

**SUMMARY REPORT 2019**  
For the Town of Lakeshore Water Supply System  
Lakeshore Water Service Area

(Made under Schedule 22 of Ontario Regulation 170/03, a regulation made under the Safe Drinking Water Act, 2002)

**Explanation**

Schedule 22 of Ontario Regulation 170/03, a regulation made under the Safe Drinking Water Act, 2002 requires that a large municipal residential drinking-water system must provide to its board members a Summary Report on various aspects of the system before March 31 of the following year. The Lakeshore Water Service Area is classed as a large municipal residential drinking-water system and is therefore subject to Schedule 22.

The Summary Report must list the following:

- The requirements of the Safe Drinking Water Act, 2002 that the system failed to meet during the period covered by the Summary Report
- The requirements of the regulations made under the Safe Drinking Water Act, 2002 that the system failed to meet during the period covered by the Summary Report
- The drinking-water systems approval that the system failed to meet during the period covered by the Summary Report
- Any order that the system failed to meet during the period covered by the Summary Report, the duration of any such failure and any measures that were taken to correct such failure
- A summary of the quantities and flow rates of water supplied by the drinking-water system by monthly average and maximum daily flow rates and instantaneous peak flow rates
- A comparison of actual flow rates with rated capacity and flow rates in the systems approval
- Minutes of the Management Review meeting held by the Operating Authority

A drinking-water system that supplies water to a municipality must provide a copy of the Summary Report to the municipality by March 31 of the year following the year covered in the Summary Report.

**Failure to meet the requirements of the Safe Drinking Water Act 2002, associated regulations, system approvals and provincial officer orders**

The table below lists the occasions on which the Lakeshore Water Service Area failed to meet the requirements of the Safe Drinking Water Act 2002, associated regulations, system approvals and provincial officer orders in 2019.

There were **no** occasions in 2019 when the Lakeshore Water Service Area was not in compliance with the requirements of the Safe Drinking Water Act 2002, associated regulations, system approvals and provincial officer orders.

**Lakeshore Water Service Area**

<b>Drinking Water Legislation</b>	<b>List the requirement(s) the system failed to meet</b>	<b>Specify the duration of the failure (i.e. date(s))</b>	<b>Describe the measures taken to correct the failure</b>	<b>Status (complete or outstanding)</b>
Safe Drinking Water Act	<b>None</b>			
Ontario Regulations	<b>None</b>			
System Certificate of Approval or Drinking Water Works Permit	<b>None</b>			
Provincial Officer's Order	<b>None</b>			

**A Summary of the Quantities and Flow Rates of Water Supplied During the Period Covered by The Report, Including Monthly Average and Maximum Daily Flows, and Daily Instantaneous Peak Flow Rates**

The Lakeshore Water Service Area operated under the following listed Permits to Take Water:

(PTTW) Number 3648-B3EQWX issued on July 25, 2018 has the following flow conditions:

- Maximum Allowable Amount Taken per Minute (Litres/Min) **34,722**
- Maximum Allowable Amount Taken Per Day (Litres/Day) **30,000,000**

**The maximum amounts of raw water taken during 2019 (see Table 1 below) are as follows:**

- Maximum Amount Taken per Minute in 2019 (Litres/Min) **22,326 (July 4, 2019)**

- Maximum Amount Taken Per Day in 2019 (Litres/Day) **17,229,000 (July 15, 2019)**

**The system did not exceed the PTTW limits in 2019.**

The Lakeshore Water Service Area operated under Drinking Water Works Permit #031-201 and Municipal Drinking Water Licence #031-101 during 2019:

The DWWL has the following flow conditions:

- The maximum daily volume of treated water that flows from the treatment subsystem to the distribution subsystem shall not exceed **36,400 m<sup>3</sup>/day**.
- The maximum daily volume of water pumped into the distribution system in 2019 was **15,969 m<sup>3</sup>/day**

The following tables (Table 1 & Table 2) give the monthly average, maximum and peak flows for the Lakeshore Water Service Area.

**Table 1: Raw Flow Data (flow into the treatment system) in 2019**

Month	Maximum Allowed Flow Rate (m <sup>3</sup> /Day)	Average Flow (m <sup>3</sup> /Day)	Maximum Flow (m <sup>3</sup> /Day)	Maximum Allowed Flow Rate (Litres/minute)	Peak Flow (Litres/Minute)
January	30,000	8,566	9,285	34,722	15,438
February	30,000	8,896	9,953	34,722	16,026
March	30,000	8,363	9,335	34,722	15,840
April	30,000	7,930	8,587	34,722	15,288
May	30,000	8,868	10,415	34,722	11,262
June	30,000	10,189	13,341	34,722	17,118
July	30,000	13,374	17,279	34,722	22,326
August	30,000	13,035	16,241	34,722	18,162
September	30,000	10,179	11,552	34,722	22,272
October	30,000	8,098	9,077	34,722	15,786
November	30,000	7,845	12,820	34,722	15,816
December	30,000	7,566	8,100	34,722	9,210

**Table 2: Treated Flow Data (flow into the distribution system) in 2019**

Month	Maximum Allowed Flow Rate (m <sup>3</sup> /Day)	Average Daily Flow (m <sup>3</sup> /Day)	Maximum Daily Flow (m <sup>3</sup> /Day)	Peak Flow (Litres/Minute)
January	36,400	8,460	9,143	11,711
February	36,400	8,773	9,703	11,790
March	36,400	8,272	9,139	19,463
April	36,400	7,877	8,361	11,678
May	36,400	8,770	10,573	11,678
June	36,400	9,995	13,321	11,835
July	36,400	12,983	15,969	24,503
August	36,400	12,655	15,201	11,869
September	36,400	10,009	11,634	11,678
October	36,400	8,015	8,932	11,576
November	36,400	7,775	11,007	12,195
December	36,400	7,536	8,081	11,633

**A Summary of 2019 Management Review Meeting Minutes as held by the Operating Authority**



**ANNUAL REPORT**

<b>Drinking-Water System Number:</b>	<b>260091507</b>
<b>Drinking-Water System Name:</b>	Lakeshore Water Treatment Plant/Water Service Area
<b>Drinking-Water System Owner:</b>	The Corporation of the Town of Lakeshore
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 01, 2019 to December 31, 2019

<p><b>Does this Drinking-Water System serve more than 10,000 people? Yes [ X ] No [ ]</b></p> <p><b>Is this annual report available to the public at no charge on a web site on the Internet? Yes [ X ] No [ ]</b></p> <p><b>Location where this system's Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</b></p> <p>Town of Lakeshore Municipal Building (Town Hall) 419 Notre Dame Street Belle River, Ont. NOR 1A0</p>	<p><b>Number of Designated Facilities served: None</b></p> <p><b>Number of Interested Authorities reported to: None</b></p>
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**Drinking-Water Systems which receive all of their drinking water from this system:**

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>
None	

**How system users are told that this 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**



**Description of the Drinking-Water System during this reporting period**

The Lakeshore WTP is a 36,360,000L/day facility, located at 492 Lakeview Dr. in Belle River, Ont. and serves approximately 28, 997 residents within the Lakeshore Water Service Area. Treatment processes within the facility include: coagulation, flocculation, sedimentation, zebra mussel control, powdered activated carbon, granular activated carbon, filtration, UV disinfection and chlorination. The Lakeshore Water Service Area (LWSA) extends south from Lake St.Clair to Highway 401 and extends east from County Rd.19 to Rochester Townline Road. The LWSA includes approximately 234 kilometers of water distribution piping ranging in size from 25 to 600 millimeters in diameter. The distribution system disinfection is by free chlorine residual. The LWSA also includes the Belle River and Maidstone elevated water storage tanks.

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

Aluminum sulphate (DelPAC product), polyelectrolytes, chlorine gas, activated carbon

**Significant expenses incurred during this reporting period to:**

- Install required equipment
- Repair required equipment
- Replace required equipment

**Please provide a brief description and a breakdown of monetary expenses incurred**

Turbidity Meter Replacements	- \$ 86,000
SCADA Upgrade	- \$ 15,000
Notre Dame Ph4 Watermain Replacement	- \$ 500,000
Lalonde Watermain Replacement	- \$ 300,000
Rourke Line Watermain Replacement	- \$ 500,000
Belle River Water Tower Generator	- \$ 24,000

**Details of 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 during this reporting period**

**\*\*None to report this period.**

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

**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 #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)



<b>Raw</b>	52	0-18	0 – 2000	N/A	N/A
<b>Treated</b>	104	0-0	0-0	104	0-70
<b>Distribution</b>	520	0-0	0-0	208	0 - 40

**Operational testing done under Schedule 7 of Regulation 170/03 during this reporting period.**

	<b>Number of Grab Samples</b>	<b>Range of Results (min #)-(max #)</b>	<b>Unit of Measure</b>
<b>Turbidity</b>	<b>8760</b>	<b>0.02-0.07</b> (avg of 4 filters)	<b>NTU</b>
<b>Chlorine</b>	<b>8760</b>	<b>1.28 – 1.98</b>	<b>Mg/L</b>
All Distribution Free Chlorine Residuals	<b>878</b>	<b>0.28 – 1.56</b>	<b>Mg/L</b>

*NOTE: 8760 indicates that continuous monitors were used for sampling.*

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

<b>Date of legal instrument issued</b>	<b>Parameter</b>	<b>Date Sampled</b>	<b>Result</b>	<b>Unit of Measure</b>
<b>June 6, 2016 DWWL 031-101 (issue 02)</b>	<b>Suspended Solids</b>	<b>Running Annual Average</b>	<b>10.55</b>	<b>Mg/L</b>

**Summary of Inorganic parameters tested during this reporting period**

<b>Parameter</b>	<b>Sample Date</b>	<b>Result Value</b>	<b>Unit of Measure</b>	<b>Exceedance</b>
<b>Antimony</b>	November 13, 2019	N/D	Mg/L	NO
<b>Arsenic</b>	November 13, 2019	N/D	Mg/L	NO
<b>Barium</b>	November 13, 2019	0.015	Mg/L	NO
<b>Boron</b>	November 13, 2019	0.05	Mg/L	NO
<b>Cadmium</b>	November 13, 2019	N/D	Mg/L	NO
<b>Chromium</b>	November 13, 2019	N/D	Mg/L	NO
<b>Mercury</b>	November 13, 2019	N/D	Mg/L	NO
<b>Selenium</b>	November 13, 2019	N/D	Mg/L	NO
<b>Uranium</b>	November 13, 2019	N/D	Mg/L	NO
<b>Fluoride</b>	November 13, 2019	0.069	Mg/L	NO
<b>Nitrite</b>	November 13, 2019	N/D	Mg/L	NO
<b>Nitrate (annual average)</b>	Annual Average	1.00	Mg/L	NO

**Summary of Alkalinity and pH testing done under Schedule 15.1 during this reporting period**

<b>Location Type Distribution</b>	<b>Number of Samples</b>	<b>Alkalinity Result (range 30 – 500)</b>	<b>Unit of Measure</b>	<b>Field pH Result</b>	<b>Number of Exceedances</b>
<b>Winter Session</b>					



s/stn LSW-027	1	96	Mg/l	7.63	N/A
s/stn LSW-046	1	101	Mg/l	7.55	N/A
s/stn LSW-039	1	99	Mg/l	7.50	N/A
s/stn LSW-066	1	109	Mg/l	7.59	N/A
s/stn LSW-004	1	90	Mg/l	7.64	N/A
s/stn LSW-006	1	92	Mg/l	7.69	N/A
s/stn LSW-018	1	114	Mg/l	7.66	N/A
<b>Summer Session</b>					
s/stn LSW-006	1	96	Mg/l	7.87	N/A
s/stn LSW-004	1	89	Mg/l	7.84	N/A
s/stn LSW-018	1	93	Mg/l	7.91	N/A
s/stn LSW-027	1	93	Mg/l	7.81	N/A
s/stn LSW-066	1	92	Mg/l	7.84	N/A
s/stn LSW-039	1	91	Mg/l	7.79	N/A
s/stn LSW-046	1	93	Mg/l	7.74	N/A

**Summary of Organic parameters sampled during this reporting period**

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	November 13, 2019	N/D	Mg/L	NO
Atrazine + N-dealkylated metabolites	November 13, 2019	N/D	Mg/L	NO
Azinphos-methyl	November 13, 2019	N/D	Mg/L	NO
Benzene	November 13, 2019	N/D	Mg/L	NO
Benzo(a)pyrene	November 13, 2019	N/D	Mg/L	NO
Bromoxynil	November 13, 2019	N/D	Mg/L	NO
Carbaryl	November 13, 2019	N/D	Mg/L	NO
Carbofuran	November 13, 2019	N/D	Mg/L	NO
Carbon Tetrachloride	November 13, 2019	N/D	Mg/L	NO
Chlordane (Total)	November 13, 2019	N/D	Mg/L	NO
Chlorpyrifos	November 13, 2019	N/D	Mg/L	NO
Diazinon	November 13, 2019	N/D	Mg/L	NO
Dicamba	November 13, 2019	N/D	Mg/L	NO
1,2-Dichlorobenzene	November 13, 2019	N/D	Mg/L	NO
1,4-Dichlorobenzene	November 13, 2019	N/D	Mg/L	NO
Dichlorodiphenyltrichloroethane (DDT) + metabolites	November 13, 2019	N/D	Mg/L	NO
1,2-Dichloroethane	November 13, 2019	N/D	Mg/L	NO



<b>1,1-Dichloroethylene (vinylidene chloride)</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Dichloromethane</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>2-4 Dichlorophenol</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>2,4-Dichlorophenoxy acetic acid (2,4-D)</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Diclofop-methyl</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Dimethoate</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Diquat</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Diuron</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Glyphosate</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Malathion</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>HAA's – distribution only</b>	<b>Running Annual Average</b>	<b>0.09</b>	<b>Mg/L</b>	<b>NO</b>
<b>MCPA</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Metolachlor</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Metribuzin</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Monochlorobenzene</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Oxychlorthane</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>

**Summary of Organic parameters sampled during this reporting period (continued)**

<b>Parameter</b>	<b>Sample Date</b>	<b>Result Value</b>	<b>Unit of Measure</b>	<b>Exceedance</b>
<b>Paraquat</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Pentachlorophenol</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Phorate</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Picloram</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Polychlorinated Biphenyls(PCB)</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Prometryne</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>Simazine</b>	<b>November 13, 2019</b>	<b>N/D</b>	<b>Mg/L</b>	<b>NO</b>
<b>THM - treatment</b>	<b>Running Annual Average</b>	<b>0.015</b>	<b>Mg/L</b>	<b>NO</b>
<b>THM – distribution</b>	<b>Running Annual Average</b>	<b>0.019</b>	<b>Mg/L</b>	<b>NO</b>



Terbufos	November 13, 2019	N/D	Mg/L	NO
Tetrachloroethylene	November 13, 2019	N/D	Mg/L	NO
2,3,4,6-Tetrachlorophenol	November 13, 2019	N/D	Mg/L	NO
Triallate	November 13, 2019	N/D	Mg/L	NO
Trichloroethylene	November 13, 2019	N/D	Mg/L	NO
2,4,6-Trichlorophenol	November 13, 2019	N/D	Mg/L	NO
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	November 13, 2019	N/D	Mg/L	NO
Trifluralin	November 13, 2019	N/D	Mg/L	NO
Vinyl Chloride	November 13, 2019	N/D	Mg/L	NO

**List of 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
None			