



February 1, 2012

The Corporation of the Municipality of Huron East  
72 Main St. S  
P.O. Box 610  
Seaford, ON  
N0K 1W0

**Attention: Brad Knight, Administrator, Clerk-Treasurer**

**RE: Brucefield Well Supply System  
2011 Annual Report**

Dear Brad,

Please find attached the 2011 Annual Operations Report for the Brucefield Water System, in accordance with Section 11(1) of O. Reg. 170/03. This report covers the period from January 1 to December 31 and meets the requirement of being prepared by February 28 of this year.

Please ensure that a copy of this report is given, without charge, to every person who requests a copy. In addition, please make certain that effective steps are taken to advise residents that copies of the report are available, and of how a copy can be obtained.

As per Schedule 22 of O. Reg. 170/03, please ensure that at least a copy of the Summary Report is given to the members of municipal council no later than March 31, 2012.

Finally, please ensure that a letter is sent to OMI Canada Inc verifying that this report has been received and accepted by Council.

If you have any questions regarding the report, we would be pleased to address them and you should contact the undersigned accordingly.

Sincerely,

OMI Canada Inc.

A handwritten signature in cursive script, appearing to read "Joe Arnold".

Joe Arnold  
Project Manager  
Huron East  
Project  
519 490 5586

cc. B. Mills, Municipality of Huron East;

## 2011 ANNUAL REPORT FOR WATER SYSTEMS

### Part 1 – ANNUAL REPORT (as required by O. Reg. 170/03, Section 11)

<b>Drinking-Water System Number:</b>	220007604
<b>Drinking-Water System Name:</b>	Brucefield Water System
<b>Drinking-Water System Owner:</b>	The Corporation of the Municipality of Huron East
<b>Drinking-Water System Category:</b>	Small Municipal Residential
<b>Period being reported:</b>	January 1-December 31, 2011

Complete if your Category is Large Municipal Residential or Small Municipal Residential	Complete for all other Categories
Does your Drinking-Water System serve more than 10,000 people? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Number of Designated Facilities served:
Is your annual report available to the public at no charge on a web site on the Internet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Did you provide a copy of your annual report to all Designated Facilities you serve? <input type="checkbox"/> Yes <input type="checkbox"/> No
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection. <b>Town Office 72 Main St. S. Seaforth, ON</b>	Number of Designated Facilities served: Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? <input type="checkbox"/> Yes <input type="checkbox"/> No

#### 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

**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?**

#### Indicate how you notified system users that your annual report is available, and is free of charge.

<input checked="" 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 a Public Library

#### Describe your Drinking Water System

##### Water Distribution System Class 2.

Well located at the intersection of Highway 4 and County Road 3 is 69.3 m deep and a 200 mm diameter steel casing and a submersible pump rated for 318 L/minute. The pump house contains four 455 L bladder type pressure tanks. Primary disinfection is supplied by ultraviolet reactors, secondary disinfection by sodium hypochlorite injection.

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

12% Sodium hypochlorite solution

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

 Maintenance by H2 Flow on UV #1  
 New Ballast installed UV #1  
 New UPS on well pump switch

**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**

Incident Date	Parameter	Result	Units	Corrective Action	Corrective Action Date
Feb 24, 2011	UV lamp failure			Replace faulty UPS	Feb 24, 2011
Mar 27, 2011	Well pump failure	<20	PSI	Well pump restarted	Mar 27, 2011
Jul 24, 2011	Well pump failure	<20	PSI	Well pump restarted	Jul 24, 2011

**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period**

	Number of Samples	Range of E.Coli Results (min #) - (max #)	Range of Total Coliform Results (min #) - (max #)	Number of HPC Samples	Range of HPC Results (min #) - (max #)
<b>Raw</b>	12	0	0	n/a	n/a
<b>Treated</b>	n/a	n/a	n/a	n/a	n/a
<b>Distribution</b>	55	0	0	55	0-10

**Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report**

	Number of Grab Samples	Range of Results (min #) - (max #)	Units
<b>Turbidity</b>	12	0.16 - 0.36	NTU
<b>Chlorine</b>	8760	.46 - 3.36	mg/L
<b>Fluoride (If the DWS provides fluoridation)</b>	n/a		

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

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
September 2002	Radionuclides	Jan 17, 2011	Gross alpha <0.1 Gross beta <0.1 Tritium <15	Bq/L

**Summary of Inorganic parameters tested during this reporting period or the most recent sample results**

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Apr 26/11	.02	Ug/L	No
Arsenic	Apr 26/11	0.4	Ug/L	No
Barium	Apr 26/11	236	Ug/L	No
Boron	Apr 26/11	14	Ug/L	No
Cadmium	Apr 26/11	0.188	Ug/L	No
Chromium	Apr 26/11	1.0	Ug/L	No
Lead-sampling conducted by the Municipality of Huron East; see summary below				
Mercury	Apr 26/11	0.02	Ug/L	No
Selenium	Apr 26/11	1.0	Ug/L	No
Sodium	Oct 20/08	11.0	mg/L	No
Uranium	Apr 26/11	1.81	mg/L	No
Fluoride	Oct 6/08	1.1	mg/L	No
Nitrite	Jan 17/11	0.005	mg/L	No
Nitrate	Jan 17/11	0.459	mg/L	No
Nitrite	Apr 26/11	.005	mg/L	No
Nitrate	Apr 26/11	.461	mg/L	No
Nitrite	July 18/11	0.005	mg/L	No
Nitrate	July 18/11	0.486	mg/L	No
Nitrite	Oct 11/11	0.005	mg/L	No
Nitrate	Oct 11/11	0.489	mg/L	No

**Summary of Lead Results\* None during this reporting period**

Sampling Period	Range of Results (µg/L) from Residential Samples (# of locations sampled)	Non-residential locations	Distribution System	Any Adverse Water Quality Incidents?

**Summary of Organic parameters tested during this reporting period or the most recent sample results**

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Apr 26/11	.02	Ug/L	No
Aldicarb	Apr 26/11	.01	Ug/L	No
Aldrin + Dieldrin	Apr 26/11	0.01	Ug/L	No
Atrazine + N-dealkylated metabolites	Apr 26/11	0.01	Ug/L	No
Azinphos-methyl	Apr 26/11	0.02	Ug/L	No
Bendiocarb	Apr 26/11	0.01	Ug/L	No
Benzene	Apr 26/11	0.32	Ug/L	No
Benzo(a)pyrene	Apr 26/11	.004	Ug/L	No
Bromoxynil	Apr 26/11	0.33	Ug/L	No
Carbaryl	Apr 26/11	0.01	Ug/L	No
Carbofuran	Apr 26/11	0.01	Ug/L	No
Carbon Tetrachloride	Apr 26/11	0.16	Ug/L	No
Chlordane (Total)	Apr 26/11	0.01	Ug/L	No
Chlorpyrifos	Apr 26/11	0.02	Ug/L	No
Cyanazine	Apr 26/11	0.03	Ug/L	No

Summary of Organic parameters tested during this reporting period or the most recent sample results				
Diazinon	Apr 26/11	0.02	Ug/L	No
Dicamba	Apr 26/11	0.20	Ug/L	No
1,2-Dichlorobenzene	Apr 26/11	0.41	Ug/L	No
1,4-Dichlorobenzene	Apr 26/11	0.36	Ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Apr 26/11	0.01	Ug/L	No
1,2-Dichloroethane	Apr 26/11	0.35	Ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Apr 26/11	0.33	Ug/L	No
Dichloromethane	Apr 26/11	0.35	Ug/L	No
2-4 Dichlorophenol	Apr 26/11	0.15	Ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Apr 26/11	0.19	Ug/L	No
Diclofop-methyl	Apr 26/11	0.40	Ug/L	No
Dimethoate	Apr 26/11	0.03	Ug/L	No
Dinoseb	Apr 26/11	0.36	Ug/L	No
Diquat	Apr 26/11	1	Ug/L	No
Diuron	Apr 26/11	0.03	Ug/L	No
Glyphosate	Apr 26/11	6	Ug/L	No
Heptachlor + Heptachlor Epoxide	Apr 26/11	0.01	Ug/L	No
Lindane (Total)	Apr 26/11	0.01	Ug/L	No
Malathion	Apr 26/11	0.02	Ug/L	No
Methoxychlor	Apr 26/11	0.01	Ug/L	No
Metolachlor	Apr 26/11	0.01	Ug/L	No
Metribuzin	Apr 26/11	0.02	Ug/L	No
Monochlorobenzene	Apr 26/11	0.03	Ug/L	No
Paraquat	Apr 26/11	1	Ug/L	No
Parathion	Apr 26/11	0.02	Ug/L	No
Pentachlorophenol	Apr 26/11	0.15	Ug/L	No
Phorate	Apr 26/11	0.01	Ug/L	No
Picloram	Apr 26/11	0.25	Ug/L	No
Polychlorinated Biphenyls(PCB)	Apr 26/11	0.04	Ug/L	No
Prometryne	Apr 26/11	0.03	Ug/L	No
Simazine	Apr 26/11	0.01	Ug/L	No
THM (NOTE: show latest annual average)	Q1-Q4 2011	3.4	Ug/L	No
Temephos	Apr 26/11	0.01	Ug/L	No
Terbufos	Apr 26/11	0.01	Ug/L	No
Tetrachloroethylene	Apr 26/11	0.35	Ug/L	No
2,3,4,6-Tetrachlorophenol	Apr 26/11	0.14	Ug/L	No
Triallate	Apr 26/11	0.01	Ug/L	No
Trichloroethylene	Apr 26/11	0.43	Ug/L	No
2,4,6-Trichlorophenol	Apr 26/11	0.25	Ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Apr 26/11	0.22	Ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Sample Date	Result Value	Unit of Measure	ODWS Criteria
Fluoride	Oct 6/08	1.1	mg/L	1.5

Part 2 – SUMMARY REPORT (as required by O. Reg. 170/03, Schedule 22)

Non – Compliance with Legislations, Regulations, Approvals & Orders

During this period, the Facility was operated in full compliance with the Act, the regulations and the Facility's approval, save and except for the following:

Requirement	Duration of Failure	Measures to Correct the Failure
No Non-Compliance in 2011		

System Capability Assessment		
Monthly Raw Water Taking (m <sup>3</sup> /d):		
Month	Average Flow	Maximum Flow
January	42	72
February	36	48
March	36	46
April	39	45
May	41	70
June	44	79
July	54	95
August	43	53
September	40	50
October	53	72
November	48	70
December	48	69
<b>AVERAGE</b>	<b>44</b>	<b>95</b>
<b>MAXIMUM</b>	<b>54</b>	
<b>SYSTEM CAPACITY</b>	<b>458</b>	<b>458</b>
<b>% CAPACITY</b>	<b>9.6</b>	<b>20.7</b>