

**2012 Annual Report**

Drinking-Water System Number:	<b>260089635</b>
Drinking-Water System Name:	<b>Shadow Ridge Well System</b>
Drinking-Water System Owner:	<b>City of Ottawa</b>
Drinking-Water System Category:	<b>Large Municipal Residential</b>
Period being reported:	<b>January 1<sup>st</sup> – December 31<sup>st</sup> 2012</b>

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your 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 Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

**Britannia Water Purification Plant  
2731 Cassels St., Ottawa Ontario  
K2B 1A8  
Telephone: 613-828-2727**

Complete for all other Categories.

Number of Designated Facilities served:

**N/A**

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

**N/A**

Number of Interested Authorities you report to:

**N/A**

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

**N/A**

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

**N/A**

**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?**

**N/A**

**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**

The Shadow Ridge Estates water system draws from either of two wells located approximately 15 meters apart at the treatment facility.

The treatment process in Shadow Ridge consists of the following steps:

- Pressure tanks for maintaining pressure in Distribution system
- Filtration using cartridge filters (5.0 micron and 1.0 micron)
- Chlorination (Free chlorine using sodium hypochlorite)
- Chlorine Contact chamber

This treatment process results in water that is clear and safe to drink.

Treated water is then pumped through the distribution network to reach water customers in Shadow Ridge Estates. All treatment, pumping, and storage systems are controlled by a dedicated SCADA computer system and monitored by certified water treatment operators 24 hours per day. On-line analyzers are used to measure chlorine residual and turbidity of the treated water. In addition, a certified operator visits the well system twice per week to collect water samples and conduct on-site water quality tests. Chlorine residuals are taken daily in the Distribution system to verify acceptable levels of chlorine.

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

Sodium Hypochlorite (liquid – 6%)

### **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

No expenses incurred this year

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

**Table 1 Adverse Water Quality events for the Shadow Ridge Well System**

Incident Date	Test Parameter and Location	Result	Unit of Measure	Corrective Action	Date of Resolution
<b>24-Sept-12</b> AWQI# 108586	Chlorine < 0.05 mg/L Shadow Ridge well system treated water	<0.05	mg/L	Flush and resample	25-Sept-12

**Table 2 Microbiological testing done under 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)
Raw	208	0	0	206	< 10 – 1000
Treated	106	0	0	104	< 10- 180
Distribution	210	0	0	206	< 10 - 20

**Table 3 Operational testing done for treated water under Schedule 7, 8 or 9 of Regulation 170/03 during this reporting period.**

	Number of Grab Samples	Results (min - max)
Turbidity	105 + continuous	0.02 – 0.18 NTU
Chlorine	106 + continuous	<0.05 – 1.83 mg/L
Fluoride (If the DWS provides fluoridation)	11	0.04 – 0.08 mg/L (naturally occurring in well water)

**Table 4 Summary of additional testing and sampling carried out in accordance with requirement of approval, order or other legal instruments.**

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

**Table 5 Summary of Inorganic parameters tested in treated water during this reporting period or the most recent sample results.**

Parameter	Sample Date*	Result Value	Unit of Measure	Exceedance**
Antimony	Jan – Dec 2012	ND	mg/L	No
Arsenic	Jan – Dec 2012	ND	mg/L	No
Barium	Jan – Dec 2012	0.1821	mg/L	No
Boron	Jan – Dec 2012	0.0209	mg/L	No
Cadmium	Jan – Dec 2012	ND	mg/L	No
Chromium	Jan – Dec 2012	0.0004	mg/L	No
Lead	Jan – Dec 2012	0.0001	mg/L	No
Mercury	Jan – Dec 2012	ND	mg/L	No
Selenium	Jan – Dec 2012	0.0003	mg/L	No
Sodium	Jan – Dec 2012	58.5	mg/L	Yes - Advisory***
Uranium	Jan – Dec 2012	0.0023	mg/L	No
Fluoride	Jan – Dec 2012	0.06	mg/L	No
Nitrate	Jan – Dec 2012	2.80	mg/L	No
Nitrite	Jan – Dec 2012	ND	mg/L	No

**ND** denotes non-detectable results

**NOTE\***: Inorganic parameters are tested monthly. The values in the table represent annual average values.

**NOTE\*\***: The determination of exceedances are based on all results in the data set.

**NOTE\*\*\***: Sodium concentration is above the advisory limit of 20.0 mg/L for treated water. Notification of the sodium exceedance was made to the MOE and Public Health Department on July 09, 2012 for this water system (notification is required every 60 months).

**Table 6 of lead testing under Schedule 15.1 during this reporting period.**

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Distribution	3	0.05 - 0.20 ppb	0

**Table 7 Summary of Organic parameters tested in treated water during this reporting period or the most recent sample results.**

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance*
Alachlor	Feb 23, 2012	ND	mg/L	No
Aldicarb	Feb 23, 2012	ND	mg/L	No
Aldrin + Dieldrin	Feb 23, 2012	ND	mg/L	No
Atrazine + N-dealkylated metabolites	Feb 23, 2012	ND	mg/L	No
Azinphos-methyl	Feb 23, 2012	ND	mg/L	No
Bendiocarb	Feb 23, 2012	ND	mg/L	No
Benzene	Feb 23, 2012	ND	mg/L	No
Benzo(a)pyrene	Feb 23, 2012	ND	mg/L	No
Bromoxynil	Feb 23, 2012	ND	mg/L	No
Carbaryl	Feb 23, 2012	ND	mg/L	No
Carbofuran	Feb 23, 2012	ND	mg/L	No
Carbon Tetrachloride	Feb 23, 2012	ND	mg/L	No
Chlordane (Total)	Feb 23, 2012	ND	mg/L	No
Chlorpyrifos	Feb 23, 2012	ND	mg/L	No
Cyanazine	Feb 23, 2012	ND	mg/L	No
Diazinon	Feb 23, 2012	ND	mg/L	No
Dicamba	Feb 23, 2012	ND	mg/L	No
1,2-Dichlorobenzene	Feb 23, 2012	ND	mg/L	No
1,4-Dichlorobenzene	Feb 23, 2012	ND	mg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Feb 23, 2012	ND	mg/L	No
1,2-Dichloroethane	Feb 23, 2012	ND	mg/L	No
1,1-Dichloroethylene	Feb 23, 2012	ND	mg/L	No
Dichloromethane	Feb 23, 2012	ND	mg/L	No
2-4 Dichlorophenol	Feb 23, 2012	ND	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Feb 23, 2012	ND	mg/L	No
Diclofop-methyl	Feb 23, 2012	ND	mg/L	No
Dimethoate	Feb 23, 2012	ND	mg/L	No
Dinoseb	Feb 23, 2012	ND	mg/L	No
Diquat	Feb 23, 2012	ND	mg/L	No
Diuron	Feb 23, 2012	ND	mg/L	No

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance*
Glyphosate	Feb 23, 2012	ND	mg/L	No
Heptachlor + Heptachlor Epoxide	Feb 23, 2012	ND	mg/L	No
Lindane (Total)	Feb 23, 2012	ND	mg/L	No
Malathion	Feb 23, 2012	ND	mg/L	No
Methoxychlor	Feb 23, 2012	ND	mg/L	No
Metolachlor	Feb 23, 2012	ND	mg/L	No
Metribuzin	Feb 23, 2012	ND	mg/L	No
Monochlorobenzene	Feb 23, 2012	ND	mg/L	No
Paraquat	Feb 23, 2012	ND	mg/L	No
Parathion	Feb 23, 2012	ND	mg/L	No
Pentachlorophenol	Feb 23, 2012	ND	mg/L	No
Phorate	Feb 23, 2012	ND	mg/L	No
Picloram	Feb 23, 2012	ND	mg/L	No
Polychlorinated Biphenyls(PCB)	Feb 23, 2012	ND	mg/L	No
Prometryne	Feb 23, 2012	ND	mg/L	No
Simazine	Feb 23, 2012	ND	mg/L	No
Trihalomethanes**	Jan – Dec, 2012	0.005	mg/L	No
Temephos	Feb 23, 2012	ND	mg/L	No
Terbufos	Feb 23, 2012	ND	mg/L	No
Tetrachloroethylene	Feb 23, 2012	ND	mg/L	No
2,3,4,6-Tetrachlorophenol	Feb 23, 2012	ND	mg/L	No
Triallate	Feb 23, 2012	ND	mg/L	No
Trichloroethylene	Feb 23, 2012	ND	mg/L	No
2,4,6-Trichlorophenol	Feb 23, 2012	ND	mg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Feb 23, 2012	ND	mg/L	No
Trifluralin	Feb 23, 2012	ND	mg/L	No
Vinyl Chloride	Feb 23, 2012	ND	mg/L	No

ND denotes non-detectable results

NOTE\*: The determination of exceedances are based on all results in the data set.

NOTE\*\*: The reported THM result is an annual average of the maximum value observed in each quarter.

**Table 8 Inorganic or Organic parameters that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.**

Parameter	Result Value	Unit of Measure	Date of Sample