



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

**TOBERMORY PRIMARY PLACE DAY CARE
TREATMENT SYSTEM**

Small Municipal Non-Residential Drinking Water System

**SECTION 11
ANNUAL REPORT**

**For the period of
JANUARY 1, 2015 TO DECEMBER 31, 2015**

Prepared by the Ontario Clean Water Agency
For The Municipality of Northern Bruce Peninsula

| | |
|--|---|
| Drinking Water System Number: | 220007034 |
| Drinking Water System Name: | Tobermory Primary Place Day Care |
| Drinking Water System Owner: | Municipality of Northern Bruce Peninsula |
| Drinking Water System Category: | Small Municipal Non-Residential |
| Reporting Period: | April 1, 2015 ¹ to December 31, 2015 |

Number of Designated Facilities served:
 1.

Did you provide a copy of your annual report to all Designated Facilities you serve?
 Yes.

Number of Interested Authorities you report to:
 1.

Did you provide a copy of the annual report to all Interested Authorities you report to for each Designated Facility?
 Yes.

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 |
|----------------------------|------------------------------|
| n/a | 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:**
- 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: Notice included in water billings.

Description of Drinking Water System:
 The raw water source is one drilled well. The raw water passes through a softener, followed by treatment consisting of two (2), 0.5 micron cartridge filters, one (1) UV disinfection unit and chlorine disinfection.

- List of water treatment chemicals used during the reporting period:**
- Water softening salt
 - Sodium hypochlorite 12%

- Significant expenses were incurred to:**
- Install required equipment
 - Repair required equipment
 - Replace required equipment

¹ Tobermory Primary Place Day Care was closed from December 17, 2014 to April 1 2015

No significant expenses were incurred

Description of expenses:

n/a.

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 |
|------------------|-----------|---|-----------------|---|------------------------|
| April 8, 2015 | Turbidity | 1 to 1.62 (for approximately 10 minutes). | NTU | "Do not drink water" signs were posted at the facility by day care staff. Bacti samples were taken to ensure that the water was safe to drink. Plumbing was flushed and UV transmittance was confirmed as good during the high turbidity event. Free chlorine residual was 1.5 mg/L and total chlorine residual was 1.76 mg/L. Both cartridge filters were changed and the water softener was reprogrammed to avoid backwash events during the time of the high turbidity occurrence. | April 10, 2015 |
| May 14, 2015 | Sodium | 139 | mg/L | Resampled drinking water and raw water pressure tank on May 21, 2015. Historically the raw water contains significant levels of sodium. Test results continue to be lower than the aesthetic objectives of 200 mg/L as per Ontario Drinking Water Standards, Objectives and Guidelines. MOH public health inspector provided a written response to the adverse water quality test results to Tobermory Primary Place Day Care. | May 22, 2015 |

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 (RW) | 18 | 0 | 20 | 1 | 1020 | n/a | n/a | n/a |
| Treated (TW) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Distribution (DW) | 23 | 0 | 0 | 0 | 0 | n/a | n/a | n/a |

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) - TW | 8760 | 0 | 1.5204 |
| Free Chlorine Residual, In-House (mg/L) - TW | 122 | 0.53 | 2.04 |
| Free Chlorine Residual, On-Line (mg/L) - DW | 8760 | 0.27* | 4.0621 |

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

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

*NOTE: Free chlorine residual taken starting April 1, 2015 (date of reopening)

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 | Parameter | Date Sampled | Result | Allowable Limit |
|---------------|-----------|--------------|--------|-----------------|
| 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 (mm/dd/yyyy) | Sample Result | Exceedance |
|--------------------------|--------------------------|---------------|------------|
| Antimony: Sb (ug/L) - TW | 09/22/10 | 0.08 | No |
| Arsenic: As (ug/L) - TW | 09/22/10 | 0.07 | No |
| Barium: Ba (ug/L) - TW | 09/22/10 | 20.5 | No |
| Boron: B (ug/L) - TW | 09/22/10 | 21.0 | No |
| Cadmium: Cd (ug/L) - TW | 09/22/10 | 0.035 | No |
| Chromium: Cr (ug/L) - TW | 09/22/10 | 2.7 | No |
| Mercury: Hg (ug/L) - TW | 09/22/10 | <0.02 | No |
| Selenium: Se (ug/L) - TW | 09/22/10 | 8.0 | No |
| Uranium: U (ug/L) - TW | 05/19/10 | 103 | No |
| Fluoride (mg/L) - TW | 05/11/2015 | 0.11 | No |
| Nitrite (mg/L) - TW | -* | -* | -* |
| Nitrite (mg/L) - TW | 4/7/2015 | <MDL 0.003 | No |
| Nitrite (mg/L) - TW | 7/21/2015 | <MDL 0.003 | No |
| Nitrite (mg/L) - TW | 10/7/2015 | <MDL 0.003 | No |
| Nitrate (mg/L) - TW | -* | -* | -* |
| Nitrate (mg/L) - TW | 4/7/2015 | 2.71 | No |
| Nitrate (mg/L) - TW | 7/21/2015 | 1.7 | No |
| Nitrate (mg/L) - TW | 10/7/2015 | 1.83 | No |
| Sodium: Na (mg/L) - TW | 05/11/2015 | 139 | 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: Tobermory Primary Place Day Care was not open until April 2015.

NOTE: The most current set of Schedule 23 samples were taken in September 2010. The next set of samples will be taken in February 2016.

NOTE: Sodium and Fluoride are to be sampled every 60 months. The most current set of samples were taken on May 11, 2015, the next set of samples are scheduled for May 2020.

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 | - | - | - | - |
| Distribution (ug/L) | 2 | 2.19 | 3.25 | 0 |

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

| Parameter | Sample Date | Result Value | Exceedance |
|--|-------------|--------------|------------|
| Alachlor (ug/L) - TW | 09/22/10 | < 0.11 | No |
| Aldicarb (ug/L) - TW | 09/22/10 | < 0.30 | No |
| Aldrin + Dieldrin (ug/L) - TW | 09/22/10 | < 0.067 | No |
| Atrazine + N-dealkylated metabolites (ug/L) - TW | 09/22/10 | < 0.12 | No |
| Azinphos-methyl (ug/L) - TW | 09/22/10 | < 0.21 | No |
| Bendiocarb (ug/L) - TW | 09/22/10 | < 0.13 | No |
| Benzene (ug/L) - TW | 09/22/10 | < 0.32 | No |
| Benzo(a)pyrene (ug/L) - TW | 09/22/10 | < 0.0040 | No |
| Bromoxynil (ug/L) - TW | 09/22/10 | < 0.33 | No |
| Carbaryl (ug/L) - TW | 09/22/10 | < 0.16 | No |
| Carbofuran (ug/L) - TW | 09/22/10 | < 0.37 | No |
| Carbon Tetrachloride (ug/L) - TW | 09/22/10 | < 0.16 | No |
| Chlordane:Total (ug/L) - TW | 09/22/10 | < 0.11 | No |
| Chlorpyrifos (ug/L) - TW | 09/22/10 | < 0.18 | No |
| Cyanazine (ug/L) - TW | 09/22/10 | < 0.18 | No |
| Diazinon (ug/L) - TW | 09/22/10 | < 0.081 | No |
| Dicamba (ug/L) - TW | 09/22/10 | < 0.20 | No |

| Parameter | Sample Date | Result Value | Exceedance |
|---|-------------|--------------|------------|
| 1,2-Dichlorobenzene (ug/L) - TW | 09/22/10 | < 0.41 | No |
| 1,4-Dichlorobenzene (ug/L) - TW | 09/22/10 | < 0.36 | No |
| Dichlorodiphenyltrichloroethane (DDT) + metabolites (ug/L) - TW | 09/22/10 | < 0.14 | No |
| 1,2-Dichloroethane (ug/L) - TW | 09/22/10 | < 0.35 | No |
| 1,1-Dichloroethylene (ug/L) - TW | 09/22/10 | < 0.33 | No |
| Dichloromethane (ug/L) - TW | 09/22/10 | < 0.35 | No |
| 2,4-Dichlorophenol (ug/L) - TW | 09/22/10 | < 0.15 | No |
| 2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW | 09/22/10 | < 0.19 | No |
| Diclofop-methyl (ug/L) - TW | 09/22/10 | < 0.40 | No |
| Dimethoate (ug/L) - TW | 09/22/10 | < 0.12 | No |
| Dinoseb (ug/L) - TW | 09/22/10 | < 0.36 | No |
| Diquat (ug/L) - TW | 09/22/10 | < 1.00 | No |
| Diuron (ug/L) - TW | 09/22/10 | < 0.087 | No |
| Glyphosate (ug/L) - TW | 09/22/10 | < 6.00 | No |
| Heptachlor+Heptachlor Epoxide (ug/L) - TW | 09/22/10 | < 0.11 | No |
| Lindane (ug/L) - TW | 09/22/10 | < 0.056 | No |
| Malathion (ug/L) - TW | 09/22/10 | < 0.091 | No |
| Methoxychlor (ug/L) - TW | 09/22/10 | < 0.14 | No |
| Metolachlor (ug/L) - TW | 09/22/10 | < 0.092 | No |
| Metribuzin (ug/L) - TW | 09/22/10 | < 0.12 | No |
| Monochlorobenzene (ug/L) - TW | 09/22/10 | < 0.30 | No |
| Paraquat (ug/L) - TW | 09/22/10 | < 1.00 | No |
| Parathion (ug/L) - TW | 09/22/10 | < 0.18 | No |
| Pentachlorophenol (ug/L) - TW | 09/22/10 | < 0.15 | No |
| Phorate (ug/L) - TW | 09/22/10 | < 0.11 | No |
| Picloram (ug/L) - TW | 09/22/10 | < 0.25 | No |
| Polychlorinated Bichenysl(PCB) (ug/L) - TW | 09/22/10 | < 0.040 | No |
| Prometryne (ug/L) - TW | 09/22/10 | < 0.23 | No |
| Simazine (ug/L) - TW | 09/22/10 | < 0.15 | No |
| Temephos (ug/L) - TW | 09/22/10 | < 0.31 | No |
| Terbufos (ug/L) - TW | 09/22/10 | < 0.12 | No |
| Tetrachloroethylene (ug/L) - TW | 09/22/10 | < 0.35 | No |
| 2,3,4,6-Tetrachlorophenol (ug/L) - TW | 09/22/10 | < 0.14 | No |
| Triallate (ug/L) - TW | 09/22/10 | < 0.10 | No |
| Trichloroethylene (ug/L) - TW | 09/22/10 | < 0.43 | No |
| 2,4,6-Trichlorophenol (ug/L) - TW | 09/22/10 | < 0.25 | No |
| 2,4,5-Trichlorophenoxy acetic acid (ug/L) - TW | 09/22/10 | < 0.22 | No |
| Trifluralin (ug/L) - TW | 09/22/10 | < 0.12 | No |
| Vinyl Chloride (ug/L) - TW | 09/22/10 | < 0.17 | No |
| THM (ug/L) - DW (Average) | 2011 | 8.65 | No |

*Annual average of THMs

NOTE: The most current set of Schedule 24 samples were taken in September 2010. The next set of samples will be taken in February 2016.

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 |
|-----------|--------------|-----------------|----------------|
| Sodium | 139 | mg/L | May 11, 2015 |

NOTE: This is required only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, small municipal non-residential, large non municipal non-residential)