

Ministry of the Environment and
Climate Change

Safe Drinking Water Branch

Barrie District Office
Unit 1201
54 Cedar Pointe Drive
Barrie ON L4N 5R7

Ministère de l'Environnement et de l'Action
en matière de changement climatique

Direction du contrôle de la qualité de l'eau
potable

Bureau du district de Barrie
Bureau 1201
54, chemin Cedar Pointe
Barrie (Ontario) L4N 5R7



18 August, 2015

Collingwood Public Utilities,
43 Stewart Road,
Collingwood, ON,
L3Y 3Z5

Attention: Peggy Slama, Manager – Water Services

**Re: 2015 Final Communal Drinking Water Inspection Report
Collingwood DWS # 220001165**

Please find enclosed the Ministry of the Environment final report of the inspection of the Town of Collingwood Drinking Water System, (Water Works # 220001165). The physical inspection process took place on 14th July, 2015.

Findings of the inspection are detailed within pages 9 to 17 of the report. Non-compliance items and actions required are located on page 18 of the report. No Provincial Officer Report or Order is issued at this time.

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation & Enforcement (II&E) Secretariat and advice of internal and risk experts. The Inspection Summary Rating Record (IRR), included as Appendix C of the inspection report, provides the Ministry, the system owner and the associated Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance. Please note the attached IRR methodology memo describing how the risk rating model has improved to better reflect the health related and administrative non-compliance found in an inspection report. IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspector's Annual Report. If you have any questions or concerns regarding the rating, please contact Craig Seabrook, Drinking Water Program Supervisor, at 705-739-6392.

**Ministry of the Environment and
Climate Change**

Safe Drinking Water Branch

Barrie District Office
Unit 1201
54 Cedar Pointe Drive
Barrie ON L4N 5R7

Ministère de l'Environnement et de l'Action
en matière de changement climatique

Direction du contrôle de la qualité de l'eau
potable

Bureau du district de Barrie
Bureau 1201
54, chemin Cedar Pointe
Barrie (Ontario) L4N 5R7



If you have any questions or concerns regarding this inspection report,
please contact the undersigned at 705-739-6384.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Stuhlemmer", written over a faint, illegible stamp.

**Brian Stuhlemmer
Provincial Officer
Barrie District Office**

cc. John Vail, Chief Water Operator, Town of Collingwood
Gary Carscadden, Compliance Officer, Town of Collingwood
Dana Doyle, Water Distribution Foreman, Town of Collingwood
Dr. Charles Gardner, Medical Officer of Health, Simcoe County District Health Unit
MOE Barrie District File



Ministry of the Environment and Climate Change

COLLINGWOOD DRINKING WATER SYSTEM

Inspection Report

Site Number:	220001165
Inspection Number:	1-BYN8X
Date of Inspection:	Jul 14, 2015
Inspected By:	Brian Stuhlemmer

OWNER INFORMATION:

Company Name: COLLINGWOOD PUBLIC UTILITIES
Street Number: 43 **Unit Identifier:**
Street Name: STEWART Rd
City: COLLINGWOOD
Province: ON **Postal Code:** L9Y 3Z5

CONTACT INFORMATION

Type: Compliance Officer **Name:** Gary Carscadden
Phone: (705) 445-1791 x2256 **Fax:** (705) 445-0984
Email: gcarscadden@collus.com
Title: Compliance Officer

Type: Water Foreman **Name:** Dana Doyle
Phone: (705) 445-1800 x2226 **Fax:** (705) 445-0791
Email: ddoyle@collus.com
Title: Water Foreman

Type: Operating Authority **Name:** Peggy Slama
Phone: (705) 445-1791 **Fax:** (705) 445-0984
Email: pslama@collus.com
Title: Manager, Water Services

Type: Operating Authority **Name:** John Vail
Phone: (705) 445-1791 x2257 **Fax:** (705) 445-0984
Email: jvail@collus.com
Title: Chief Operator

INSPECTION DETAILS:

Site Name: COLLINGWOOD DRINKING WATER SYSTEM
Site Address: 2 RAGLAN ST COLLINGWOOD L9Y 4Z5
County/District: Collingwood
MOECC District/Area Office: Barrie District
Health Unit: SIMCOE MUSKOKA DISTRICT HEALTH UNIT
Conservation Authority: N/A
MNR Office: N/A
Category: Large Municipal Residential

Site Number: 220001165
Inspection Type: Announced
Inspection Number: 1-BYN8X
Date of Inspection: Jul 14, 2015
Date of Previous Inspection: Jul 09, 2014

COMPONENTS DESCRIPTION

Site (Name): MOE DWS Mapping
Type: DWS Mapping Point **Sub Type:**
Comments:
 Not Applicable

Site (Name): RAW WATER
Type: Source **Sub Type:** Surface
Comments:

The Collingwood Water Treatment Plant (WTP) is located at 2 Raglan Street in the Town of Collingwood, Simcoe County, on the shore of Nottawasaga Bay in Lake Huron. Treatment at the facility consists of direct membrane filtration and chlorination for primary and secondary disinfection. The WTP consists of a Potable Water Plant and a Process (non-potable) Water Plant. The Process Water Plant supplies unfiltered, unchlorinated water through a dedicated trunk main to a number of industries which utilize this non-potable water for their industrial processing requirements. The Potable Water Plant is used to produce potable drinking water for the Town of Collingwood and supplies this water to the Town of Blue Mountains and through a regional transmission water main owned by New Tecumseth, which supplies water to the Towns of New Lowell in Clearview Township, Angus and Baxter in Essa Township and Alliston in New Tecumseth.

Raw Water-

Surface water from Nottawasaga Bay gravity feeds into the WTP via a 765 m long and 1067 mm diameter watermain. The intake is a submerged flared elbow in approximately eight metres of water. Chlorine for pre-treatment and zebra mussle control can be applied before a surge relief chamber which has valving to direct raw water to the industrial process clear well (IPCW), directly to the membrane feed chamber (MFC) within the WTP or, to the Raw Water Supply Plant (RWSP) (typical operations). Chlorine is not typically applied at the RWSP inlet for pretreatment. The RWSP inlet splits into two - Wet Wells 1 and 2. Wet Well 1 directs raw water to the MFC with the aid of an in-line mixer to increase hydraulic gradient. Wet Well 2 houses an unused mechanical screen and can direct water to the IPCW or, as typically occurs, receive recycled process water by gravity back from the IPCW and return it to the MFC. The inlet and outlet lines are valved. The MFC receives raw and recycled process water and directs it by gravity through valved lines to five membrane filter tanks housing five trains of ZW500 membrane filters.

A raw water vertical turbine pump draws water from the MFC, directs it through a 0.5 mm automatic strainer, through a continuously monitored magnetic flow meter, turbidity analyser, a valve and check valve and then into the tank housing one train of ZW1000 membrane filters. Backwash water is directed from this tank by gravity to one of the ZW500 tanks.

All of the filter tanks contain level sensors and valved lines equipped with back flow prevention (BFP), concentrate pumps and continuously monitored magnetic flow meters which can drain the tanks to sanitary sewer and/or to the IPCW (typical) and/or to the overflow outfall in the lake (emergency).

Air is supplied to each tank to air scour the filter units and keep solids in suspension. Air is supplied to the five ZW500 by six positive displacement air blowers (five duty, one standby rated at 680 L/s at a

backpressure of 36 kPa) and to the ZW1000 tank by one air blower (rated at 30 L/s at a backpressure of 31 kPa).

There is continuous free chlorine residual, pH, turbidity and temperature monitoring of the raw water from the MFC. There is an unused particle counter on the raw water inlet.

There is not a flow meter installed on the raw water intake. A raw water flow meter will be installed on the raw water header as part of the planned upgrades.

Site (Name): RAYMOND A. BARKER ULTRAFILTRATION SURFACE WATER TREATMENT FACILITY

Type: Treated Water POE

Sub Type: Treatment Facility

Comments:

Each treatment train of the filtration system consists of ZeeWeed ultra-filtration membrane modules (five 500 series trains and one 1000 series train), a permeate/ backpulse pump, a backpulse tank and an air blower.

There are six variable speed permeate extraction/backpulse pumps (five duty, 1 spare, each rated at 126 L/s at a total dynamic head (TDH) of 15.24 m) for the ZW500 membranes, and one variable speed multi-purpose permeate extraction/backpulse/chemically enhanced backwash (CEB)/clean-in-place (CIP) pump (rated at 36.6 to 75.7 L/s at a TDH of 13.7 m) for the ZW1000 train.

The permeate pump creates a slight vacuum which suctions clean (permeate) water through the membrane, leaving any particulate matter greater than 0.035 micron in the process tank. In order to keep the particulate levels in the concentrate (water left behind in the membrane basins) from rising, concentrate pumps withdraw and discharge concentrate to the IPCW, where it may be blended with raw water in the non-potable water supply system prior to being discharged to the industries and/or recycled to the head works of the plant.

Six concentrate pumps (five duty, one standby, each rated at 39 L/s at a TDH of 16.76 m) for the ZW500 trains and one drain pump (rated at 54 to 82 L/s at a TDH of 7.6 m) for the ZW1000 train (directs tank water to ZW500 trains), remove membrane concentrate/ water from the tanks and direct it to the ICPW.

Air is released to the membrane headers by the permeate process which must be removed with six air removal vacuum pumps (five duty, one standby, rated at 48 m³/h at 41 kPa) and five air separation columns for the ZW500 trains, and one vacuum pump (rated at 39 m³/h at 68 kPa) for the ZW1000 train.

The membranes must be thoroughly cleaned regularly in addition to the continuous backpulse process. This is completed with separate systems for the ZW500 trains and the ZW1000 train. The ZW500 CIP system consists of a 12.3 m³ mixing tank and pumps directing solution to the various trains, a 12% sodium hypochlorite feed system for organic cleaning during the CIP process (consisting of two 1200 L day tanks and a 178 L/min chemical metering /transfer pump) and a 50% citric acid system (including a 300 L day tank and a 178 L/min chemical metering pump) for inorganic cleaning. The chemicals are pumped into the membranes and discharged to sanitary sewers.

Backpulses are completed with treated water from a 23.8 m³ tank piped to the five ZW500 trains.

The ZW1000 CIP/CEB system includes 200 L day tanks for 12% sodium hypochlorite and 50% citric acid, 178 L/s chemical metering pumps and a 108 L/s pump for the CEB process.

Both trains are provided air compressors, air receivers and air dryers for membrane integrity testing and valve actuation.

Each permeate extraction line is equipped with a continuously monitored and alarmed turbidity analyser and a continuously monitored magnetic flow meter.

Each concentrate pump discharge is equipped with magnetic flow meters.

Particle counters are installed on the ZW1000 discharge line (not in use) and on the inlet line to the chlorine contact chamber (CCC).

There are continuously monitored magnetic flow meters on the inlet line to the ICPW and the inlet to the CCC.

After passing through the membrane filters, the permeate water is then disinfected with the addition of chlorine gas. The chlorination system consists of three gas chlorine units (two duty, one standby, each rated at 226 kilograms per day), two weigh scales with SCADA system output, one vacuum regulator and two vacuum switches. The chlorinated permeate water is then discharged into the two 413 m³ baffled and level controlled CCC's and then flows by gravity into the 797 m³ clear well. Free chlorine residual is continuously monitored by an alarmed analyser at the CCC inlet.

The finished water is pumped to the Collingwood distribution system via four vertical turbine HLP's with variable speed drives (one jockey pump rated at 56.7 L/s at a TDH of 57 m, and three rated at 138.6 L/s at a TDH of 55 m). Three additional HLP's with variable speed drives, all rated at 136.1 L/s at a TDH of 55m and under the control of the Town of New Tecumseth, direct water to the Regional Pipeline. Each of the HLP's is equipped with pressure monitoring, flow control/check valves and isolation valves.

The HLP discharge header to the Collingwood distribution system is equipped with a continuously monitored magnetic flow meter, pressure transducers and analysers for temperature, free chlorine residual, turbidity and pH.

Flow is continuously monitored on the transmission main discharge.

All monitoring, alarms and controls for the WTP and the various other facilities within the Collingwood distribution system are routed through the SCADA system in the WTP.

A 1000 kW diesel standby generator with four contained fuel tanks (2270 L volume) and automatic start and stop capabilities for emergency power supply is located on site.

Floor drains empty to the sanitary sewers.

The clear well overflow empties to the plant head works.

Vents with screens are provided for the chemical tanks, the clear well and the CCC's.

An on-site lab provides testing facilities for various water quality parameters.

The Industrial Process Clear Well receives concentrate waste water from the filter tanks and/or raw water from the plant head works. Flow monitoring is provided on the concentrate line. Concentrate continuously gravity feeds back to the head works when the tank is full or during emergencies to the lake outfall. Four HLP's discharge non-potable process water to industrial users in Town through a watermain network separate from the distribution system. Tank level, flows, turbidity and pressure are monitored on this system.

Site (Name): DISTRIBUTION

Type: Other

Sub Type: Other

Comments:

The Collingwood distribution system serves the Town of Collingwood with an estimated population of 22,500 persons.

Watermains are comprised of various components including cast iron, ductile iron, copper, concrete and Polyvinyl chloride (PVC). These watermains range in diameter from 100 mm to 600 mm. There is an estimated total length of 157.75 km of watermains installed within the Town. There are an estimated 921 hydrants, 2625 valves, three pressure sustaining valves, five designated sample stations and numerous blow offs located within the distribution system.

The system is fire rated and includes an elevated storage tower, two reservoir/booster pumping stations, and two below-grade pressure booster stations. Further detail on the reservoirs, booster stations and the elevated tower is provided below.

The Collingwood WTP also supplies drinking water to the Town of the Blue Mountains via a connection to Collingwood's distribution system at the boundary of the two municipalities (Osler Bluff Road) and to the Municipalities of New Tecumseth and Essa via a 58 kilometre long Regional Pipeline. The Regional Pipeline is located in the former railway corridor that runs north-south through the Town of Collingwood (further described below).

Site (Name): WEST END RESERVOIR AND BOOSTER STATION

Type: Other

Sub Type: Reservoir

Comments:

The West End Reservoir and Booster Station (also known as the A. R. (Ted) Carmichael Reservoir) is located at 11437 Highway 26 in the Town of Collingwood. The building is constructed of concrete blocks with a steel roof and locking, alarmed steel entry doors. Contact information and parking control signs are provided.

Distribution system water enters the facility by way of a common inlet/outlet line which separate within the facility. The inlet line has a pressure relief valve, a chlorine gas injection point, a continuously monitored flow meter, a supply line to the on-line free chlorine residual analyser, a valved reservoir by-pass line and two valved reservoir fill lines.

The reservoir is a concrete, single cell below grade chamber which extends outside of the building. It has a single, screened vent pipe within a locked metal cage enclosure outside of the building, an overflow with metal flapper valve and screen which empties to the roadside ditch, and level monitoring.

Three vertical turbine HLP's (one rated at 100 L/s at a TDH of 45.6 m and two rated at 200 L/s at a TDH of 42.7 m) draw water from the reservoir and discharge it back to the distribution system. Each of the HLP discharges are equipped with pressure gauges, pressure switches for sequential pump starts, valving and flow control/ backflow prevention valves.

The HLP discharge has a pressure relief valve which will direct water back into the reservoir if system pressure is too high, a gas chlorination injection point, a continuously monitored magnetic flow meter with a valved by-pass line and isolation valving.

The gas chlorination system is contained within a separate room, has automatic weigh scales and automatic switch-over capabilities, and is rated at 226 kg/d. It is typically injected into the inlet line in response to chlorine residual set points as recorded by the free chlorine residual analyser.

All alarms and monitoring are trended by the SCADA system at the WTP.

The floor drains empty to the sanitary sewers.

There is a 350 kW diesel generator set with a contained, double fuel tank and automatic start and stop capabilities located inside the building for emergency power supply.

There is a tap outside for public use, equipped with a backflow preventer.

Site (Name): COLLINGWOOD SOUTH RESERVOIR AND BOOSTER STATION

Type: Other

Sub Type: Reservoir

Comments:

The Collingwood South Reservoir became operational in December 2008 and is located on the north side of Poplar Sideroad (#7508), just west of the Pretty River. It is expected to provide adequate pressure for future development in the area.

This facility draws from the Regional Pipeline, through a 500 mm watermain, where it intersects with Poplar Sideroad. Water entering the facility passes a continuously monitored pressure transducer, isolation valves, a continuously monitored magnetic inlet flow meter with valved bypass line, a pressure sustaining/ flow control valve and then through a valving arrangement with isolation valves, a motorized modulating pressure relief valve which under typical operations directs water to the two celled, concreted, 2,565 m³ underground storage reservoir, or, if the reservoir is to be by-passed,

through a flow control/ backflow preventing valve and on to the facility discharge line. There is a pressure relief valve on the by-pass line which will direct water into the reservoir if system pressure gets too high.

Separate fill lines direct water into the reservoir cells. A continuously monitored and alarmed free chlorine analyser draws water from the common inlet line.

The reservoir cells extend outside the building and are hydraulically connected by a valved line which can be closed to isolate the cells. Each cell is equipped with baffle walls, a continuously monitored and alarmed level sensor, plate metal and gasketed access hatches, screened vents exiting the roof of the building, an overflow which empties through a line with backflow prevention to the roadside ditch and a discharge/suction line to the HLP's.

Four HLP's rated at 25 L/s, 55 L/s, 92 L/s and 92 L/s at 60 m TDH and with variable speed drives are installed to discharge water from the facility. Each is equipped with electronic pressure sensors on inlet and outlet for pump start control (sequential), air relief valves, a vacuum priming system tied into a vacuum system, back flow prevention and valving before discharging to the discharge header.

The discharge header is equipped with two 3 m³ hydropneumatic surge tanks with level gauges, a line with backflow prevention, valving, a flow meter and outside tap for bulk water takings, continuous pressure sensors, an electronic pump switch/sensor, a continuously monitored free chlorine residual/pH/temperature analyser/sensor, a chlorine injection point, air relief valves, isolation valves and a continuously monitored magnetic flow meter with valved by-pass before joining with the outside watermain. The bulk water fill line is accessed by passcode and the backflow preventer installed on the line is inspected annually.

The top up chlorination system is composed of two flow paced chemical metering pumps (duty and standby), each rated at 7.2 L/hr and equipped with manual switch-over under normal conditions. There is an unused, contained 2000 L sodium hypochlorite bulk storage tank with venting and motorized blower, an in-use, approximately 100 L contained day tank, alarmed flow sensors and pump failure alarms.

The floor drains empty to the sanitary sewers.

The building is constructed of concrete blocks with a steel roof and steel entry doors that are alarmed for forced entry.

There is a 200 kW diesel generator set with self contained, doubled walled fuel tank and automatic start and stop capabilities located outside the building for emergency power supply.

There is provision for two more reservoir cells and a fifth HLP.

All alarms and monitoring are linked to the SCADA system at the WTP.

Site (Name): ELEVATED STORAGE TOWER

Type: Other

Sub Type: Reservoir

Comments:

The Elevated Storage Tower is located at 200 Hume Street and consists of one multi-legged elevated storage tank with a usable volume of 2,273 m³, three locked brick outbuildings (one is a telecommunications hut not owned by the CPU and another contains some telecommunication equipment) and a fenced compound with barbed wire and locking gate. The tower has a single, 600 mm diameter inlet/outlet pipe and an overflow which empties into a manhole and then to the adjacent stream. An alarmed continuous free chlorine residual analyser recording to the SCADA system at the WTP draws water from the feed pipe.

A sodium hypochlorite top up chlorination system, injecting into the inlet/outlet header in response to programmed free chlorine set points with water discharge, has been installed including two chemical metering pumps (one duty, one standby), each rated at 12 L/hr, alarmed flow sensors and a 60 L day tank.

This facility is equipped with isolation valves, continuously monitored alarms and sensors for floods, power failure and reservoir level.

A small portable generator is kept on-site for emergency power anywhere in the distribution system.

The floor drains empty to the sanitary sewers.

Access is by way of steps up the central pipe and a locked access hatch at the top of the structure. Venting at the top of the tower is reportedly screened.

Site (Name): OSLER BLUFF ROAD PRESSURE BOOSTER STATION

Type: Other

Sub Type: Booster Station

Comments:

The Osler Bluff Road Booster Station is located at 223 Osler Bluff Road. The facility consists of an underground precast concrete chamber, accessed by a locked plate metal hatch, three horizontal in-line booster pumps (two duty pumps rated at 43.9 L/s at 27.6 m TDH and one standby pump rated at 45.3 L/s at 27 m TDH), two 300 L hydropneumatic tanks, a continuously monitored magnetic flow meter, valves, an above grade sample line activated by a manually operated solenoid valve, an above grade, steel encased and lockable control panel and a 100 kW, above grade, standby diesel generator set with locking steel enclosure, automatic start and stop capability and self contained fuel tank.

This station ensures that sufficient pressure is maintained in the water distributed to the Town of The Blue Mountains.

Site (Name): GEORGIAN MEADOWS BOOSTER PUMPING STATION

Type: Other

Sub Type: Booster Station

Comments:

The Georgian Meadows Booster Station is located at 1 Georgian Meadows Drive. This facility is not owned by the Town of Collingwood but the Collingwood Public Utilities maintain and operate it for the owners, the Craigleith Land Corporation.

The facility consists of an underground precast concrete chamber with screened air vent, accessed by a locked plate metal hatch, three horizontal in-line booster pumps, two rated at 24.3 L/s at 30.6 m TDH (one duty, one standby), and one pressure pump rated at 6.5 L/s at 24.4 m TDH, an above grade, steel encased and lockable control panel valves and other appurtenances.

This station ensures that sufficient pressure is maintained in the water distributed to the Georgian Meadows subdivision.

Site (Name): NEW TECUMSETH TRANSMISSION WATERMAIN

Type: Other

Sub Type: Other

Comments:

This transmission watermain is supplied from, and runs approximately 58 km from the WTP HLP clearwell to the Town of Alliston in the Town of New Tecumseth. New Tecumseth owns the watermain and the equipment which supplies the main but Collingwood maintains the pumps within the WTP.

Three vertical turbine HLP's, all with variable speed drives, isolation valves, flow control valves and rated at 136.1 L/s at a TDH of 55 m, discharge treated water from the WTP HLP clearwell, through a continuously monitored magnetic flow meter and out of the plant. Collingwood's South End Reservoir on Poplar Sideroad receives water from this watermain before it leaves the Town of Collingwood. There is a second continuously monitored magnetic flow meter installed at the Town boundary.

The transmission main supplies all or part of the water consumed by the Village of New Lowell in Clearview Township, Baxter and Angus in Essa Township and Alliston in New Tecumseth.

INSPECTION SUMMARY

INTRODUCTION

- * The primary focus of this inspection is to confirm compliance with Ministry of the Environment and Climate Change (MOECC) legislation as well as evaluating conformance with ministry drinking water related policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment and distribution components as well as management practices.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This report is based on a "focused" inspection of the system. Although the inspection involved fewer activities than those normally undertaken in a detailed inspection, it contained critical elements required to assess key compliance issues. This system was chosen for a focused inspection because the system's performance met the ministry's criteria, most importantly that there were no deficiencies as identified in O.Reg. 172/03 over the past 3 years. The undertaking of a focused inspection at this drinking water system does not ensure that a similar type of inspection will be conducted at any point in the future.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

The Town of Collingwood, having an estimated population of approximately 24,500 persons is located on Nottawasaga Bay on the southern shore of Georgian Bay within Simcoe County and is served by the Collingwood Drinking Water System (DWS). The Drinking Water System is owned and operated by Collingwood Public Utilities, a utility owned by the municipality and governed by the Collingwood Public Utilities Services Board (CPUS) and is classified as Large Municipal Residential Drinking Water System and has been assigned the Drinking Water System (DWS) number 220001165 by the Ministry. The municipality of Collingwood intends to dissolve the CPUS and bring the DWS under Town management on 1 January, 2016. DWS Permit number 100-201 and DWS License number 100-101 was issued to the Corporation of the Town of Collingwood on 7/29/2011.

The Drinking Water System is comprised of a single surface water source, known as the Raymond A. Barker Ultrafiltration Plant or Water Treatment Plant is located within the municipality and drawing from Nottawasaga Bay under Permit to Take Water number 3451-8CZMJC issued Jan 28, 2011. Other Drinking Water Systems that receive drinking water from Raymond A. Barker Ultrafiltration Plant include the following:

- Town of New Tecumseth, DWS # 220001174
- Town of The Blue Mountains, DWS #220001762
- Baxter Distribution System (Township of Essa), DWS #260086866
- Angus Well Supply System (Township of Essa), DWS #260001026
- Clearview Township (Distribution and Supply Subsystem), DWS #220003706

INTRODUCTION

Treatment of surface water consists of pre-chlorination for Zebra mussel control, microfiltration, and chlorination before being fed into the on-site in-ground 797 m³ storage reservoir and / or the distribution system. The Collingwood distribution system is comprised of approximately 158 km of various diameter water transmission mains, ranging from 100 mm to 600 mm diameter, as well as the following major components;

- Collingwood Water Tower and Re-chlorination Facility on 250 Hume Street with a 2,273 m³ elevated storage tank,
- A.R. (Ted) Carmichael West End Reservoir Booster Pumping Station on Highway 26 with rechlorination and 6,800 m³ reservoir,
- South Collingwood Reservoir Booster Pumping Station on Poplar Sideroad with rechlorination and 2,565 m³ reservoir,
- Osler Bluff Road Booster Station on Osler Bluff Road, and
- Georgian Meadows Booster Station on Sixth Street.

Collingwood's distribution system at the town boundary and three (3) municipalities,

through the 58km Regional Pipeline including Clearview Township (New Lowell), Essa Township (Village of Baxter and Town of Angus) and Town of New Tecumseth (Alliston).

The Collingwood Drinking Water System also supplies drinking water to the Town of Blue Mountain through a connection to Collingwood's distribution system and the Town of New Tecumseth and Township of Essa through the 58 km Regional Drinking Water Transmission Main in addition to unfiltered, unchlorinated water via a dedicated pipeline to municipal industrial users with need of non-potable process water.

CAPACITY ASSESSMENT

- * **There was sufficient monitoring of flow as required by the Permit and Licence or Approval issued under Part V of the SDWA**

Condition 2.1 of Schedule C of Municipal Drinking Water Licence 100-101, issued 7/29/2011 requires continuous flow measurement and recording of the flow rate and daily volume of water to and through the drinking water treatment system.

Flow meters are installed on the non-potable header being directed to industrial users, the treated water header from the treatment facility being directed to Collingwood and Town of Blue Mountain distribution system as well as to the regional supply pipeline, at the regional boundary for the Town of New Tecumseth pipeline, and at the South Reservoir. The installed flow meters are used to calculate the raw water flow and the treated water flow.

- * **The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Permit and Licence or Approval issued under Part V of the SDWA.**

Condition 1.1 of Schedule C of Municipal Drinking Water Licence 100-101, issued 7/29/2011 limits the rated capacity of the Collingwood Drinking Water treatment plant to 31,140 m³/day.

Documents reviewed indicate daily average flow to be 17,444 m³/day (56% of limit) with the maximum daily flow of 23,468 m³/day (75% of limit) for 2014.

TREATMENT PROCESSES

- * **The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.**

On the day of physical inspection, major components as described within Schedule A of Drinking Water System Permit Number 100-201, Issued July 29th, 201, appeared to be installed and operational.

TREATMENT PROCESSES

- * **The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.**

Records provided by the Operating Authority indicate the following works were undertaken in the alteration, addition, modification or extension to the distribution system for which a 'Form 1 – Record of Watermains Authorized as a Future Alteration' was completed in concordance with section 3 Schedule B of Drinking Water System Permit Number 100-201, Issued July 29th, 2011 for the following:

- Beech Street watermain replacement - 5/05/2015
- Hume Street watermain replacements (ongoing) - 7/03/2015

- * **Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Permit, Licence or Approval issued under Part V of the SDWA at all times that water was being supplied to consumers.**

Records reviewed indicate that, in concordance with Section 1-4 of Schedule 1 of O.Reg. 170/03, water treatment equipment provided for the raw surface water source was designed and operated to be capable of chemically assisted filtration, and achieving, at all times, primary disinfection in accordance with the Ministry's "Procedure for Disinfection of Drinking Water in Ontario".

- * **Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.**

Records provided by the Operating Authority indicate that the water treatment equipment was operated in a manner so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/L free available chlorine in concordance with Sch. 1-2(2)4 of O.Reg. 170/03.

The secondary disinfection chlorine residual is measured using continuous monitoring equipment located within the distribution system at the elevated water tower, A.R. Carmichael west-end reservoir and the R.A. Davey south-end reservoir. These analysers are connected to the Supervisory Control and Data Acquisition (SCADA) system for recording and alarming purposes.

Approximately 450 grab-samples for chlorine residual are tested over an operational year, all of which indicated results over 0.05 mg/L free available chlorine during the inspection review period.

For a data audit sample of approximately sixteen instances of low disinfectant residual, the Operating Authority was able to provide documented events of maintenance activities.

- * **The Operator-in-Charge had ensured that all equipment used in the processes was monitored, inspected, and evaluated.**

In concordance with section 26(2) of O. Reg. 128/04, a routine is in place which ensures that physical checks are performed to verify that treatment and monitoring equipment are operating properly during day to day operations and are appropriately recorded within daily checks.

TREATMENT PROCESS MONITORING

TREATMENT PROCESS MONITORING

- * **Primary disinfection chlorine monitoring was being conducted at a location approved by Permit, Licence or Approval issued under Part V of the SDWA, or at/near a location where the intended CT had just been achieved.**

Primary disinfection is achieved with the application of chlorine gas at an application point in the common membrane permeator header upstream of the two chlorine contact chambers with a volume of 829 m³.

In concordance with section 7-2 Schedule 7 of O. Reg. 170/03, a continuous chlorine analyser is provided with feed sample water from a point after the clearwell, prior to entering the distribution system. Another continuous chlorine analyzer is installed that draws sample water from between the two cells of the contact chamber for operational monitoring.

- * **Continuous monitoring of each filter effluent line was being performed for turbidity.**

In concordance with section 7-3 Schedule 7 of O. Reg. 170/03, a continuous turbidity analyser is installed on each of the six filter effluent lines, as well as on the treated water

header which is in operation at all times when water is being produced. There is also an additional turbidity analyzer installed on the industry supply line.

- * **The secondary disinfectant residual was measured as required for the distribution system.**

In concordance with section 7-2 Schedule 7 of O. Reg. 170/03, secondary disinfection is being monitored, with the Operating Authority opting for residual sampling and testing by continuous monitoring equipment, in concordance with Schedule 6, O.Reg. 170/03.

Specifically, there are three continuous chlorine analysers installed within the distribution system at the following locations;

- R.A (Bob) Davey south end reservoir,
- elevated storage tower, and
- A.R. (Ted) Carmichael west end reservoir.

- * **Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.**

In concordance with section 6-5 Schedule 6 of O. Reg. 170/03, operators effect a review of all continuous monitoring test results which are data-logged within the Supervisory Control and Data Acquisition (SCADA) system within 72 hours of that test. Typically reviews are done at the beginning of each business day and a note made of this.

- * **All continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or approval or order, were equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6.**

In concordance with section 6-5 Schedule 6 of O. Reg. 170/03, continuous monitoring equipment was sampling free available chlorine residual to achieve primary disinfection as well as turbidity on the six filter effluent lines and common highlift header piping.

The Operating Authority has effected alarm setpoints on the continuous chlorine residual and turbidity analysers to notify operations staff.

TREATMENT PROCESS MONITORING

- **Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.**

In concordance with section 6-5 Schedule 6 of O. Reg. 170/03, continuous monitoring equipment effects records of date, time, and location of parameters tested with at least the minimum frequency specified by Table 1.

Specifically, the Operating Authority has programmed the SCADA system to poll analysers to record free available chlorine residual once every five minutes and turbidity once every five minutes.

- **All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.**

Documents reviewed indicated that a regular program of maintenance is carried out with respect to continuous water quality analyzers. Continuous disinfectant analysers are checked on a daily basis and an accuracy check or calibration is performed once per week. Recalibrations are effected as required in accordance with the operations manual procedure and manufacturer's manual.

OPERATIONS MANUALS

- **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**

The Operations and Maintenance Manual reviewed at the time of physical inspection contained plans, drawings and process descriptions in concordance with the requirements of O.Reg. 128/04.

Plans show treatment process units, chemical application points and process monitoring / sampling points for the drinking water system. Distribution system components such as water mains, valves, hydrants, and other appurtenances are registered and mapped with GPS technology and managed with a GIS database (InfraMap).

- **The operations and maintenance manuals did meet the requirements of the Permit and Licence or Approval issued under Part V of the SDWA.**

Schedule B, Section 16 of Municipal Drinking Water 100-101, Issued July 29th, 2011 contains minimum content requirements for the Operations and Maintenance Manual. At the time of physical inspection, the manual appeared to be up to date with regular revisions and contained the required content.

Operational Staff indicate that revisions are scheduled in the near future to reflect the change of Chief Operations Officer in March 2015, and the dissolution of the public services board.

LOGBOOKS

- **Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.**

Documents reviewed indicate that testing for parameters such as chlorine residual or turbidity not performed by a continuous analyser was tested by an appropriately licensed operator in concordance with section 7-5 Schedule 7 of O. Reg. 170/03.

SECURITY

SECURITY

- * **The owner had provided security measures to protect components of the drinking-water system.**

On the day of physical inspection critical assets such as pumphouses, treatment and storage structures all appeared to be adequately secured against unauthorised entry, fenced and provided with appropriate prohibitory signage. Entry alarms are connected to the SCADA system.

CERTIFICATION AND TRAINING

- * **The overall responsible operator had been designated for each subsystem.**

In concordance with sec. 23 of O. Reg. 128/04, an Overall Responsible Operator had been designated by the operating authority, who has overall operational responsibility for the drinking water system and is in possession of an operator's certificate to match the classification of the facility. Specifically, the Operating Authority has designated two OROs, one for the treatment facility, and one for the distribution system. Should the ORO be absent or unable to act, an OIC then provides coverage.

- * **Operators in charge had been designated for all subsystems which comprised the drinking-water system.**

One or more operators have been designated by the Operating Authority as an operator-in-charge (OIC) by the owner or operating authority who may direct other operators, set operational parameters in the drinking water system and has the authority to make operational decisions.

- * **Only certified operators made adjustments to the treatment equipment.**

Records reviewed indicate that only certified operators effected any adjustments to treatment equipment in concordance with sec. 1-2(2)5 of O. Reg. 170/03.

WATER QUALITY MONITORING

- * **All microbiological water quality monitoring requirements for distribution samples were being met.**

From documentation provided by the Operating Authority, it appears that all O.Reg. 170/03 Schedule 10 microbiological sampling requirements were met. The municipality obtained and had analyzed approximately 456 treated distribution water samples in 2015 for the required O.Reg. 169/03 Schedule 10 microbiological parameters.

Documents indicate that at least 8 distribution water samples were obtained and tested once per week of which at least two of these samples were additionally tested for Heterotrophic Plate Count (HPC) in addition to Escherichia Coli and Total Coliform bacteria.

- * **All microbiological water quality monitoring requirements for treated samples were being met.**

From documentation provided by staff, it appears that all O.Reg. 170/03 Schedule 10 treated water microbiological sampling requirements were met. The municipality obtained and had analyzed 52 treated water samples from the Raymond A Barker Ultrafiltration Plant for the required O.Reg. 169/03 Schedule 10 microbiological parameters.

Documents indicate that treated water point of entry locations are sampled and tested once per week and tested for Escherichia coli, total coliforms, and general bacteria population expressed as colony counts on a heterotrophic plate count.

WATER QUALITY MONITORING

- * **All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

From documentation provided by staff, it appears that all O.Reg. 170/03 Schedule 13 physical and chemical sampling requirements were met. The municipality obtained and had analyzed water samples from each of the treatment facilities for the required O.Reg. 170/03 Schedule 23 inorganic chemical parameters within the last 12 months.

Specifically, Schedule 23 inorganic parameters were last sampled and tested in a supererogatory manner by the Operating Authority on 5/08/2014, 8/13/2014, 11/12/2014, 2/12/2015, and most recently on 5/14/2015.

- * **All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

From documentation provided by staff, it appears that all O.Reg. 170/03 Schedule 13 physical and chemical sampling requirements were met. The municipality obtained and had analyzed water samples from each of the treatment facilities for the required O.Reg. 170/03 Schedule 24 organic chemical parameters within the last 12 months.

Specifically, Schedule 24 organic parameters were last sampled and tested in a supererogatory manner by the Operating Authority on 5/08/2014, 8/13/2014, 11/12/2014, 2/12/2015, and most recently on 5/14/2015.

- * **All trihalomethanes water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

From documentation provided by staff, it appears that all O.Reg. 170/03 Schedule 13 trihalomethane sampling requirements were met with at least one distribution sample taken every three months, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of trihalomethanes and have the sample tested for trihalomethanes.

Specifically, trihalomethanes were last sampled on 5/07/2014, 8/13/2014, 11/24/2014, 2/11/2015 and most recently on 5/13/2015.

- * **All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.**

From documentation provided by staff, it appears that all O.Reg. 170/03 Schedule 13 nitrate / nitrite sampling requirements were effected in concordance with Section 13-7 of Schedule 13 of Ontario Regulation 170/03, with at least one water sample is taken every three months and tested for nitrate and nitrite.

Specifically, nitrate / nitrite sampling were last sampled on 5/08/2014, 8/13/2014, 11/12/2014, 2/12/2015 and most recently on 5/14/2015.

- * **All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

From documentation provided by staff, it appears that all required O.Reg. 170/03 Schedule 13 sodium sampling requirements were met with at least one water sample taken every 60 months and tested for sodium in concordance with Section 13-8 of Schedule 13 of Ontario Regulation 170/03.

Specifically, sodium was sampled and analysed in a supererogatory manner on 8/13/2014, 11/12/2014, 2/12/2015 and most recently on 5/14/2015.

WATER QUALITY MONITORING

- **All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

From documentation provided by staff, it appears that all O.Reg. 170/03 Schedule 13 fluoride sampling requirements were met with a water sample taken at least once every 60 months and tested for fluoride in concordance with Section 13-9 of Schedule 13 of Ontario Regulation 170/03.

Specifically, fluoride was sampled in a supererogatory manner on 5/08/2014, 8/13/2014, 11/12/2014, 2/12/2015, and most recently on 5/14/2015.

- **All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 were being met.**

Under Schedule 15.1-5 of O.Reg. 170/03 ('Reduced Sampling'), the municipality is now exempt from strict compliance with lead sampling and is required to obtain a minimum of thirty samples from private residences, four samples from the distribution system, and three samples from a non-residential plumbing sampling point within this drinking water system per sampling period.

Further exemptions now require the municipality to obtain four alkalinity and pH samples in the distribution system in every 'winter' (December 15 to April 15) and 'summer' (June 15 to October 15) period and lead once every three years. At least four distribution samples were obtained and analysed for alkalinity and pH on the following dates; 8/13/2014, 11/12/2014, 2/11/2015, and most recently on 5/13/2015.

- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

Documents provided by staff indicated that chlorine residual levels were analysed concurrently with microbiological sampling in concordance with section 6-3 Schedule 6 of O. Reg. 170/03. Specifically, the Operator sampling notes the chlorine residual data (free and total chlorine residual) directly on the laboratory sample submission / chain of custody sheet.

WATER QUALITY ASSESSMENT

- **The audit samples collected by the inspector met the applicable Ontario Drinking Water Quality Standards and/or the aesthetic objectives or operation guidelines. The results of the audit sampling are summarized as follows:**

A treated water sample was obtained on 7/14/2015 in concordance with the Ministry's internal publication, "Practices for the Collection and Handling Of Drinking-Water Samples", Version 2.0, April 1, 2009 (PIBS 4465e02). One drinking water sample was collected from a point in the drinking water system as part of the inspection. The free chlorine residual recorded at the time of the audit sample was;

- 1.55 mg/L at Raymond A. Barker Ultrafiltration Plant (2 Ragland Street, Collingwood)

The sample obtained was analysed for microbiological parameters (Total Coliforms and Escherichia coli) and submitted to the Ministry of the Environment and Climate Change laboratory in Toronto for analysis. Laboratory results (report dated 7/21/2015) from samples obtained on the day of physical inspection indicate water free from bacteriological contamination.

- **Records show that all water sample results taken during the review period met the Ontario Drinking Water Quality Standards (O. Reg. 169/03).**

Laboratory results and monitoring data provided by the operating authority for the inspection review period was reviewed. It appears that the water provided by the drinking water system did not exceed the prescribed drinking water quality standard values.

OTHER INSPECTION FINDINGS

OTHER INSPECTION FINDINGS

- * **The following instance(s) of non-compliance were also noted during the inspection:**

Documents reviewed indicate that the 2013 and 2014 Annual Report was not prepared by the Operating Authority by February 28th of the following year in contravention of section 11(5) of O. Reg. 170/03.

It appears that it had been the practice of the Operating Authority for some time to combine the Annual Report, as required by section 11 of O. Reg. 170/03 and the Summary Report to Council, as required by Schedule 22 of O. Reg. 170/03.

The Annual Report, due on February 28th of the following year and the Summary Report to Council, due on March 31st of the following year have different content requirements and are intended for different audiences.

- * **The following issues were also noted during the inspection:**

From documents and discussions with the Operating Authority, it was determined that there are six pressure regulating valves (PRV) within the distribution system, three of which have not yet been commissioned. The Operating Authority indicates that there is currently no proactive inspection or maintenance program in place.

Furthermore, an air release valve (ARV) was discovered in June 2015 during the Hume Street reconstruction project.

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

1. The following instance(s) of non-compliance were also noted during the inspection:

Documents reviewed indicate that the 2013 and 2014 Annual Report was not prepared by the Operating Authority by February 28th of the following year in contravention of section 11(5) of O. Reg. 170/03.

It appears that it had been the practice of the Operating Authority for some time to combine the Annual Report, as required by section 11 of O. Reg. 170/03 and the Summary Report to Council, as required by Schedule 22 of O. Reg. 170/03.

The Annual Report, due on February 28th of the following year and the Summary Report to Council, due on March 31st of the following year have different content requirements and are intended for different audiences.

Action(s) Required:

By 28 February 2016, the Operating Authority shall submit to the undersigned Inspecting Officer a copy of the 2015 Annual Report as required by section 11 of O. Reg. 170/03.

Furthermore, by 31 March 2016, the Operating Authority shall submit to the undersigned Inspecting Officer, a copy of the 2015 Summary Report to Council with confirmation of the date this report was provided to municipal Council.

SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

1. The following issues were also noted during the inspection:

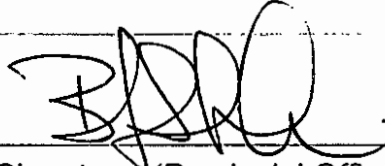
From documents and discussions with the Operating Authority, it was determined that there are six pressure regulating valves (PRV) within the distribution system, three of which have not yet been commissioned. The Operating Authority indicates that there is currently no proactive inspection or maintenance program in place.

Furthermore, an air release valve (ARV) was discovered in June 2015 during the Hume Street reconstruction project.

Recommendation:

It is recommended that the Operating Authority consider the development of a proactive maintenance program of drinking water distribution system PRVs and ARVs with regular inspections of all below-grade appurtenances in the Spring and Fall each year to verify the preclusion of potential contaminant intrusion into the distribution system in line with recommendations within AWWA Standard G200-09 (Distribution Systems Operation and Management).

The Operating Authority, since the date of physical inspection, indicates that a maintenance program is to commence in September of this year.

SIGNATURES

Inspected By:

Signature: (Provincial Officer):

Brian Stuhlemmer

Reviewed & Approved By:

Signature: (Supervisor):

Sheri Broeckel



Review & Approval Date:

Aug 18, 2015

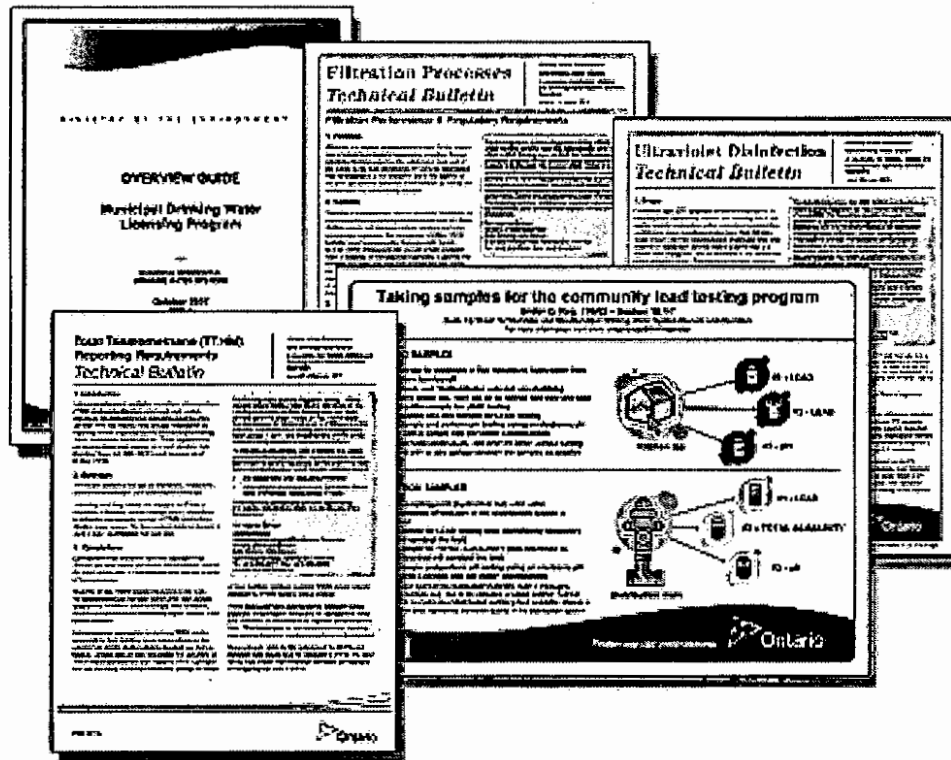
Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.

COLLINGWOOD DRINKING WATER SYSTEM DWS Number : 220001165

Stakeholder Appendix

Attached

- *Key Reference and Guidance Material for Municipal Residential Drinking Water Systems*



COLLINGWOOD DRINKING WATER SYSTEM
DWS Number : 220001165

DWS Ministry Audit Sample Results

Attached

Final Report: 7/21/2015
Sampling Date: 7/14/2015

Sample Identification Number	MOE LIMS Identification Number	Free Available Chlorine Residual at time of Sampling
C221355-0001 #2 Ragland Street Raymond A. Barker Membrane Filtration Plant	2015WD28-00013	1.55 milligrams / Litre

Login: C221355

Program Code 130074201 Program: MOE OPERATIONS DIVISION
Study: WATER, COMMUNAL
Project: SOUTHWEST REGION - BARRIE DIST
Activity: WTP MUNIC INSPECT/ADVERS NOTIF
Organization: District Manager - Barrie

Org. Id: 4232

Mail this copy to :

STUHLEMMER, BRIAN
MOE - BARRIE DISTRICT OFFICE
54 CEDAR POINTE DRIVE, UNIT 1203
BARRIE, ONT
L4N 5R7

Final reports to : STUHLEMMER, BRIAN
SEABROOK, CRAIG
VALLEY, JENNY

Approved for release by :

LOGIN DESCRIPTION: 220001165 COLLINGWOOD WS BRIAN STUHLEMMER 705-739-6384

The results relate only to items tested.
To provide customer service feedback on this report and/or other services provided by LaSB, please contact the LaSB HelpDesk at 416-235-6030 or the Customer Service Manager at 416-235-5831

This report contains confidential information intended only for the person(s) to whom it is addressed. Any unauthorized disclosure, copying, other distribution of this report, or taking any action on its content is strictly prohibited. If you have received this report in error, please contact the LaSB HelpDesk at 416-235-6030 or the Customer Service Manager at 416-235-5831

Login: C221355

Field ID Station ID
COLL-1 220001165

Sample ID
C221355-0001

MOE*LIMS Products Requested:
WD E3226A PA3226

UTM:

Zone Easting Northing Collection Method Accuracy
230 563365 4928651.01; GPS 6-10M

Sample Location Description
RAYMOND A BARKER ULTRAFILTRATION
PLANT TREATED POE

Sampling Date Time Zone
14 JUL 2015 10:45 5

Sampler Information

Sample Comment Description

Login: C221355

Field ID:
Sample ID:
MCE-LIMS ID:
Station ID:
Collect Date:
Sample Location Description:

COLL-1
C221355-0001
2015WD28-00013
220001165
14 JUL 2015

RAYMOND A BARKER
ULTRAFILTRATION PLANT TREATED PO

Sample Comments Description:

Listid	Parname	Value	Units	Qual	Rmk1	Rmk2
--------	---------	-------	-------	------	------	------

3226L1 NT: Total Coliforms

See Non-Target Textual result >10C

LogIn: C221355

CODE DESCRIPTION

>10C RECD>10C. DATA MAY NOT REFLECT THAT OF ORIG.SAMPLE
 NDAT NO DATA: ABSENT NT: TOTAL COLIFORMS
 NDAE NO DATA: ABSENT NT: ESCHERICHIA COLI

NON-TARGET TEXTUAL RESULT

Sample ID: C221355-0001	Listid : 3226L1	Parname : NT: Total Coliforms	Value:	Units: c/100mL	Qual: NDAT	Remarks: >10C
Absent						
Sample ID: C221355-0001	Listid : 3226L1	Parname : NT: Escherichia coli	Value:	Units: c/100mL	Qual: NDAE	Remarks: >10C
Absent						

TEXT COMMENT

Product Completion

Sample ID	Matrix	Method	Product	Analytical Department	Completion Date
C221355-0001	WD	E3226A	PA3226	6510	20-JUL-15

LaSB Method Summary

Method	Method Description	Status	Status Description
E3226A	THE DETECTION OF COLIFORM BACTERIA INCLUDING ESCHERICHIA COLI IN DRINKING WATER BY THE PRESENCE-ABSENCE PROCEDURE	ROUTINE	Method has been fully validated, is deemed fit for purpose and has the associated Uncertainty information available upon request.

** End of Report **

**COLLINGWOOD DRINKING WATER SYSTEM
DWS Number : 220001165****Inspection Summary Rating Record**

Attached

Inspection Summary Rating Record for Reporting Year – 2014 / 2015.

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2015-2016)

DWS Name: COLLINGWOOD DRINKING WATER SYSTEM
DWS Number: 220001165
DWS Owner: Collingwood Public Utilities
Municipal Location: Collingwood
Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Focused
Inspection Date: July 14, 2015
Ministry Office: Barrie District

Maximum Question Rating: 426

Inspection Module	Non-Compliance Rating
Capacity Assessment	0 / 30
Treatment Processes	0 / 81
Operations Manuals	0 / 28
Logbooks	0 / 14
Certification and Training	0 / 28
Water Quality Monitoring	0 / 112
Other Inspection Findings	0 / 0
Treatment Process Monitoring	0 / 133
TOTAL	0 / 426

Inspection Risk Rating	0.00%
------------------------	-------

FINAL INSPECTION RATING:	100.00%
---------------------------------	----------------

Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2015-2016)

DWS Name: COLLINGWOOD DRINKING WATER SYSTEM
DWS Number: 220001165
DWS Owner: Collingwood Public Utilities
Municipal Location: Collingwood
Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Focused
Inspection Date: July 14, 2015
Ministry Office: Barrie District

Non-compliant Question(s)	Question Rating
Other Inspection Findings	
In the event that an issue of non-compliance outside the scope of this inspection protocol is identified, a "No" response may be used if further actions are deemed necessary (and approved by the DW Supervisor) to facilitate compliance.	0
TOTAL QUESTION RATING	0

Maximum Question Rating: 426

Inspection Risk Rating	0.00%
-------------------------------	--------------

FINAL INSPECTION RATING:	100.00%
---------------------------------	----------------