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|---------------------------------|-------------------------------|
| Drinking-Water System Number: | 220005063 |
| Drinking-Water System Name: | Churchill Well Supply |
| Drinking-Water System Owner: | InnServices Utilities Inc. |
| Drinking-Water System Category: | Large Municipal Residential |
| Period being reported: | January 1 – December 31, 2019 |

| | |
|---|--|
| <p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [] No [X]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>https://innisfil.ca/living/InnServices/WaterTreatmentDistribution/watersystemsreports</p> <p>InnServices Headquarters 7251 Yonge Street, Innisfil, ON</p> </div> | <p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <p style="text-align: center;">N/A</p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to:</p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p> |
|---|--|

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 |
|----------------------------|------------------------------|
| None | |

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 [X] No []

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

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method (Message on Utility Bill)



Describe your Drinking-Water System

Churchill DWS consists of three (3) wells, one well pump house, one high lift pumping station and underground reservoir, and distribution watermains. Monitored remotely by SCADA

List all water treatment chemicals used over this reporting period

12% Sodium-hypochlorite

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

New Churchill Booster Pumping Station commissioned in 2019 - \$4.611 million budget
Chlorine pump - \$3100

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

| Incident Date | Parameter | Result | Unit of Measure | Corrective Action | Corrective Action Date |
|---------------|-----------|--------|-----------------|-----------------------------------|------------------------|
| Feb. 19, 2019 | THM | 103.63 | µg/L | Investigate methods to reduce THM | Feb. 19, 2019 |

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

| | Number of Samples | Range of E.Coli Or Fecal Results (min #)-(max #) CFU/100mL | Range of Total Coliform Results (min #)-(max #) CFU/100mL | Number of HPC Samples | Range of HPC Results (min #)-(max #) CFU/1mL |
|---------------------|-------------------|--|---|-----------------------|--|
| Raw | 155 | 0-0 | 0-444 | n/a | n/a |
| Treated | 89 | 0-0 | 0-0 | 89 | 0-394 |
| Distribution | 212 | 0-0 | 0-0 | 212 | 0-181 |

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

| | Number of Grab Samples | Range of Results (min #)-(max #) | Unit of Measure |
|---|------------------------|----------------------------------|-----------------|
| Turbidity | N/A | N/A | N/A |
| Chlorine – Well #3 | 8760 | 0.00 – 5.00* | mg/L |
| Chlorine – Well # 1 and 2 | 8760 | 0.00 – 5.00* | mg/L |
| Fluoride (If the DWS provides fluoridation) | N/A | N/A | N/A |

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

* - all instances where FCR < 1.00 mg/L were investigated and confirmed to coincide with a power outage, calibration activities, and/or appropriate corrective actions were taken to remove non-compliant water from the system.

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

| Date of legal instrument issued | Parameter | Date Sampled | Result | Unit of Measure |
|---------------------------------|-----------|--------------|--------|-----------------|
| n/a | | | | |

Churchill Well #1 & 2

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

| Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|-----------|-------------|--------------|-----------------|------------|
| Antimony | 20-Nov-2018 | 0.03 | µg/L | No |
| Arsenic | 20-Nov-2018 | <0.2 | µg/L | No |
| Barium | 20-Nov-2018 | 35.6 | µg/L | No |
| Boron | 20-Nov-2018 | 158 | µg/L | No |
| Cadmium | 20-Nov-2018 | <0.003 | µg/L | No |
| Chromium | 20-Nov-2018 | 0.11 | µg/L | No |
| Mercury | 20-Nov-2018 | <0.01 | µg/L | No |
| Selenium | 20-Nov-2018 | <0.04 | µg/L | No |
| Sodium | 19-Dec-2016 | 27.5 | mg/L | Yes |
| Uranium | 20-Nov-2018 | 0.004 | µg/L | No |
| Fluoride | 19-Dec-2016 | <0.4 | mg/L | No |
| Nitrite | 18-Nov-2019 | <0.003 | mg/L | No |
| Nitrate | 18-Nov-2019 | 0.009 | mg/L | No |

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

| Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|---|-------------|--------------|-----------------|------------|
| Alachlor | 20-Nov-2018 | <0.02 | µg/L | No |
| Atrazine + N-dealkylated metabolites | 20-Nov-2018 | <0.01 | µg/L | No |
| Azinphos-methyl | 20-Nov-2018 | <0.05 | µg/L | No |
| Benzene | 20-Nov-2018 | <0.32 | µg/L | No |
| Benzo(a)pyrene | 20-Nov-2018 | <0.004 | µg/L | No |
| Bromoxynil | 20-Nov-2018 | <0.33 | µg/L | No |
| Carbaryl | 20-Nov-2018 | <0.05 | µg/L | No |
| Carbofuran | 20-Nov-2018 | <0.01 | µg/L | No |
| Carbon Tetrachloride | 20-Nov-2018 | <0.16 | µg/L | No |
| Chlorpyrifos | 20-Nov-2018 | <0.02 | µg/L | No |
| Diazinon | 20-Nov-2018 | <0.02 | µg/L | No |
| Dicamba | 20-Nov-2018 | <0.20 | µg/L | No |
| 1,2-Dichlorobenzene | 20-Nov-2018 | <0.41 | µg/L | No |
| 1,4-Dichlorobenzene | 20-Nov-2018 | <0.36 | µg/L | No |
| 1,2-Dichloroethane | 20-Nov-2018 | <0.35 | µg/L | No |
| 1,1-Dichloroethylene (vinylidene chloride) | 20-Nov-2018 | <0.33 | µg/L | No |
| Dichloromethane | 20-Nov-2018 | <0.35 | µg/L | No |
| 2-4 Dichlorophenol | 20-Nov-2018 | <0.15 | µg/L | No |
| 2,4-Dichlorophenoxy acetic acid (2,4-D) | 20-Nov-2018 | <0.19 | µg/L | No |
| Diclofop-methyl | 20-Nov-2018 | <0.40 | µg/L | No |
| Dimethoate | 20-Nov-2018 | <0.03 | µg/L | No |
| Diquat | 20-Nov-2018 | <1 | µg/L | No |

| | | | | |
|---|-------------|--------------|------|----|
| Diuron | 20-Nov-2018 | <0.03 | µg/L | No |
| Glyphosate | 20-Nov-2018 | <1 | µg/L | No |
| Malathion | 20-Nov-2018 | <0.02 | µg/L | No |
| 2-Methyl-4-chlorophenoxyacetic acid (MCPA) | 20-Nov-2018 | <0.0001 2 | Mg/L | No |
| Metolachlor | 20-Nov-2018 | <0.01 | µg/L | No |
| Metribuzin | 20-Nov-2018 | <0.02 | µg/L | No |
| Monochlorobenzene | 20-Nov-2018 | <0.3 | µg/L | No |
| Paraquat | 20-Nov-2018 | <1 | µg/L | No |
| Pentachlorophenol | 20-Nov-2018 | <0.15 | µg/L | No |
| Phorate | 20-Nov-2018 | <0.01 | µg/L | No |
| Picloram | 20-Nov-2018 | <1 | µg/L | No |
| Polychlorinated Biphenyls(PCB) | 20-Nov-2018 | <0.04 | µg/L | No |
| Prometryne | 20-Nov-2018 | <0.03 | µg/L | No |
| Simazine | 20-Nov-2018 | <0.03 | µg/L | No |
| Terbufos | 20-Nov-2018 | <0.01 | µg/L | No |
| Tetrachloroethylene | 20-Nov-2018 | <0.35 | µg/L | No |
| 2,3,4,6-Tetrachlorophenol | 20-Nov-2018 | <0.2 | µg/L | No |
| Triallate | 20-Nov-2018 | <0.01 | µg/L | No |
| Trichloroethylene | 20-Nov-2018 | <0.44 | µg/L | No |
| 2,4,6-Trichlorophenol | 20-Nov-2018 | <0.25 | µg/L | No |
| Trifluralin | 20-Nov-2018 | <0.02 | µg/L | No |
| Vinyl Chloride | 20-Nov-2018 | <0.17 | µg/L | No |

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

| Parameter | Result Value | Unit of Measure | Date of Sample |
|------------------|---------------------|------------------------|-----------------------|
| Sodium | 27.5 | mg/L | 19-Dec-2016 |

Churchill Well #3

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

| Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|-----------|-------------|--------------|-----------------|------------|
| Antimony | 20-Nov-2018 | 0.02 | µg/L | No |
| Arsenic | 20-Nov-2018 | <0.2 | µg/L | No |
| Barium | 20-Nov-2018 | 29.6 | µg/L | No |
| Boron | 20-Nov-2018 | 163 | µg/L | No |
| Cadmium | 20-Nov-2018 | <0.003 | µg/L | No |
| Chromium | 20-Nov-2018 | 0.09 | µg/L | No |
| Mercury | 20-Nov-2018 | <0.01 | µg/L | No |
| Selenium | 20-Nov-2018 | <0.04 | µg/L | No |
| Sodium | 19-Dec-2016 | 62.4 | Mg/L | Yes |
| Uranium | 20-Nov-2018 | <0.002 | µg/L | No |
| Fluoride | 19-Dec-2016 | 0.5 | mg/L | No |
| Nitrite | 18-Nov-2019 | <0.003 | mg/L | No |
| Nitrate | 18-Nov-2019 | <0.006 | mg/L | No |

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

| Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|--------------------------------------|-------------|--------------|-----------------|------------|
| Alachlor | 20-Nov-2018 | <0.02 | µg/L | No |
| Atrazine + N-dealkylated metabolites | 20-Nov-2018 | <0.01 | µg/L | No |
| Azinphos-methyl | 20-Nov-2018 | <0.05 | µg/L | No |
| Benzene | 20-Nov-2018 | <0.32 | µg/L | No |
| Benzo(a)pyrene | 20-Nov-2018 | <0.004 | µg/L | No |
| Bromoxynil | 20-Nov-2018 | <0.33 | µg/L | No |
| Carbaryl | 20-Nov-2018 | <0.05 | µg/L | No |
| Carbofuran | 20-Nov-2018 | <0.01 | µg/L | No |
| Carbon Tetrachloride | 20-Nov-2018 | <0.16 | µg/L | No |
| Chlorpyrifos | 20-Nov-2018 | <0.02 | µg/L | No |
| Diazinon | 20-Nov-2018 | <0.02 | µg/L | No |

| | | | | |
|--|-------------|----------|------|----|
| Dicamba | 20-Nov-2018 | <0.2 | µg/L | No |
| 1,2-Dichlorobenzene | 20-Nov-2018 | <0.41 | µg/L | No |
| 1,4-Dichlorobenzene | 20-Nov-2018 | <0.36 | µg/L | No |
| 1,2-Dichloroethane | 20-Nov-2018 | <0.35 | µg/L | No |
| 1,1-Dichloroethylene (vinylidene chloride) | 20-Nov-2018 | <0.33 | µg/L | No |
| Dichloromethane | 20-Nov-2018 | <0.35 | µg/L | No |
| 2-4 Dichlorophenol | 20-Nov-2018 | <0.15 | µg/L | No |
| 2,4-Dichlorophenoxy acetic acid (2,4-D) | 20-Nov-2018 | <0.19 | µg/L | No |
| Diclofop-methyl | 20-Nov-2018 | <0.4 | µg/L | No |
| Dimethoate | 20-Nov-2018 | <0.03 | µg/L | No |
| Diquat | 20-Nov-2018 | < 1 | µg/L | No |
| Diuron | 20-Nov-2018 | <0.03 | µg/L | No |
| Glyphosate | 20-Nov-2018 | < 1 | µg/L | No |
| Malathion | 20-Nov-2018 | <0.02 | µg/L | No |
| 2-Methyl-4-chlorophenoxyacetic acid (MCPA) | 20-Nov-2018 | <0.00012 | Mg/L | No |
| Metolachlor | 20-Nov-2018 | <0.01 | µg/L | No |
| Metribuzin | 20-Nov-2018 | <0.02 | µg/L | No |
| Monochlorobenzene | 20-Nov-2018 | <0.3 | µg/L | No |
| Paraquat | 20-Nov-2018 | <1 | µg/L | No |
| Pentachlorophenol | 20-Nov-2018 | <0.15 | µg/L | No |
| Phorate | 20-Nov-2018 | <0.01 | µg/L | No |
| Picloram | 20-Nov-2018 | < 1 | µg/L | No |
| Polychlorinated Biphenyls(PCB) | 20-Nov-2018 | <0.04 | µg/L | No |
| Prometryne | 20-Nov-2018 | <0.03 | µg/L | No |

| | | | | |
|---------------------------|-------------|-------|------|----|
| Simazine | 20-Nov-2018 | <0.01 | µg/L | No |
| Terbufos | 20-Nov-2018 | <0.01 | µg/L | No |
| Tetrachloroethylene | 20-Nov-2018 | <0.35 | µg/L | No |
| 2,3,4,6-Tetrachlorophenol | 20-Nov-2018 | <0.20 | µg/L | No |
| Triallate | 20-Nov-2018 | <0.01 | µg/L | No |
| Trichloroethylene | 20-Nov-2018 | <0.44 | µg/L | No |
| 2,4,6-Trichlorophenol | 20-Nov-2018 | <0.25 | µg/L | No |
| Trifluralin | 20-Nov-2018 | <0.02 | µg/L | No |
| Vinyl Chloride | 20-Nov-2018 | <0.17 | µg/L | No |

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

| Parameter | Result Value | Unit of Measure | Date of Sample |
|-----------|--------------|-----------------|----------------|
| Sodium | 62.4 | mg/L | 19-Dec-2016 |

Distribution Sampling (Lead and Trihalomethanes)

Summary of lead testing under Schedule 15.1 during this reporting period

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

| Location Type | Number of Samples | Range of Lead Results* (min#) – (max #) | Unit of Measure | Number of Exceedances |
|---------------|-------------------|--|-----------------|-----------------------|
| Plumbing | N/A | N/A | N/A | N/A |
| Distribution | 4 | 133-139 | Mg/L | 0 |

*Test for Alkalinity only as per Reduced Sampling Protocol in accordance with O. Reg 170/03, Schedule 15.1-5.

Summary of THM samples during this reporting period or the most recent sample results

| Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|---|--------------|--------------|-----------------|------------|
| THM (NOTE: show latest annual average) | 16-Dec.-2019 | 84.69 | µg/L | No |



List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards. (Lead and THM)

| Parameter | Result Value | Unit of Measure | Date of Sample |
|------------------------------|---------------------|------------------------|-----------------------|
| THM (running annual average) | <u>Q1</u> – 103.63 | µg/L | 19-Feb-2019 |
| | <u>Q2</u> – 99.54 | µg/L | 21-May-2019 |
| | <u>Q3</u> – 95.71 | µg/L | 06-Aug-2019 |
| | <u>Q4</u> – 84.69 | µg/L | 16-Dec-2019 |