



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

EAST LINTON
DRINKING WATER SYSTEM

Large Municipal Residential

SECTION 11
ANNUAL REPORT

For the period of
JANUARY 1, 2017 TO DECEMBER 31, 2017

Prepared by the Ontario Clean Water Agency
For The Township of Georgian Bluffs

Drinking Water System Number:	220007659
Drinking Water System Name:	East Linton Drinking Water System
Drinking Water System Owner:	Township of Georgian Bluffs
Drinking Water System Category:	Large Municipal Residential
Reporting Period:	January 1, 2017 to December 31, 2017

Does the Drinking Water System serve more than 10,000 people?

No.

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

Yes.

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

Georgian Bluffs Municipal Office
177964 Grey Road #18
R.R. #3 Owen Sound, ON
N4K 5N5

Drinking-Water Systems (if any), which receive all of their drinking water from your system:

n/a.

Did you provide a copy of the annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

n/a.

How system users are notified that the annual report is available, and is free of charge:

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> | Public access/notice via the web |
| <input checked="" type="checkbox"/> | Public access/notice via Government Office |
| <input type="checkbox"/> | Public access/notice via a newspaper |
| <input type="checkbox"/> | Public access/notice via Public Request |
| <input type="checkbox"/> | Public access/notice via a Public Library |
| <input type="checkbox"/> | Public access/notice via other method: _____ |

Description of Drinking Water System:

The East Linton Drinking Water System is supplied by Georgian Bay (surface water) via a low lift pumping station which provides pre-chlorination on an as needed basis for zebra mussel control. The water treatment facility consists of the following:

- Chlorination system (hypochlorite injected upstream of membrane filtration system)
- Membrane filtration system (2 units in parallel)
- UV disinfection system (3 reactors)
- Facility wide integrated process control system
- Waste residual management system (storage, re-treatment, disposal)
- Standby power generator set

A back-up power connection is installed at the low-lift building to bring in a portable generator (if required).

A water tower is located in the distribution system and used to provide storage and pressure to the system.

List of water treatment chemicals used during the reporting period:

- Sodium Hypochlorite, 12%
- Sodium Hydroxide
- Citric Acid

Significant expenses were incurred to:

- | | |
|-------------------------------------|---------------------------------------|
| <input checked="" type="checkbox"/> | Install required equipment |
| <input checked="" type="checkbox"/> | Repair required equipment |
| <input checked="" type="checkbox"/> | Replace required equipment |
| <input type="checkbox"/> | No significant expenses were incurred |

Description of expenses:

- Minor tower repairs (completed in the fall of 2017)
- Completed modifications to SCADA programming and UV system programming to allow filter operation at varying rates.
- Installed new air compressor
- Installed new UPS on SCADA computer
- Installed new chlorine pump
- Repaired leaks in chlorine lines
- Replaced turbidimeter sensor head.
- Replaced UPS back-up power supply in Pall PLC
- Replaced power supply at tower PLC
- Installed new watermain on Balmy Beach Rd.
- Repaired Balmy beach PRV chamber leak.
- Repaired High-lift pump

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:

Date of Incident	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a	n/a	n/a	n/a	n/a	n/a

Table 1. Microbiological testing done under Schedule 10, 11 or 12 of Regulation 170/03 during this reporting Period

Location	Number of Samples	Range of E.coli Results		Range of Total Coliforms Results		Number of HPC Samples	Range of HPC Samples	
		Minimum	Maximum	Minimum	Maximum		Minimum	Maximum
Raw Water (RW)	53	0	15	0	43	n/a	n/a	n/a
Treated (TW)	53	0	0	0	0	53	0	2000*
Distribution (DW)	118	0	0	0	0	53	0	88

*Suspected operator sampling error on August 8th, 2017 Treated Water sample that had a result of 2000 cfu/1mL Heterotrophic Plate Count (HPC) as August 14, 2017 Treated Water sample has a result of 0 cfu/1mL HPC.

Table 2. Operational testing done under Schedule 7, 8 or 9 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results	
		Minimum	Maximum
Turbidity, On-Line (NTU) - FiltA	8760	0.01	0.062
Turbidity, On-Line (NTU) - FiltB	8760	0.01	0.067
Free Chlorine Residual, On-Line (mg/L) - TW	8760	0.82	2.47
Free Chlorine Residual, In-House (mg/L) - DW	365	0.45	2.20

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

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

Table 3. Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of Order of MDWL	Parameter	Date Sampled	Result	MDWL Allowable Annual Average Concentration
n/a	n/a	n/a	n/a	n/a

Table 4. Summary of Inorganic parameters tested during this reporting period or most recent sample results

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	Exceedance
Antimony: Sb (µg/L) - TW	2017/01/09	0.08	No
Arsenic: As (µg/L) - TW	2017/01/09	0.4	No
Barium: Ba (µg/L) - TW	2017/01/09	13.4	No
Boron: B (µg/L) - TW	2017/01/09	15.0	No
Cadmium: Cd (µg/L) - TW	2017/01/09	0.008	No
Chromium: Cr (µg/L) - TW	2017/01/09	0.66	No
Mercury: Hg (µg/L) - TW	2017/01/09	<MDL 0.01	No
Selenium: Se (µg/L) - TW	2017/01/09	0.2	No
Uranium: U (µg/L) - TW	2017/01/09	0.184	No
Fluoride (mg/L) - TW	2016/07/04	0.11	No
Nitrite (mg/L) - TW	2017/01/09	<MDL 0.003	No
Nitrite (mg/L) - TW	2017/04/03	<MDL 0.003	No
Nitrite (mg/L) - TW	2017/07/04	<MDL 0.003	No
Nitrite (mg/L) - TW	2017/10/02	<MDL 0.003	No
Nitrate (mg/L) - TW	2017/01/09	0.28	No
Nitrate (mg/L) - TW	2017/04/03	0.265	No
Nitrate (mg/L) - TW	2017/07/04	0.263	No
Nitrate (mg/L) - TW	2017/10/02	0.236	No
Sodium: Na (mg/L) - TW	2016/07/04	6.92	No

NOTE: There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

NOTE: Fluoride and Sodium are to be sampled every 60 months. The most recent samples for Fluoride and Sodium were taken on July 4, 2016. The next set of Fluoride and Sodium samples are to be taken in 2021.

Table 5. Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results		Number of Exceedances
		Minimum	Maximum	
Plumbing	n/a	n/a	n/a	n/a
Lead (µg/L) - DW	4	0.12	1	0
Alkalinity (mg/L) - DW	4	71	75	n/a

NOTE: This system now qualifies for the plumbing exemption as per Ontario Regulation 170/03 Schedule 15.1-5 (9) (10). Four (4) distribution lead samples are only taken every 12 months. (i.e. 2 samples per period).

Table 6. Summary of Organic parameters sampled during this reporting period or most recent sample results.

Parameter	Sample Date (yyyy/mm/dd)	Result Value	Exceedance
Alachlor (µg/L) - TW	2017/01/09	<MDL 0.02	No
Atrazine + N-dealkylated metabolites (µg/L) - TW	2017/01/09	0.01	No
Azinphos-methyl (µg/L) - TW	2017/01/09	<MDL 0.05	No
Benzene (µg/L) - TW	2017/01/09	<MDL 0.32	No
Benzo(a)pyrene (µg/L) - TW	2017/01/09	<MDL 0.004	No
Bromoxynil (µg/L) - TW	2017/01/09	<MDL 0.33	No
Carbaryl (µg/L) - TW	2017/01/09	<MDL 0.05	No
Carbofuran (µg/L) - TW	2017/01/09	<MDL 0.01	No
Carbon Tetrachloride (µg/L) - TW	2017/01/09	<MDL 0.16	No
Chlorpyrifos (µg/L) - TW	2017/01/09	<MDL 0.02	No
Diazinon (µg/L) - TW	2017/01/09	<MDL 0.02	No
Dicamba (µg/L) - TW	2017/01/09	<MDL 0.2	No
1,2-Dichlorobenzene (µg/L) - TW	2017/01/09	<MDL 0.41	No
1,4-Dichlorobenzene (µg/L) - TW	2017/01/09	<MDL 0.36	No
1,2-Dichloroethane (µg/L) - TW	2017/01/09	<MDL 0.35	No
1,1-Dichloroethylene (µg/L) - TW	2017/01/09	<MDL 0.33	No
Dichloromethane (Methylene Chloride) (µg/L) - TW	2017/01/09	<MDL 0.35	No
2,4-Dichlorophenol (µg/L) - TW	2017/01/09	<MDL 0.15	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (µg/L) - TW	2017/01/09	<MDL 0.19	No
Diclofop-methyl (µg/L) - TW	2017/01/09	<MDL 0.4	No
Dimethoate (µg/L) - TW	2017/01/09	<MDL 0.03	No
Diquat (µg/L) - TW	2017/01/09	<MDL 1.0	No
Diuron (µg/L) - TW	2017/01/09	<MDL 0.03	No
Glyphosate (µg/L) - TW	2017/01/09	<MDL 1.0	No
Malathion (µg/L) - TW	2017/01/09	<MDL 0.02	No
Metolachlor (µg/L) - TW	2017/01/09	<MDL 0.01	No
Metribuzin (µg/L) - TW	2017/01/09	<MDL 0.02	No
Monochlorobenzene (Chlorobenzene) (µg/L) - TW	2017/01/09	<MDL 0.3	No
Paraquat (µg/L) - TW	2017/01/09	<MDL 1.0	No
PCB (µg/L) - TW	2017/01/09	<MDL 0.04	No
Pentachlorophenol (µg/L) - TW	2017/01/09	<MDL 0.15	No
Phorate (µg/L) - TW	2017/01/09	<MDL 0.01	No
Picloram (µg/L) - TW	2017/01/09	<MDL 1.0	No
Prometryne (µg/L) - TW	2017/01/09	<MDL 0.03	No
Simazine (µg/L) - TW	2017/01/09	<MDL 0.01	No
Terbufos (µg/L) - TW	2017/01/09	<MDL 0.01	No
Tetrachloroethylene (µg/L) - TW	2017/01/09	<MDL 0.35	No
2,3,4,6-Tetrachlorophenol (µg/L) - TW	2017/01/09	<MDL 0.2	No
Triallate (µg/L) - TW	2017/01/09	<MDL 0.01	No
Trichloroethylene (µg/L) - TW	2017/01/09	<MDL 0.44	No
2,4,6-Trichlorophenol (µg/L) - TW	2017/01/09	<MDL 0.25	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (µg/L) - TW	2017/01/09	<MDL 0.12	No
Trifluralin (µg/L) - TW	2017/01/09	<MDL 0.02	No
Vinyl Chloride (µg/L) - TW	2017/01/09	<MDL 0.17	No
Trihalomethane: Total (µg/L), Annual Average - DW	2017/01/01	57.25	No
Haloacetic Acids (HAAs): Total (µg/L), Annual Average - DW	2017/01/01	30.975	n/a

* The limit of 80 µg/L running annual average for HAAs does not come into force until 2020.

Table 7. 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
Trihalomethane: Total Annual Average - DW	57.25	µg/L	January 9, 2017 April 3, 2017 July 4, 2017 October 2, 2017