Tetrachloroethylene	2018/12/12	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2018/12/12	0.0002	mg/L	No
Triallate	2018/12/12	0.000117	mg/L	No
Trichloroethylene	2018/12/12	0.0002	mg/L	No
2,4,6-Trichlorophenol	2018/12/12	0.0002	mg/L	No
Trifluralin	2018/12/12	0.000117	mg/L	No
Vinyl Chloride	2018/12/12	0.0001	mg/L	No
MCPA	2018/12/12	0.00643	mg/L	No

WELL J - Capreol

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2018/12/12	0.000237	mg/L	No
Atrazine + N-dealkylated metabolites	2018/12/12	0.0005	mg/L	No
Azinphos-methyl	2018/12/12	0.000178	mg/L	No
Benzene	2018/12/12	0.0001	mg/L	No
Benzo(a)pyrene	2018/12/12	0.00001	mg/L	No
Bromoxynil	2018/12/12	0.000104	mg/L	No
Carbaryl	2018/12/12	0.001	mg/L	No
Carbofuran	2018/12/12	0.001	mg/L	No
Carbon Tetrachloride	2018/12/12	0.0002	mg/L	No
Chlorpyrifos	2018/12/12	0.000178	mg/L	No
Diazinon	2018/12/12	0.000178	mg/L	No
Dicamba	2018/12/12	0.000091	mg/L	No
1,2-Dichlorobenzene	2018/12/12	0.0002	mg/L	No
1,4-Dichlorobenzene	2018/12/12	0.0003	mg/L	No
1,2-Dichloroethane	2018/12/12	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2018/12/12	0.0003	mg/L	No
Dichloromethane	2018/12/12	0.001	mg/L	No
2-4 Dichlorophenol	2018/12/12	0.0003	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2018/12/12	0.00039	mg/L	No
Diclofop-methyl	2018/12/12	0.00013	mg/L	No
Dimethoate	2018/12/12	0.000178	mg/L	No
Diquat	2018/12/12	0.002	mg/L	No
Diuron	2018/12/12	0.0006	mg/L	No
Glyphosate	2018/12/12	0.02	mg/L	No
Malathion	2018/12/12	0.000178	mg/L	No
Metolachlor	2018/12/12	0.000118	mg/L	No
Metribuzin	2018/12/12	0.000118	mg/L	No
Monochlorobenzene	2018/12/12	0.0005	mg/L	No
Paraquat	2018/12/12	0.004	mg/L	No
Pentachlorophenol	2018/12/12	0.0003	mg/L	No
Phorate	2018/12/12	0.000118	mg/L	No

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

Picloram	2018/12/12	0.000091	mg/L	No
Polychlorinated Biphenyls(PCB)	2018/12/12	0.00006	mg/L	No
Prometryne	2018/12/12	0.0000592	mg/L	No
Simazine	2018/12/12	0.000178	mg/L	No
Terbufos	2018/12/12	0.000118	mg/L	No
Tetrachloroethylene	2018/12/12	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2018/12/12	0.0003	mg/L	No
Triallate	2018/12/12	0.000118	mg/L	No
Trichloroethylene	2018/12/12	0.0002	mg/L	No
2,4,6-Trichlorophenol	2018/12/12	0.0002	mg/L	No
Trifluralin	2018/12/12	0.000118	mg/L	No
Vinyl Chloride	2018/12/12	0.0001	mg/L	No
MCPA	2018/12/12	0.0065	mg/L	No

WELL Q- CHENIER

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/12	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/12	0.0005	mg/L	No
Azinphos-methyl	2017/12/12	0.0002	mg/L	No
Benzene	2017/12/12	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/12	0.000005	mg/L	No
Bromoxynil	2017/12/12	0.00009	mg/L	No
Carbaryl	2017/12/12	0.001	mg/L	No
Carbofuran	2017/12/12	0.001	mg/L	No
Carbon Tetrachloride	2017/12/12	0.0002	mg/L	No
Chlorpyrifos	2017/12/12	0.0002	mg/L	No
Diazinon	2017/12/12	0.0002	mg/L	No
Dicamba	2017/12/12	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/12	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/12	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/12	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/12	0.0003	mg/L	No
Dichloromethane	2017/12/12	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/12	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/12	0.00008	mg/L	No
Diclofop-methyl	2017/12/12	0.00008	mg/L	No
Dimethoate	2017/12/12	0.0002	mg/L	No
Diquat	2017/12/12	0.0006	mg/L	No
Diuron	2017/12/12	0.005	mg/L	No
Glyphosate	2017/12/12	0.02	mg/L	No
Malathion	2017/12/12	0.0002	mg/L	No
Metolachlor	2017/12/12	0.0001	mg/L	No
Metribuzin	2017/12/12	0.0001	mg/L	No
Monochlorobenzene	2017/12/12	0.0005	mg/L	No
Paraquat	2017/12/12	0.0003	mg/L	No
Pentachlorophenol	2017/12/12	0.0003	mg/L	No
Phorate	2017/12/12	0.0001	mg/L	No
Picloram	2017/12/12	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/12	0.00006	mg/L	No
Prometryne	2017/12/12	0.00006	mg/L	No
Simazine	2017/12/12	0.0002	mg/L	No

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

Terbufos	2017/12/12	0.0001	mg/L	No
Tetrachloroethylene	2017/12/12	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/12	0.0002	mg/L	No
Triallate	2017/12/12	0.0001	mg/L	No
Trichloroethylene	2017/12/12	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/12	0.0002	mg/L	No
Trifluralin	2017/12/12	0.0001	mg/L	No
Vinyl Chloride	2017/12/12	0.0001	mg/L	No
MCPA	2017/12/12	0.01	mg/L	No

WELL R

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	2017/12/19	0.0002	mg/L	No
Atrazine + N-dealkylated metabolites	2017/12/19	0.0005	mg/L	No
Azinphos-methyl	2017/12/19	0.0002	mg/L	No
Benzene	2017/12/19	0.0001	mg/L	No
Benzo(a)pyrene	2017/12/19	0.000005	mg/L	No
Bromoxynil	2017/12/19	0.00009	mg/L	No
Carbaryl	2017/12/19	0.001	mg/L	No
Carbofuran	2017/12/19	0.001	mg/L	No
Carbon Tetrachloride	2017/12/19	0.0002	mg/L	No
Chlorpyrifos	2017/12/19	0.0002	mg/L	No
Diazinon	2017/12/19	0.0002	mg/L	No
Dicamba	2017/12/19	0.00008	mg/L	No
1,2-Dichlorobenzene	2017/12/19	0.0002	mg/L	No
1,4-Dichlorobenzene	2017/12/19	0.0003	mg/L	No
1,2-Dichloroethane	2017/12/19	0.0002	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2017/12/19	0.0003	mg/L	No
Dichloromethane	2017/12/19	0.001	mg/L	No
2-4 Dichlorophenol	2017/12/19	0.0002	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2017/12/19	0.00008	mg/L	No
Diclofop-methyl	2017/12/19	0.00008	mg/L	No
Dimethoate	2017/12/19	0.0002	mg/L	No
Diquat	2017/12/19	0.0008	mg/L	No
Diuron	2017/12/19	0.005	mg/L	No
Glyphosate	2017/12/19	0.02	mg/L	No
Malathion	2017/12/19	0.0002	mg/L	No
Metolachlor	2017/12/19	0.0001	mg/L	No
Metribuzin	2017/12/19	0.0001	mg/L	No
Monochlorobenzene	2017/12/19	0.0005	mg/L	No
Paraquat	2017/12/19	0.0004	mg/L	No
Pentachlorophenol	2017/12/19	0.0003	mg/L	No
Phorate	2017/12/19	0.0001	mg/L	No
Picloram	2017/12/19	0.00008	mg/L	No
Polychlorinated Biphenyls(PCB)	2017/12/19	0.00006	mg/L	No
Prometryne	2017/12/19	0.00006	mg/L	No
Simazine	2017/12/19	0.0002	mg/L	No
Terbufos	2017/12/19	0.0001	mg/L	No
Tetrachloroethylene	2017/12/19	0.0003	mg/L	No
2,3,4,6-Tetrachlorophenol	2017/12/19	0.0003	mg/L	No
Triallate	2017/12/19	0.0001	mg/L	No

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

Trichloroethylene	2017/12/19	0.0002	mg/L	No
2,4,6-Trichlorophenol	2017/12/19	0.0002	mg/L	No
Trifluralin	2017/12/19	0.0001	mg/L	No
Vinyl Chloride	2017/12/19	0.0001	mg/L	No
MCPA	2017/12/19	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:	260006789
Drinking-Water System Name:	Vermilion Distribution System
Drinking-Water System Owner:	City of Greater Sudbury
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	From 2018-01-01 To 2018-12-31

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

1) Water Main Lining - \$360,000.00

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	263	0 to 0	0 to 0	59	10 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	0.11 - 3.34

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

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

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

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		mg/L	

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)	2018	0.0993	mg/L	No

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				
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)