

Ontario Drinking-Water Systems Regulation O. Reg. 170-03 (s)11

Buckingham Woods 2021 Annual Report

Drinking-Water System Number: 250001420
Drinking-Water System Name: Buckingham Woods Drinking Water System
Drinking-Water System Owner: The Corporation of the Township of Clearview
Drinking-Water System Category: Small Municipal Residential
Period being reported: January – December 2021

This Drinking-Water System does not serve more than 10,000 people.

This annual report is available to the public at no charge on the Clearview website at www.clearview.ca

The Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection at the Clearview Municipal Office 217 Gideon Street, Stayner and at the Clearview public works building at 5833 County Road 96, Stayner.

No other Drinking Water Systems receive their drinking water from this system.

This annual report is available free of charge on our web-site, and at the locations listed above. Notice of the report availability is provided on the Clearview web-site and social media accounts. Report availability is also advertised in the local newspaper.

Description of the system:

The water source for this system is two groundwater source wells. Disinfection is provided with sodium hypochlorite. Sodium Silicate is used to sequester iron. Water storage is in two celled concrete reservoir with a total capacity of 100 m³. There are approximately 38 active service connections. There are 13 hydrants for flushing purposes, this system does not support fire protection.

Chemicals used for treatment include 12% Sodium Hypochlorite and Sodium Silicate.

Significant expenses incurred to install, repair, or replace equipment:

- Sodium Hypochlorite pumps replacement – \$8,550
- 3 Pressure tanks - \$1,700
- High Lift pump control panel and PLC replacement - \$52,700
- Jockey pump VFD addition - \$4,000

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	Unit of Measure	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.

Sample Type	Number of Samples	Range of E.coli Or Fecal Results (min #)-(max #) CFU/100 mL	Range of Total Coliform Results (min #)-(max #) CFU/100 mL	Number of HPC Samples	Range of HPC Results (min #)-(max #) CFU/100 mL
Raw – Well # 1	16	0 – 0	0 - 4	0	NA
Raw – Well # 3	12	0 – 0	0 – 0	0	NA
Treated	0	NA	NA	0	NA
Distribution	52	0 - 0	0 - 0	52	<10 - 100

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

Parameter	Number of Grab Samples	Range of Results (min #)-(max #)	Unit of Measure
System Chlorine	104	0.40 – 1.27	mg/L
Chlorine	8760	0.21 – 2.18	mg/L
Turbidity			
Raw – Well # 1	12	0.40 – 0.98	NTU
Raw – Well # 3	12	0.17 – 1.14	NTU

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

Summary of lead testing under Schedule 15.1 during this reporting period (applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	0	NA	mg/L	NA
Distribution	0	NA	mg/L	NA

Samples required under Schedule 13

Parameter	Date Sampled	Result	Unit of Measure
THM's (annual running average)	2021	0.0108	mg/L
HAA's (annual running average)	2021	<0.0053	mg/L
Nitrate	01/18/2021	<0.1	mg/L
	04/15/2021	<0.1	
	07/15/2021	<0.1	
	10/21/2021	<0.1	
Nitrite	01/18/2021	<0.1	mg/L
	04/15/2021	<0.1	
	07/15/2021	<0.1	
	10/21/2021	<0.1	
Sodium	11/25/2021	11.4	mg/L
Fluoride	07/18/2017	<0.1	mg/L

Other sampling

Parameter	Date Sampled	Result	Unit of Measure
Chloride	11/25/2021	21.5	mg/L
Hardness	08/28/2019	354	mg/L

The most recent sample results of Inorganic parameters tested during this reporting period
 – Appendix – A

The most recent sample results of Organic parameters sampled during this reporting period.
 – Appendix – B

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

APPENDIX A
INORGANIC PARAMETERS
(SCHEDULE 23)

C.O.C.: **DWC191008M**

REPORT No. **B19-32358**

Report To:

Clearview, Township of
 217 Gideon Street, Box 200
 Stayner Ontario L0M 1S0 Canada

Attention: Todd Patton

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 08-Oct-19

JOB/PROJECT NO.: Buckingham Woods

DATE REPORTED: 15-Oct-19

P.O. NUMBER: BW Sched 23 2019

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 250001420

Parameter	Units	R.L.	Reference Method	Date/Site Analyzed		ODWS	
						Objective	Type of Objective
Antimony	mg/L	0.0001	EPA 200.8	09-Oct-19/O	< 0.0001	0.006,0.006	IMAC,MAC
Arsenic	mg/L	0.0001	EPA 200.8	09-Oct-19/O	0.0006	0.025,0.01	IMAC,MAC
Barium	mg/L	0.001	SM 3120	15-Oct-19/O	0.209	1	MAC
Boron	mg/L	0.005	SM 3120	15-Oct-19/O	0.031	5,5	IMAC,MAC
Cadmium	mg/L	0.000015	EPA 200.8	09-Oct-19/O	< 0.000015	0.005	MAC
Chromium	mg/L	0.002	SM 3120	15-Oct-19/O	< 0.002	0.05	MAC
Mercury	mg/L	0.00002	SM 3112 B	11-Oct-19/O	< 0.00002	0.001	MAC
Selenium	mg/L	0.001	EPA 200.8	09-Oct-19/O	< 0.001	0.05	MAC
Uranium	mg/L	0.00005	EPA 200.8	09-Oct-19/O	0.00011	0.02	MAC
Free Chlorine	mg/L		n/a	08-Oct-19/B	1.30		

1 Free chlorine results provided by client.

ODWS - Ontario Drinking Water Standards
 AO - Aesthetic Objectives
 IMAC - Interim Maximum Acceptable Concentration
 MAC - Maximum Acceptable Concentration
 OG - Operational Guidelines

R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an *

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie



Christine Burke
 Lab Manager

APPENDIX B
ORGANIC PARAMETERS
(SCHEDULE 24)

C.O.C.: DWTC210316H

REPORT No. B21-07301

Report To:

Clearview, Township of
 217 Gideon Street, Box 200
 Stayner Ontario L0M 1S0 Canada

Attention: Todd Patton

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 16-Mar-21

JOB/PROJECT NO.: Buckingham Woods

DATE REPORTED: 01-Apr-21

P.O. NUMBER: Schedule 24

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 250001420

Client I.D.:	BW Treated	ODWS	
Sample I.D.:	B21-07301-1		
Date Collected:	15-Mar-21		
		Objective	Type of Objective

Parameter	Units	R.L.	Reference Method	Date/Site Analyzed				
Alachlor	µg/L	0.3	EPA 8270	23-Mar-21/K	< 0.3		5	IMAC
Atrazine + Metabolites	µg/L	0.5	Calc.	23-Mar-21/K	< 0.5		5	IMAC
Azinphos-methyl	µg/L	1	EPA 8270	23-Mar-21/K	< 1		20	MAC
Benzo(a)pyrene	µg/L	0.006	EPA 8270	23-Mar-21/K	< 0.006		0.01	MAC
Bromoxynil	µg/L	0.5	EPA 8270	23-Mar-21/K	< 0.5		5	IMAC
Carbaryl	µg/L	3	EPA 8270	23-Mar-21/K	< 3		90	MAC
Carbofuran	µg/L	1	EPA 8270	23-Mar-21/K	< 1		90	MAC
Chlorpyrifos	µg/L	0.5	EPA 8270	23-Mar-21/K	< 0.5		90	MAC
Diazinon	µg/L	1	EPA 8270	23-Mar-21/K	< 1		20	MAC
Dicamba	µg/L	10	EPA 8270	23-Mar-21/K	< 10		120	MAC
Dichlorophenol, 2,4-	µg/L	0.2	EPA 8270	23-Mar-21/K	< 0.2		0.3,900	AO,MAC
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	µg/L	10	EPA 8270	23-Mar-21/K	< 10		100	IMAC
Diclofop-methyl	µg/L	0.9	EPA 8270	23-Mar-21/K	< 0.9		9	MAC
Dimethoate	µg/L	1	EPA 8270	23-Mar-21/K	< 1		20	IMAC
Diquat	µg/L	5	EPA 549.1	25-Mar-21/K	< 5		70	MAC
Diuron	µg/L	5	EPA 8270	23-Mar-21/K	< 5		150	MAC
Glyphosate	µg/L	25	EPA 547	23-Mar-21/K	< 25		280	MAC
Malathion	µg/L	5	EPA 8270	23-Mar-21/K	< 5		190	MAC
Metolachlor	µg/L	3	EPA 8270	23-Mar-21/K	< 3		50	IMAC
Metribuzin	µg/L	3	EPA 8270	23-Mar-21/K	< 3		80	MAC
Paraquat	µg/L	1	EPA 549.1	25-Mar-21/K	< 1		10	IMAC
Pentachlorophenol	µg/L	0.2	EPA 8270	23-Mar-21/K	< 0.2		30,60	AO,MAC
Phorate	µg/L	0.3	EPA 8270	23-Mar-21/K	< 0.3		2	IMAC

ODWS - Ontario Drinking Water Standards

AO - Aesthetic Objectives

IMAC - Interim Maximum Acceptable Concentration

MAC - Maximum Acceptable Concentration

ODWO - D-5-5 Objective

OG - Operational Guidelines

WL - Warning Level - Sodium Restricted Diets

R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an *

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie



Christine Burke
 Lab Manager

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

C.O.C.: DWTC210316H

REPORT No. B21-07301

Report To:

Clearview, Township of
 217 Gideon Street, Box 200
 Stayner Ontario L0M 1S0 Canada

Attention: Todd Patton

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 16-Mar-21

JOB/PROJECT NO.: Buckingham Woods

DATE REPORTED: 01-Apr-21

P.O. NUMBER: Schedule 24

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 250001420

Client I.D.:	BW Treated		ODWS	
Sample I.D.:	B21-07301-1		Objective	Type of Objective
Date Collected:	15-Mar-21			

Parameter	Units	R.L.	Reference Method	Date/Site Analyzed				
Picloram	µg/L	15	EPA 8270	23-Mar-21/K	< 15		190	IMAC
Poly-Chlorinated Biphenyls (PCB's)	µg/L	0.05	EPA 8082	19-Mar-21/K	< 0.05		3	IMAC
Prometryne	µg/L	0.1	EPA 8270	23-Mar-21/K	< 0.1		1	IMAC
Simazine	µg/L	0.5	EPA 8270	23-Mar-21/K	< 0.5		10	IMAC
Terbufos	µg/L	0.5	EPA 8270	23-Mar-21/K	< 0.5		1	IMAC
Tetrachlorophenol, 2,3,4,6-	µg/L	0.2	EPA 8270	23-Mar-21/K	< 0.2		1,100	AO,MAC
Triallate	µg/L	10	EPA 8270	23-Mar-21/K	< 10		230	MAC
Trichlorophenol 2,4,6-	µg/L	0.2	EPA 8270	23-Mar-21/K	< 0.2		2,5	AO,MAC
Trifluralin	µg/L	0.5	EPA 8270	23-Mar-21/K	< 0.5		45	IMAC
MCPA	µg/L	10	EPA 8151A	01-Apr-21/K	< 10		100	MAC

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Christine Burke
 Lab Manager

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C.O.C.: DWTC210316HT

REPORT No. B21-07303

Report To:

Clearview, Township of
 217 Gideon Street, Box 200
 Stayner Ontario L0M 1S0 Canada

Attention: Todd Patton

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 16-Mar-21

JOB/PROJECT NO.: Buckingham Woods

DATE REPORTED: 22-Mar-21

P.O. NUMBER: Schedule 24

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 250001420

Client I.D.:	BW Treated		ODWS	
Sample I.D.:	B21-07303-1		Objective	Type of Objective
Date Collected:	15-Mar-21			

Parameter	Units	R.L.	Reference Method	Date/Site Analyzed				
Benzene	µg/L	0.5	EPA 8260	19-Mar-21/R	< 0.5		1	MAC
Carbon Tetrachloride	µg/L	0.2	EPA 8260	19-Mar-21/R	< 0.2		2	MAC
Dichlorobenzene, 1,2-	µg/L	0.5	EPA 8260	19-Mar-21/R	< 0.5		3,200	AO,MAC
Dichlorobenzene, 1,4-	µg/L	0.5	EPA 8260	19-Mar-21/R	< 0.5		1,5	AO,MAC
Dichloroethylene, 1,1-	µg/L	0.5	EPA 8260	19-Mar-21/R	< 0.5		14	MAC
Dichloroethane, 1,2-	µg/L	0.5	EPA 8260	19-Mar-21/R	< 0.5		5	IMAC
Dichloromethane (Methylene Chloride)	µg/L	5	EPA 8260	19-Mar-21/R	< 5		50	MAC
Monochlorobenzene (Chlorobenzene)	µg/L	0.5	EPA 8260	19-Mar-21/R	< 0.5		80	MAC
Tetrachloroethylene	µg/L	0.5	EPA 8260	19-Mar-21/R	< 0.5		10	MAC
Trichloroethylene	µg/L	0.5	EPA 8260	19-Mar-21/R	< 0.5		5	MAC
Vinyl Chloride	µg/L	0.2	EPA 8260	19-Mar-21/R	< 0.2		1	MAC

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Christine Burke
 Lab Manager