



**ANNUAL REPORT**

|  |   |
|--|---|
| <b>Drinking-Water System Number:</b>   | <b>220005161</b>                          |
| <b>Drinking-Water System Name:</b>     | Washago Water Supply and Distribution     |
| <b>Drinking-Water System Owner:</b>    | The Corporation of the Township of Severn |
| <b>Drinking-Water System Category:</b> | Large Municipal Residential               |
| <b>Period being reported:</b>          | January 1, 2018 to December 31, 2018      |

|   |   |
|---|---|
| <p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] 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;"> <p>Township of Severn Administrative Office<br/>1024 Hurlwood Lane<br/>Severn, Ontario<br/>L3V 0Y6</p> </div> | <p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served:<br/><input type="text"/></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: <input type="text"/></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> |
|---|---|

**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:

| <b>Drinking Water System Name</b> | <b>Drinking Water System Number</b> |
|-----------------------------------|-------------------------------------|
| Ramara Knob Hill / Somerset       | 260046137                           |

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 \_\_\_\_\_

**Describe your Drinking-Water System**

Water for the Washago water treatment plant is pumped from Lake Couchiching to a package water treatment plant located on Quetton Street. Chlorine dioxide and SternPAC are added prior to direct filtration. Filtration is provided by two (2) trains of pressure type depth filters and clarifiers, followed by GAC filtration. Filtered water is chlorinated and then sent to a 257 m<sup>3</sup>, three-cell, baffled concrete underground reservoir for storage. Backwash water from the clarifiers and filters is sent directly to the sanitary sewage system. The distribution system was constructed in the 1980's and consists of PVC piping with a recirculation line connecting all dead ends. There are 11 fire hydrants and four sample stations connected to the distribution system. The Washago water system serves approximately 300 residents in the village of Washago in the Township of Severn and 17 houses in the Township of Ramara.

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

Sodium Hypochlorite  
 Stern PAC  
 Sodium Chlorite  
 Hydrochloric Acid

**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**

|   |          |
|---|----------|
| Addition of (2) new sample stations                           | \$6,400  |
| Replacement of sample station                                 | \$3,200  |
| Replacement of turbidity analyzers with new HACH Tu5300 units | \$16,000 |
| New Carrying Water pump                                       | \$1,600  |



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 |
|---------------|--|--|-----------------|--|------------------------|
| Jun. 26, 2018 | Watermain Break (Loss of pressure Boil Water Advisory) | Potable water leaking from 8 inch main | N/A             | Repaired, flushed and sampled. Samples were in compliance. | Jun. 28, 2018          |
| Oct. 23, 2018 | Sodium   | 32.1                                   | mg/L            | Resampled  | Oct. 24, 2018          |

**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 #) |
|---------------------|-------------------|--|---|-----------------------|--------------------------------------|
| <b>Raw</b>          | 53                | 0 – 12   | 0 – 540   | N/A                   | N/A                                  |
| <b>Treated</b>      | 53                | 0 – 0  | 0 – 0   | 52                    | 0 – 10                               |
| <b>Distribution</b> | 110               | 0 – 0  | 0 – 0   | 52                    | 0 – 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 #) |
|--|------------------------|----------------------------------|
| <b>Turbidity – Train 1</b>                         | 8760                   | 0.019 – 0.165 NTU                |
| <b>Turbidity – Train 2</b>                         | 8760                   | 0.019 – 0.141 NTU                |
| <b>Turbidity</b>                                   | 8760                   | 0.023 – 0.168 NTU                |
| <b>Chlorine</b>                                    | 8760                   | 1.24 – 1.97                      |
| <b>Chlorine Free Residual Distribution Supply</b>  | 368                    | 0.59 – 1.88                      |
| <b>Fluoride (If the DWS provides fluoridation)</b> | N/A                    |                                  |

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

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



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

| Date of legal instrument issued | Parameter | Date Sampled   | Result   | Unit of Measure |
|---------------------------------|-----------|----------------|----------|-----------------|
| July 16, 2012                   | Chlorite  | Jan. 9, 2018   | 0.09     | mg/L            |
|                                 |           | Feb. 5, 2018   | 0.23     |                 |
|                                 |           | March 5, 2018  | 0.16     |                 |
|                                 |           | April 3, 2018  | 0.24     |                 |
|                                 |           | May 14, 2018   | 0.14     |                 |
|                                 |           | June 4, 2018   | 0.07     |                 |
|                                 |           | July 3, 2018   | 0.06     |                 |
|                                 |           | August 7, 2018 | 0.08     |                 |
|                                 |           | Sept. 4, 2018  | 0.05     |                 |
|                                 |           | Oct. 1, 2018   | 0.15     |                 |
|                                 |           | Nov. 5, 2018   | 0.19     |                 |
|                                 |           | Dec. 3, 2018   | 0.11     |                 |
|                                 |           | July 16, 2012  | Chlorate |                 |
| Feb. 5, 2018                    | 0.41      |                |          |                 |
| March 5, 2018                   | 0.40      |                |          |                 |
| April 3, 2018                   | 0.34      |                |          |                 |
| May 14, 2018                    | 0.41      |                |          |                 |
| June 4, 2018                    | 0.62      |                |          |                 |
| July 3, 2018                    | 0.69      |                |          |                 |
| August 7, 2018                  | 0.92      |                |          |                 |
| Sept. 4, 2018                   | 0.86      |                |          |                 |
| Oct. 1, 2018                    | 0.79      |                |          |                 |
| Nov. 5, 2018                    | 0.45      |                |          |                 |
| Dec. 3, 2018                    | 0.39      |                |          |                 |

**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  | October 15, 2018 | 0.04         | µg/L            | No         |
| Arsenic   | October 15, 2018 | 0.4          | µg/L            | No         |
| Barium    | October 15, 2018 | 23.5         | µg/L            | No         |
| Boron     | October 15, 2018 | 21           | µg/L            | No         |
| Cadmium   | October 15, 2018 | 0.006        | µg/L            | No         |
| Chromium  | October 15, 2018 | 0.09         | µg/L            | No         |
| *Lead     | N/A              |              |                 |            |
| Mercury   | October 15, 2018 | <0.02        | µg/L            | No         |
| Selenium  | October 15, 2018 | 0.05         | µg/L            | No         |
| Sodium    | October 15, 2018 | 32.1         | mg/L            | Yes        |
| Uranium   | October 15, 2018 | 0.102        | µg/L            | No         |
| Fluoride  | January 10, 2018 | 0.06         | mg/L            | No         |
| Nitrite   | Jan. 9, 2018     | <0.003       | mg/L            | No         |
|           | April 16, 2018   | <0.003       |                 |            |
|           | July 16, 2018    | <0.003       |                 |            |
|           | October 15, 2018 | <0.003       |                 |            |

| Parameter | Sample Date      | Result Value | Unit of Measure | Exceedance |
|-----------|------------------|--------------|-----------------|------------|
| Nitrate   | Jan. 9, 2018     | 0.035        | mg/L            | No         |
|           | April 16, 2018   | 0.020        |                 |            |
|           | July 16, 2018    | 0.184        |                 |            |
|           | October 15, 2018 | 0.038        |                 |            |

\*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

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

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

| Location Type | Number of Samples | Range of Lead Results<br>(min#) – (max #) | Number of Exceedances |
|---------------|-------------------|---|-----------------------|
| Plumbing      |                   |   |                       |
| Distribution  |                   |   |                       |

### 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                                      | October 15, 2018 | <0.02        | µg/L            | No         |
| Atrazine + N-dealkylated metabolites          | October 15, 2018 | <0.01        | µg/L            | No         |
| Azinphos-methyl                               | October 15, 2018 | <0.05        | µg/L            | No         |
| Benzene                                       | October 15, 2018 | <0.32        | µg/L            | No         |
| Benzo(a)pyrene                                | October 15, 2018 | <0.004       | µg/L            | No         |
| Bromoxynil                                    | October 15, 2018 | <0.33        | µg/L            | No         |
| Carbaryl                                      | October 15, 2018 | <0.05        | µg/L            | No         |
| Carbofuran                                    | October 15, 2018 | <0.01        | µg/L            | No         |
| Carbon Tetrachloride                          | October 15, 2018 | <0.16        | µg/L            | No         |
| Chlorpyrifos                                  | October 15, 2018 | <0.02        | µg/L            | No         |
| Diazinon                                      | October 15, 2018 | <0.02        | µg/L            | No         |
| Dicamba                                       | October 15, 2018 | <0.20        | µg/L            | No         |
| 1,2-Dichlorobenzene                           | October 15, 2018 | <0.41        | µg/L            | No         |
| 1,4-Dichlorobenzene                           | October 15, 2018 | <0.36        | µg/L            | No         |
| 1,2-Dichloroethane                            | October 15, 2018 | <0.35        | µg/L            | No         |
| 1,1-Dichloroethylene<br>(vinylidene chloride) | October 15, 2018 | <0.33        | µg/L            | No         |
| Dichloromethane                               | October 15, 2018 | <0.35        | µg/L            | No         |
| 2-4 Dichlorophenol                            | October 15, 2018 | <0.15        | µg/L            | No         |
| 2,4-Dichlorophenoxy acetic acid (2,4-D)       | October 15, 2018 | <0.19        | µg/L            | No         |
| Diclofop-methyl                               | October 15, 2018 | <0.40        | µg/L            | No         |
| Dimethoate                                    | October 15, 2018 | <0.03        | µg/L            | No         |
| Diquat  | October 15, 2018 | <1           | µg/L            | No         |



|  |                  |          |      |    |
|--|------------------|----------|------|----|
| <b>Diuron</b>  | October 15, 2018 | <0.03    | µg/L | No |
| <b>Glyphosate</b>  | October 15, 2018 | <1       | µg/L | No |
| <b>Haloacetic Acids (HAA5)</b><br>(NOTE: show latest annual average) | 2018 Average     | 26       | µg/L | No |
| <b>Malathion</b>   | October 15, 2018 | <0.02    | µg/L | No |
| <b>MCPA</b>  | October 15, 2018 | <0.00012 | mg/L | No |
| <b>Metolachlor</b>   | October 15, 2018 | <0.01    | µg/L | No |
| <b>Metribuzin</b>  | October 15, 2018 | <0.02    | µg/L | No |
| <b>Monochlorobenzene</b>   | October 15, 2018 | <0.3     | µg/L | No |
| <b>Paraquat</b>  | October 15, 2018 | <1       | µg/L | No |
| <b>Pentachlorophenol</b>   | October 15, 2018 | <0.15    | µg/L | No |
| <b>Phorate</b>   | October 15, 2018 | <0.01    | µg/L | No |
| <b>Picloram</b>  | October 15, 2018 | <1       | µg/L | No |
| <b>Polychlorinated Biphenyls(PCB)</b>                                | October 15, 2018 | <0.04    | µg/L | No |
| <b>Prometryne</b>  | October 15, 2018 | <0.03    | µg/L | No |
| <b>Simazine</b>  | October 15, 2018 | <0.01    | µg/L | No |
| <b>THM</b><br>(NOTE: show latest annual average)                     | 2018 Average     | 44       | µg/L | No |
| <b>Terbufos</b>  | October 15, 2018 | <0.01    | µg/L | No |
| <b>Tetrachloroethylene</b>   | October 15, 2018 | <0.35    | µg/L | No |
| <b>2,3,4,6-Tetrachlorophenol</b>                                     | October 15, 2018 | <0.20    | µg/L | No |
| <b>Triallate</b>   | October 15, 2018 | <0.01    | µg/L | No |
| <b>Trichloroethylene</b>   | October 15, 2018 | <0.44    | µg/L | No |
| <b>2,4,6-Trichlorophenol</b>   | October 15, 2018 | <0.25    | µg/L | No |
| <b>Trifluralin</b>   | October 15, 2018 | <0.02    | µg/L | No |
| <b>Vinyl Chloride</b>  | October 15, 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    | 32.1         | mg/L            | October 15, 2018 |