

## 2009 ANNUAL REPORT FOR WATER SYSTEMS

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

Drinking-Water System Number:	220002147
Drinking-Water System Name:	Neustadt Well Supply
Drinking-Water System Owner:	Municipality of West Grey
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1 – December 31, 2009

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:	n/a
Is your annual report available to the public at no charge on a web site on the Internet? <input type="checkbox"/> Yes <input checked="" 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. Municipality of West Grey Grey Road #4 Durham, ON N0G 2V0	Number of Designated Facilities served:	n/a
	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
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.

<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 checked="" type="checkbox"/> Public access/notice via other method
INCLUDED WITH TAX NOTICE		

#### Describe your Drinking Water System

<p>Three GUDI wells: Well No. 2 with a submersible pump capable of delivering 10.6 L/s; Well No. 3 with a submersible pump capable of delivering 6.1 L/s; and Well No. 1 with a submersible pump capable of delivering 3.2 L/s. Pumping station No. 2 transfers flow monitored raw water from Well No. 2 and Well No. 3 (each well with online turbidity meters) to Well No. 1 pumphouse. Well No. 1 pumphouse contains the treatment equipment, including, but not limited to, flow meters, sodium hypochlorite disinfection system (primary disinfection), UV disinfection system (seasonal, dependent on turbidity</p>
---

threshold of 0.6 NTU), cartridge filters, online chlorine and turbidity analyzers, low level alarms and auto dialer.

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

Sodium Hypochlorite 12%

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

DWQMS certification \$8,940.00

**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
NA	NA	NA	NA	NA	NA

**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 #)
Raw Well #1	51*	0	0	n/a	n/a
Raw Well #2	52	0	0	n/a	n/a
Raw Well #3	52	0	0	n/a	n/a
Treated (POE)	52	0	0	52	0-1
Distribution	104	0	0	104	0-3

\*Raw Well #1 taken off-line in February 2009, one sampling event was missed as a result.

**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
Turbidity - Raw	116	0.00-0.44	NTU
Turbidity - Treated	365	0.01-0.41	NTU
Chlorine - Treated	4860	0.53-1.28	mg/L
Chlorine - Dist	415	0.27-1.14	mg/L
Fluoride (If the DWS provides fluoridation)	NA	NA	

**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
None				

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

Parameter	Sample Date	Result Value POE	Distribution	Unit of Measure	Exceedance
Antimony	Aug 5/09	ND	-	mg/L	NO
Arsenic	Aug 5/09	0.003	-	mg/L	NO
Barium	Aug 5/09	0.13	-	mg/L	NO
Boron	Aug 5/09	0.02	-	mg/L	NO
Cadmium	Aug 5/09	ND	-	mg/L	NO
Chromium	Aug 5/09	ND	-	mg/L	NO
Lead-see results below					
Mercury	Aug 5/09	ND	-	mg/L	NO
Selenium	Aug 5/09	ND	-	mg/L	NO
Sodium	Aug 5/09	4400	-	µg/L	NA
Uranium	Aug 5/09	0.0001	-	mg/L	NO
Fluoride	Aug 5/09	0.8	-	mg/L	NO
Nitrite	Feb 2/09	ND	-	mg/L	NO
Nitrate	Feb 2/09	ND	-	mg/L	NO
Nitrite	May 11/09	ND	-	mg/L	NO
Nitrate	May 11/09	ND	-	mg/L	NO
Nitrite	Aug 4/09	ND	-	mg/L	NO
Nitrate	Aug 4/09	ND	-	mg/L	NO
Nitrite	Nov 2/09	ND	-	mg/L	NO
Nitrate	Nov 2/09	ND	-	mg/L	NO

Summary of Lead Results during this reporting period (Winter: Dec. 15/07-April 15/08; Summer: June 15-Oct. 15/08)

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

As per O. Reg 170/03 Schedule 15.1-5, lead sampling is not required again until the period starting December 15/2010

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

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	Aug 4/09	ND	µg/L	NO
Aldicarb	Aug 4/09	ND	µg/L	NO
Aldrin + Dieldrin	Aug 4/09	ND	µg/L	NO
Atrazine + N-dealkylated metabolites	Aug 4/09	ND	µg/L	NO
Azinphos-methyl	Aug 4/09	ND	µg/L	NO
Bendiocarb	Aug 4/09	ND	µg/L	NO
Benzene	Aug 4/09	ND	µg/L	NO
Benzo(a)pyrene	Aug 4/09	ND	µg/L	NO
Bromoxynil	Aug 4/09	ND	µg/L	NO
Carbaryl	Aug 4/09	ND	µg/L	NO
Carbofuran	Aug 4/09	ND	µg/L	NO
Carbon Tetrachloride	Aug 4/09	ND	µg/L	NO
Chlordane (Total)	Aug 4/09	ND	µg/L	NO
Chlorpyrifos	Aug 4/09	ND	µg/L	NO
Cyanazine	Aug 4/09	ND	µg/L	NO
Diazinon	Aug 4/09	ND	µg/L	NO
Dicamba	Aug 4/09	ND	µg/L	NO
1,2-Dichlorobenzene	Aug 4/09	ND	µg/L	NO
1,4-Dichlorobenzene	Aug 4/09	ND	µg/L	NO
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Aug 4/09	ND	µg/L	NO
1,2-Dichloroethane	Aug 4/09	ND	µg/L	NO
1,1-Dichloroethylene (vinylidene chloride)	Aug 4/09	ND	µg/L	NO
Dichloromethane	Aug 4/09	ND	µg/L	NO
2,4 Dichlorophenol	Aug 4/09	ND	µg/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	Aug 4/09	ND	µg/L	NO
Diclofop-methyl	Aug 4/09	ND	µg/L	NO
Dimethoate	Aug 4/09	ND	µg/L	NO
Dinoseb	Aug 4/09	ND	µg/L	NO
Diquat	Aug 4/09	ND	µg/L	NO
Diuron	Aug 4/09	ND	µg/L	NO
Glyphosate	Aug 4/09	ND	µg/L	NO
Heptachlor + Heptachlor Epoxide	Aug 4/09	ND	µg/L	NO
Lindane (Total)	Aug 4/09	ND	µg/L	NO
Malathion	Aug 4/09	ND	µg/L	NO
Methoxychlor	Aug 4/09	ND	µg/L	NO
Metolachlor	Aug 4/09	ND	µg/L	NO
Metribuzin	Aug 4/09	ND	µg/L	NO
(Mono)chlorobenzene	Aug 4/09	ND	µg/L	NO
Paraquat	Aug 4/09	ND	µg/L	NO
Parathion	Aug 4/09	ND	µg/L	NO
Pentachlorophenol	Aug 4/09	ND	µg/L	NO
Phorate	Aug 4/09	ND	µg/L	NO
Picloram	Aug 4/09	ND	µg/L	NO
Polychlorinated Biphenyls(PCB)	Aug 4/09	ND	µg/L	NO
Prometryne	Aug 4/09	ND	µg/L	NO
Simazine	Aug 4/09	ND	µg/L	NO
THM (NOTE: show latest annual average)	Q1 – Q4 2009	8.8	µg/L	NO

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

Temephos	Aug 4/09	ND	µg/L	NO
Terbufos	Aug 4/09	ND	µg/L	NO
Tetrachloroethylene	Aug 4/09	ND	µg/L	NO
2,3,4,6-Tetrachlorophenol	Aug 4/09	ND	µg/L	NO
Triallate	Aug 4/09	ND	µg/L	NO
Trichloroethylene	Aug 4/09	ND	µg/L	NO
2,4,6-Trichlorophenol	Aug 4/09	ND	µg/L	NO
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Aug 4/09	ND	µg/L	NO
Trifluralin	Aug 4/09	ND	µg/L	NO
Vinyl Chloride	Aug 4/09	ND	µg/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

## 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

System Capability Assessment								
Comparison of Flow Rates (m <sup>3</sup> /d):								
Month	Average Flow	Maximum Flow	Well 1 Avg Flow	Well 1 Max Flow	Well 2 Avg Flow	Well 2 Max Flow	Well 3 Avg Flow	Well 3 Max Flow
January	115	144	32	45	0.5	5	83	99
February	108	215	1	32	103	198	3	74
March	103	123	8	58	82	212	16	88
April	121	146	1	7	119	146	1	17
May	128	183	7	42	105	176	17	100
June	135	458	31	67	12	354	89	185
July	123	197	33	51	0.6	6	90	146
August	126	412	31	40	10	306	85	106
September	117	155	31	37	0.7	8	90	107
October	115	144	30	40	0.5	5	84	96
November	107	139	31	37	0.4	5	77	101
December	130	157	24	50	45	157	61	105
<b>AVERAGE</b>	119		22		40		58	
<b>MAXIMUM</b>	135	458	33	67	105	354	90	185
<b>SYSTEM CAPACITY</b>	916	916						
<b>% CAPACITY</b>	13%	50%						

\*Due to rounding, the sum of the monthly well average totals may not equal the total average flow

Each well pump is set to a certain flow rate to maintain compliance with C of A and PTTW. The Maximum Instantaneous flow rates (L/s) for each well pump are as follows:

Well	Max flow rate (L/s)	Approved limit (L/s)
Well #1	1.75	3.2
Well #2	10.5	10.6
Well #3	6.0	6.1