



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**

**POTTAWATOMI**  
**DRINKING WATER SYSTEM**

Small 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

<b>Drinking Water System Number:</b>	220008319
<b>Drinking Water System Name:</b>	Pottawatomi Drinking Water System
<b>Drinking Water System Owner:</b>	Township of Georgian Bluffs
<b>Drinking Water System Category:</b>	Small Municipal Residential
<b>Reporting Period:</b>	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 Pottawatomi Drinking Water System is supplied by a deep drilled (GUDI) groundwater well (PW 2). The water treatment facility is equipped with the following:

- a cartridge filtration system (used as pretreatment for the UV disinfection system),
- a two stage disinfection system consisting of:
  - UV Disinfection System (3 UV reactors in parallel)
  - Chlorination System (Sodium Hypochlorite)
- A sodium silicates injection system (downstream of the UV units) for iron sequestration
- Facility-wide integrated process and instrumentation control system and;
- A stand-by generator set

**List of water treatment chemicals used during the reporting period:**

- Sodium Hypochlorite, 12%
- Sodium Silicate

**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:**

<ul style="list-style-type: none"> <li>- Repaired leak on raw water trunk main.</li> <li>- Repaired leaks on chlorine lines</li> <li>- Replaced chemical injector and valves</li> <li>- Installed newly refurbished chlorine pump</li> <li>Replaced turbidimeter circuit board</li> </ul>
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**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
August 31, 2017	Other Observations	-	-	Following maintenance of treated water online turbidity, the unit was found to be defective and was taken offline from 04:40 to 07:45 to perform repairs. Required CT and UV dosage were always achieved. MOECC Inspector was contacted regarding the incident and recommended that it be reported under "other observations".  Turbidimeter was repaired and put back into service at 07:45.	August 31, 2017

**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
Well 2 (RW)	12	0	0	0	0	n/a	n/a	n/a
Distribution (DW)	52	0	0	0	0	52	0	4

**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 (NTU) - TW	365	0	0.33
Free Chlorine Residual (mg/L) - TW	365	1.06	3.34
Free Chlorine Residual, In-House (mg/L) - DW	246	0.88	2.2

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	<MDL 0.02	No
Arsenic: As (µg/L) - TW	2017/01/09	3.0	No
Barium: Ba (µg/L) - TW	2017/01/09	73.5	No
Boron: B (µg/L) - TW	2017/01/09	216.0	No
Cadmium: Cd (µg/L) - TW	2017/01/09	0.003	No
Chromium: Cr (µg/L) - TW	2017/01/09	0.55	No
Mercury: Hg (µg/L) - TW	2017/01/09	<MDL 0.01	No
Selenium: Se (µg/L) - TW	2017/01/09	0.09	No
Uranium: U (µg/L) - TW	2017/01/09	0.078	No
Fluoride (mg/L) - TW	2016/07/04	0.15	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	0.008	No
Nitrate (mg/L) - TW	2017/04/03	0.009	No
Nitrate (mg/L) - TW	2017/07/04	0.008	No
Nitrate (mg/L) - TW	2017/10/02	0.01	No
Sodium: Na (mg/L) - TW	2016/07/04	15.9	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 current 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.*

*NOTE: For small municipal residential systems, Schedule 23 & 24 samples are to be taken every 60 months. The most current Schedule 23 & 24 samples were taken in January 2016 the next set of samples is scheduled to be sampled in January 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
Distribution (µg/L)	4	0.83	1.91	0
Alkalinity (mg/L)	4	221	223	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	<MDL 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	4.275	No
Haloacetic Acids: Total (µg/L) Annual Average - DW	2017/01/01	5.3	N/A

NOTE: For small municipal residential systems, Schedule 23 & 24 samples are to be taken every 60 months. The most current Schedule 23 & 24 samples were taken in January 2016 the next set of samples is scheduled to be sampled in January 2021.

**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
n/a	n/a	n/a	n/a