Ontario

DRINKING WATER WORKS PERMIT

Permit Number: 150-202
Issue Number: 7

Pursuant to the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, I hereby issue this drinking water works permit under Part V of the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32 to:

The Corporation of the Municipality of Trent Hills

66 Front St. N.
Campbellford ON
P.O. Box 1030
K0L 1L0

For the following municipal residential drinking water system:

Campbellford Drinking Water System

This drinking water works permit includes the following:

Schedule	Description
Schedule A	Drinking Water System Description
Schedule B	General
Schedule C	All documents issued as Schedule C to this drinking water works permit which authorize alterations to the drinking water system
Schedule D	Process Flow Diagrams

Upon the effective date of this drinking water works permit #150-202, all previously issued versions of permit #150-202 are revoked and replaced by this permit.

DATED at TORONTO this 25th day of June, 2021

Signature

Aziz Ahmed, P.Eng.
Director
Part V, *Safe Drinking Water Act*, 2002

Schedule A: Drinking Water System Description

System Owner	**The Corporation of the Municipality of Trent Hills**
Permit Number	**150-202**
Drinking Water System Name	**Campbellford Drinking Water System**
Permit Effective Date	**June 25, 2021**

1.0 System Description

1.1 The following is a summary description of the works comprising the above drinking water system:

Overview

The Campbellford water treatment plant is a conventional water treatment system, which draws all of its raw water supply from the Trent River. The treatment system consists of a low lift pumping station, two (2) solids contact up-flow reactor-clarifiers, two (2) dual-media filters equipped with granular activated carbon for taste and odour control, ultraviolet (UV) disinfection, a high lift pumping station as well as chlorination for primary (backup) and secondary disinfection with a clearwell and in-ground reservoir. Secondary disinfection is accomplished by a chlorine injection system located on the plant discharge. A corrosion inhibitor is injected into the plant discharge pipe for corrosion control in the distribution system.

A 5,230 cubic meter off-site storage reservoir provides peak hour demands and fire flow protection and houses a booster pumping station and rechlorination facility. The water distribution system is comprised of various watermain materials of different sizes and pressure zones. The system supplies the Town of Campbellford, immediate areas of Seymour Township, Ferris Provincial Park, several residents for a 7.5 km stretch along Cty. Rd. 30 South including Percy Boom Rd. and the Warkworth Federal Penal Institute.

Approximately 44 kilometers of distribution watermains.

Campbellford Water Treatment Plant

Treatment Plant

Name	Campbellford Water Treatment Plant
Street Address	58 Saskatoon Avenue, Campbellford
UTM Coordinates	NAD 83, Zone 17, +/- 10 m, 276699m E, 4909684 m N
System Type	Treatment and Distribution
Notes	

Surface Water Supply

Intake Chamber

Description	Intake chamber with screen
Dimensions	0.9 m by 1.8 m chamber, complete with a 600 mm by 600 mm coarse screen with 100 mm by 50 mm bar spacing
Notes	a diffuser device located inside the intake chamber

Intake Pipe

Description	Raw Water Intake Pipe
Dimensions	450 mm diameter, 20 m long, extending from the Intake Chamber to the Screen Channel
Notes	25 mm diameter chlorine solution supply line, PVC pipe, inside the 450 mm raw water intake pipe, connected to the diffuser device at the intake

Low Lift Works

Low Lift Facilities

Description	Low lift well, static mixer and ozone contact chamber
Equipment	A Low Lift Wet Well, 8.3 m by 2.45 m by 4.2 m side water depth (SWD) with common wall construction to the screen channel
	One (1) Static Mixer on the low lift pump common discharge header and
	One (1) Ozone Contact Chamber, 5.9 m by 1.3 m by 3.4 m SWD, with common wall construction to the screen channel, for future ozone installation.
Notes	One (1) Submersible Pump capable of pumping 0.3 L/s, connected to monitoring equipment

Screens

Description	One fixed screen and one motorized Travelling Screen located in the Screen Channel
Dimensions	25 mm and 9.5 mm mesh opening respectively
Notes	

Low Lift Pumps

Description	Three (3) Vertical Turbine Low Lift Pumps (two duty and one standby)
Capacity	Each pump capable of pumping 39.5 L/s at a total dynamic head (TDH) of 7.83m
Notes	each pump connected to a 250 mm diameter low lift pump common discharge header delivering water to the clarifiers in the water treatment plant building

Clarification

Solids Contact Up-flow Clarifiers

Description	Two (2) Settling Basins
Dimensions	Each basin is 9.1 m by 9.1 m by 4.4 m side water depth (SWD) and complete with tube settler modules each inclined 60 degrees to the horizontal
Notes	One (1) centrally located variable speed submerged coagulator device
	One (1) circular fixed weir discharging clarified effluent to the filter-adsorbers
	An automatic sludge collection and removal system consisting of a radial sludge collector arm and a central hopper

Filtration

Filters

Description	Filter intake well and Rapid gravity filter absorber units
Equipment	One (1) Filter Intake Well
	Two (2) Rapid Gravity Filter-Adsorber units, each 5.5 m by 4.4 m and packed with granular activated carbon (GAC) and silica sand filter media, complete with underdrain system for air scour/water backwash
	One (1) Air Blower rated 590 L/s (1,250 CFM) at a backpressure of 20 kPa with outlet connected to the underdrain system of both filter-adsorber units
Notes	

Ultraviolet Disinfection

Description	Ultraviolet (UV) light disinfection system located downstream of the filters
Capacity	Two (2) UV units in parallel (one duty and one standby), each unit rated to provide a minimum UV dose of 40 mJ/cm^2 at a design flowrate of 6,800 m^3/d
Notes	

Clearwell

Description	One (1) Clearwell
Dimensions	13.1 m by 6.8 m by 1.55 m SWD providing a total capacity of 138 m^3
Notes	

Raw Water Backwash System

Description	Raw Water Intake Backwash System
Equipment	150 to 200 mm diameter pipe extending from the high lift pump common discharge header to the water intake structure.
Notes	

Backwash Pumps

Description	Backwash pumps in the highlift pumphouse and control building
Capacity	Two (2) vertical turbine backwash pumps (one duty, one standby), each capable of pumping 180 L/s at a TDH of 13.0 m with discharge pipe connected to each filter
Notes	

Waste Residual Management

Residual Settling Tank

Description	One (1) Process Residual Settling Tank
Dimensions	14.2 m by 5.7 m by 5.4 m SWD
Notes	

Submersible Pumps

Description	Submersible pumps
Equipment	One (1) Submersible Pump, capable of pumping 11.8 L/s at a TDH of 8.4 m discharging supernatant to storm sewer
	Two (2) Submersible Pump (one connected and one shelf spare pump on-site), each capable of pumping 8.7 L/s at a TDH of 9.3 m discharging settled solids to the municipal sewage collection system
Notes	

High Lift Works

High Lift Pumps

Description	Pumphouse control building on top of the two pumping cells and north end of the two storage cells
Capacity	Three (3) vertical turbine high lift pumps (two duty and one standby), each capable of pumping 42 L/s at a TDH of 75.5 m and each connected to 250 mm diameter high lift pump common discharge header
Notes	Backflow Prevention Devices installed on in-plant water supply lines

On-Site Storage

In-Ground Reservoir

Description	One (1) in-ground storage reservoir consisting of two (2) reservoir cells and two (2) treated water pumping cells in high lift pumphouse control building.
Reservoir Cells	Two (2) reservoir cells designated as East Reservoir Cell and West Reservoir Cell, each measuring 7.5 m x 28.3 m x 3.9 m SWD and providing a total storage capacity of 1,470 m^3 (based on 3.6 m usable depth)
Pumping Cells	Two (2) pumping cells designated as East Pumping Cell and West Pumping Cell, each measuring 7.25 m x 6.3 m x 6.5 m SWD and providing a total capacity of 330 m^3 (based on 3.6 m usable depth)
Notes	Located approximately 100 m north of the Campbellford Water Treatment Plant. Provides backup chlorine primary disinfection contact time, in case the UV disinfection system is out of service

Emergency Power

Backup Power Supply

Description	A 200 kW Diesel Engine Standby Power Generator Set.
Notes	

Fuel Oil Systems

Fuel Storage Location

Location	Campbellford Water Treatment Plant - 58 Saskatoon Avenue, Campbellford 44*18’23”N 77*47’58”W
Description	1100 liters fuel tank with spill containment is located within the Campbellford WTP building.
Fuel Type	Diesel
Source Protection Area	Lower Trent
Notes	

Chemical Addition

Coagulant Storage and Feed System

Description	Primary Coagulant Storage and Feed System
Equipment	Two (2) 13 m^3 storage tanks,
	One (1) 1,113 L day tank
	Two (2) chemical metering pumps (one duty and one stand-by) each rated at 30 L/hr, with dual feed lines discharging aluminum sulphate or polyaluminum chloride (PAC) to the low lift pump common discharge header
Notes	

Corrosion Control System

Description	A sodium silicate feed system for corrosion control located in the high lift pumphouse control building
Feed Point	High lift pump common header
Equipment	One (1) chemical storage tank and 1 day tank
	Two (2) chemical metering pumps
Notes	

Gas Chlorination System

Description	Gas Chlorination System
Feed Point	Feed lines may discharge liquid chlorine to: - intake pipe; - low lift pump common discharge header; - inlet of the reconfigured clearwell; and - high lift pump common discharge header
Equipment	Chlorine gas cylinders, as necessary
	Two (2) vacuum regulators
	Two (2) gas chlorinators feeding to the intake, low lift pump discharge header and inlet of the clearwell
	One (1) gas chlorinator feeding to the high lift pump common discharge header
	One (1) chlorine booster pump for post chlorination process
Notes	

Instrumentation and Control

SCADA System

Description	Supervisory Control and Data Acquisition (SCADA) System
Equipment	Four (4) Chlorine Residual Analyzers, measuring free chlorine residual concentration, connected to the: 1) low lift pump common discharge header, 2) filter effluent discharge piping, 3) reservoir effluent, and 4) high lift pump common discharge header; complete with 4-20 mA output to SCADA
	Four (4) Turbidimeters connected to the low lift pump common discharge header each filtrate line and the high lift pump discharge header, all complete with 4-20 mA output to SCADA
	Four (4) Flow Metering Devices, located on the low lift pump common discharge header, each filtrate line and the high lift pump common discharge header, all complete with 4-20 mA output to SCADA.
	One (1) pH Metering Device located on the modified clearwell effluent piping, complete with 4-20 mA output to SCADA
	One (1) Flow Meter monitoring flow in the standpipe fill pipe, complete with 4-20 mA signal output to SCADA
	One (1) Chlorine Residual Analyzer measuring the concentration of free chlorine residuals, connected to the standpipe fill/drain pipe, complete with 4-20 mA signal output to SCADA
	Two (2) ultraviolet light reactors monitoring dose, intensity, and power on filter effluent pipework complete with 4-20 mA signal
Notes	The SCADA system also monitors the filter pressure. The water levels of the Campbellford Standpipe are monitored by SCADA.

Off-site Storage and Pumping Station with Rechlorination

Campbellford Standpipe and High Street Booster Pumping Station

Location	75 High Street
UTM Coordinates	NAD 83, Zone 17, +/- 10 m, 276268m E, 4910154 m N
Description	One (1) Standpipe, booster pumping station, inlet flow meter and rechlorination system
Dimensions	One (1) Standpipe, 5,230 m^3 usable volume, 19 m diameter and 19 m high complete with a 450 mm diameter single feed/discharge pipe and a 400 mm emergency overflow device
Equipment	Three (3) Centrifugal Booster Pumps (two duty and one standby), one capable of pumping 0.694 L/s at a TDH of 35 m, one capable of pumping 1.389 L/s at a TDH of 36 m and one capable of pumping 5.30 L/s at a TDH of 35 m
	Rechlorination System, consisting of one 310 L chemical solution tank, two chemical metering pumps (one duty and one standby), each capable of pumping 3.8 L/h at a backpressure of 1,034 kPa with feed line discharging sodium hypochlorite solution to the standpipe fill pipe
Standby Power	
Notes	

Watermains

1.1 Watermains within the distribution system comprise:

1.1.1 Watermains that have been set out in each document or file identified in column 1 of Table 1.

Table 1: Watermains

Column 1 Document or File Name	Column 2 Date
TrentHills Campbellford Water - v011.pdf Title: Campbellford Water System	May 27, 2021

1.1.2 Watermains that have been added, modified, replaced or extended further to the provisions of Schedule C of this drinking water works permit on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.

1.1.3 Watermains that have been added, modified, replaced or extended further to an authorization by the Director on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.

Schedule B: General

System Owner	**The Corporation of the Municipality of Trent Hills**
Permit Number	**150-202**
Drinking Water System Name	**Campbellford Drinking Water System**
Permit Effective Date	**June 25, 2021**

1.0 Applicability

1.1 In addition to any other applicable legal requirements, the drinking water system identified above shall be altered and operated in accordance with the conditions of this drinking water works permit and the licence #150-102.

1.2 The definitions and conditions of licence #150-102 are incorporated into this permit and also apply to this drinking water system.

2.0 Alterations to the Drinking Water System

2.1 Any document issued by the Director to be incorporated into Schedule C to this drinking water works permit shall provide authority to alter the drinking water system in accordance with the applicable conditions of this drinking water works permit and licence #150-102.

2.2 All documents issued by the Director as described in condition 2.1 shall form part of this drinking water works permit.

2.3 All parts of the drinking water system in contact with drinking water that are added, modified, replaced, extended shall be disinfected in accordance with a procedure approved by the Director or in accordance with the applicable provisions of the following documents:

a) Until December 14, 2021 the ministry's Watermain Disinfection Procedure, dated November 2015. As of December 15, 2021 the ministry's Watermain Disinfection Procedure, dated August 1, 2020;
b) Subject to condition 2.3.2, any updated version of the ministry's Watermain Disinfection Procedure;
c) AWWA C652 – Standard for Disinfection of Water-Storage Facilities;
d) AWWA C653 – Standard for Disinfection of Water Treatment Plants; and
e) AWWA C654 – Standard for Disinfection of Wells.

2.3.1 For greater clarity, where an activity has occurred that could introduce contamination, including but not limited to repair, maintenance, or physical / video inspection, all equipment that may come in contact with the drinking water system shall be disinfected in accordance with the requirements of condition 2.3. above.

2.3.2 Updated requirements described in condition 2.3 b) are effective six months from the date of publication of the updated Watermain Disinfection Procedure.

2.4 The owner shall notify the Director in writing within thirty (30) days of the placing into service or the completion of any addition, modification, replacement, removal or extension of the drinking water system which had been authorized through:

2.4.1 Schedule B to this drinking water works permit which would require an alteration of the description of a drinking water system component described in Schedule A of this drinking water works permit;

2.4.2 Any document to be incorporated in Schedule C to this drinking water works permit respecting works other than watermains; or

2.4.3 Any approval issued prior to the issue date of the first drinking water works permit respecting works other than watermains which were not in service at the time of the issuance of the first drinking water works permit.

2.5 The notification required in condition 2.4 shall be submitted using the "Director Notification Form" published by the Ministry.

2.6 For greater certainty, the notification requirements set out in condition 2.4 do not apply to any addition, modification, replacement, removal or extension in respect of the drinking water system which:

2.6.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03;

2.6.2 Constitutes maintenance or repair of the drinking water system; or

2.6.3 Is a watermain authorized by condition 3.1 of Schedule B of this drinking water works permit.

2.7 The owner shall notify the legal owner of any part of the drinking water system that is prescribed as a municipal drinking water system by section 2 of O. Reg. 172/03 of the requirements of the licence and this drinking water works permit as applicable to the prescribed system.

2.8 For greater certainty, the owner may only carry out alterations to the drinking water system in accordance with this drinking water works permit after having satisfied other applicable legal obligations, including those arising from the *Environmental Assessment Act*, *Niagara Escarpment Planning and Development Act*, *Oak Ridges Moraine Conservation Act, 2001* and *Greenbelt Act, 2005*.

3.0 Watermain Additions, Modifications, Replacements and Extensions

3.1 The owner may alter the drinking water system, or permit it to be altered by a person acting on the owner's behalf, by adding, modifying, replacing or extending a watermain within the distribution system subject to the following conditions:

3.1.1 The design of the watermain addition, modification, replacement or extension:

a) Has been prepared by a licensed engineering practitioner;

b) Has been designed only to transmit water and has not been designed to treat water;

c) Satisfies the design criteria set out in the Ministry publication “Watermain Design Criteria for Future Alterations Authorized under a Drinking Water Works Permit – June 2012”, as amended from time to time; and

d) Is consistent with or otherwise addresses the design objectives contained within the Ministry publication “Design Guidelines for Drinking Water Systems, 2008”, as amended from time to time.

3.1.2 The maximum demand for water exerted by consumers who are serviced by the addition, modification, replacement or extension of the watermain will not result in an exceedance of the rated capacity of a treatment subsystem or the maximum flow rate for a treatment subsystem component as specified in the licence, or the creation of adverse conditions within the drinking water system.

3.1.3 The watermain addition, modification, replacement or extension will not adversely affect the distribution system’s ability to maintain a minimum pressure of 140 kPa at ground level at all points in the distribution system under maximum day demand plus fire flow conditions.

3.1.4 Secondary disinfection will be provided to water within the added, modified, replaced or extended watermain to meet the requirements of O. Reg. 170/03.

3.1.5 The watermain addition, modification, replacement or extension is wholly located within the municipal boundary over which the owner has jurisdiction.

3.1.6 The owner of the drinking water system consents in writing to the watermain addition, modification, replacement or extension.

3.1.7 A licensed engineering practitioner has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of condition 3.1.1.

3.1.8 The owner of the drinking water system has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of conditions 3.1.2 to 3.1.6.

3.2 The authorization for the addition, modification, replacement or extension of a watermain provided for in condition 3.1 does not include the addition, modification, replacement or extension of a watermain that:

3.2.1 Passes under or through a body of surface water, unless trenchless construction methods are used;

3.2.2 Has a nominal diameter greater than 750 mm;

3.2.3 Results in the fragmentation of the drinking water system; or

3.2.4 Connects to another drinking water system, unless:

a) Prior to construction, the owner of the drinking water system seeking the connection obtains written consent from the owner or owner’s delegate of the drinking water system being connected to; and

b) The owner of the drinking water system seeking the connection retains a copy of the written consent from the owner or owner's delegate of the drinking water system being connected to as part of the record that is recorded and retained under condition 3.3.

3.3 The verifications required in conditions 3.1.7 and 3.1.8 shall be:

3.3.1 Recorded on "Form 1 – Record of Watermains Authorized as a Future Alteration", as published by the Ministry, prior to the watermain addition, modification, replacement or extension being placed into service; and

3.3.2 Retained for a period of ten (10) years by the owner.

3.4 For greater certainty, the verification requirements set out in condition 3.3 do not apply to any addition, modification, replacement or extension in respect of the drinking water system which:

3.4.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or

3.4.2 Constitutes maintenance or repair of the drinking water system.

3.5 The document or file referenced in Column 1 of Table 1 of Schedule A of this drinking water works permit that sets out watermains shall be retained by the owner and shall be updated to include watermain additions, modifications, replacements and extensions within 12 months of the addition, modification, replacement or extension.

3.6 The updates required by condition 3.5 shall include watermain location relative to named streets or easements and watermain diameter.

3.7 Despite clause (a) of condition 3.1.1 and condition 3.1.7, with respect to the replacement of an existing watermain or section of watermain that is 6.1 meters in length or less, if a licensed engineering practitioner has:

3.7.1 inspected the replacement prior to it being put into service;

3.7.2 prepared a report confirming that the replacement satisfies clauses (b), (c) and (d) of condition 3.1.1 (i.e. "Form 1 – Record of Watermains Authorized by a Future Alteration" (Form 1), Part 3, items No. 2, 3 and 4); and

3.7.3 appended the report referred to in condition 3.7.2 to the completed Form 1,

the replacement is exempt from the requirements that the design of the replacement be prepared by a licensed engineering practitioner and that a licensed engineering practitioner verify on Form 1, Part 3, item No. 1 that a licensed engineering practitioner prepared the design of the replacement.

3.8 For greater certainty, the exemption in condition 3.7 does not apply to the replacement of an existing watermain or section of watermain if two or more sections of pipe, each of which is 6.1 meters in length or less, are joined together, if the total length of replacement pipes joined together is greater than 6.1 meters.

4.0 Minor Modifications to the Drinking Water System

4.1 The drinking water system may be altered by adding, modifying or replacing the following components in the drinking water system:

4.1.1 Coagulant feed systems in the treatment system, including the location and number of dosing points:

a) Prior to making any alteration to the drinking water system under condition 4.1.1, the owner shall undertake a review of the impacts that the alteration might have on corrosion control or other treatment processes; and

b) The owner shall notify the Director in writing within thirty (30) days of any alteration made under condition 4.1.1 and shall provide the Director with a copy of the review.

c) The notification required in condition 4.1.1 b) shall be submitted using the "Director Notification Form" published by the Ministry

4.1.2 Instrumentation and controls, including new SCADA systems and upgrades to SCADA system hardware;

4.1.3 SCADA system software or programming that:

a) Measures, monitors or reports on a regulated parameter;
b) Measures, monitor or reports on a parameter that is used to calculate CT; or,
c) Calculates CT for the system or is part of the process algorithm that calculates log removal, where the impacts of addition, modification or replacement have been reviewed by a licensed engineering practitioner;

4.1.4 Filter media, backwashing equipment, filter troughs, and under-drains and associated equipment in the treatment system;

4.1.5 Spill containment works; or,

4.1.6 Coarse screens and fine screens

4.2 The drinking water system may be altered by adding, modifying, replacing or removing the following components in the drinking water system:

4.2.1 Treated water pumps, pressure tanks, and associated equipment;

4.2.2 Raw water pumps and process pumps in the treatment system;

4.2.3 Inline booster pumping stations that are not associated with distribution system storage facilities and are on a watermain with a nominal diameter not exceeding 200 mm;

4.2.4 Re-circulation devices within distribution system storage facilities;

4.2.5 In-line mixing equipment;

4.2.6 Chemical metering pumps and chemical handling pumps;

4.2.7 Chemical storage tanks (excluding fuel storage tanks) and associated equipment; or,

4.2.8 Measuring and monitoring devices that are not required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry.

4.2.9 Chemical injection points;

4.2.10 Valves.

4.3 The drinking water system may be altered by replacing the following:

4.3.1 Raw water piping, treatment process piping or treated water piping within the treatment subsystem;

4.3.2 Measuring and monitoring devices that are required by regulation, by a condition in the Drinking Water Works Permit or by a condition otherwise imposed by the Ministry.

4.3.3 Coagulants and pH adjustment chemicals, where the replacement chemicals perform the same function;

a) Prior to making any alteration to the drinking water system under condition 4.3.3, the owner shall undertake a review of the impacts that the alteration might have on corrosion control or other treatment processes; and

b) The owner shall notify the Director in writing within thirty (30) days of any alteration made under condition 4.3.3 and shall provide the Director with a copy of the review.

c) The notification required in condition 4.3.3 b) shall be submitted using the "Director Notification Form" published by the Ministry.

4.4 Any alteration of the drinking water system made under conditions 4.1, 4.2 or 4.3 shall not result in:

4.4.1 An exceedance of a treatment subsystem rated capacity or a treatment subsystem component maximum flow rate as specified in the licence;

4.4.2 The bypassing or removal of any unit process within a treatment subsystem;

4.4.3 The addition of any new unit process other than coagulation within a treatment subsystem;

4.4.4 A deterioration in the quality of drinking water provided to consumers;

4.4.5 A reduction in the reliability or redundancy of any component of the drinking water system;

4.4.6 A negative impact on the ability to undertake compliance and other monitoring necessary for the operation of the drinking water system; or

4.4.7 An adverse effect on the environment.

4.5 The owner shall verify in writing that any addition, modification, replacement or removal of drinking water system components in accordance with conditions 4.1, 4.2 or 4.3 has met the requirements of the conditions listed in condition 4.4.

4.6 The verifications and documentation required in condition 4.5 shall be:

4.6.1 Recorded on “Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System” published by the Ministry, prior to the modified or replaced components being placed into service; and

4.6.2 Retained for a period of ten (10) years by the owner.

4.7 For greater certainty, the verification requirements set out in conditions 4.5 and 4.6 do not apply to any addition, modification, replacement or removal in respect of the drinking water system which:

4.7.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or

4.7.2 Constitutes maintenance or repair of the drinking water system, including software changes to a SCADA system that are not listed in condition 4.1.3

4.8 The owner shall update any drawings maintained for the drinking water system to reflect the modification or replacement of the works, where applicable.

5.0 Equipment with Emissions to the Air

5.1 The drinking water system may be altered by adding, modifying or replacing any of the following drinking water system components that may discharge or alter the rate or manner of a discharge of a compound of concern to the air:

5.1.1 Any equipment, apparatus, mechanism or thing that is used for the transfer of outdoor air into a building or structure that is not a cooling tower;

5.1.2 Any equipment, apparatus, mechanism or thing that is used for the transfer of indoor air out of a space used for the production, processing, repair, maintenance or storage of goods or materials, including chemical storage;

5.1.3 Laboratory fume hoods used for drinking water testing, quality control and quality assurance purposes;

5.1.4 Low temperature handling of compounds with a vapor pressure of less than 1 kilopascal;

5.1.5 Maintenance welding stations;

5.1.6 Minor painting operations used for maintenance purposes;

5.1.7 Parts washers for maintenance shops;

5.1.8 Emergency chlorine and ammonia gas scrubbers and absorbers;

5.1.9 Venting for activated carbon units for drinking water taste and odour control;

5.1.10 Venting for a stripping unit for methane removal from a groundwater supply;

5.1.11 Venting for an ozone treatment unit;

5.1.12 Natural gas or propane fired boilers, water heaters, space heaters and make-up air units with a total facility-wide heat input rating of less than 20 million kilojoules per hour, and with an individual fuel energy input of less than or equal to 10.5 gigajoules per hour; or

5.1.13 Emergency generators that fire No. 2 fuel oil (diesel fuel) with a sulphur content of 0.5 per cent or less measured by weight, natural gas, propane, gasoline or biofuel, and that are used for emergency duty only with periodic testing.

5.2 The owner shall not make an addition, modification, or replacement described in condition 5.1 in relation to an activity that is not related to the treatment and/or distribution of drinking water.

5.3 The emergency generators identified in condition 5.1.13 shall not be used for non-emergency purposes including the generation of electricity for sale or for peak shaving purposes.

5.4 The owner shall prepare an emission summary table for nitrogen oxides emissions only, for each addition, modification or replacement of emergency generators identified in condition 5.1.13.

Performance Limits

5.5 The owner shall ensure that a drinking water system component identified in conditions 5.1.1 to 5.1.13 is operated at all times to comply with the following limits:

5.5.1 For equipment other than emergency generators, the maximum concentration of any compound of concern at a point of impingement shall not exceed the corresponding point of impingement limit;

5.5.2 For emergency generators, the maximum concentration of nitrogen oxides at sensitive receptors shall not exceed the applicable point of impingement limit, and at non-sensitive receptors shall not exceed the Ministry half-hourly screening level of 1880 ug/m^3 as amended; and

5.5.3 The noise emissions comply at all times with the limits set out in publication NPC-300, as applicable.

5.6 The owner shall verify in writing that any addition, modification or replacement of works in accordance with condition 5.1 has met the requirements of the conditions listed in condition 5.5.

5.7 The owner shall document how compliance with the performance limits outlined in condition 5.5.3 is being achieved, through noise abatement equipment and/or operational procedures.

5.8 The verifications and documentation required in conditions 5.6 and 5.7 shall be:

5.8.1 Recorded on “Form 3 – Record of Addition, Modification or Replacement of Equipment Discharging a Contaminant of Concern to the Atmosphere”, as published by the Ministry, prior to the additional, modified or replacement equipment being placed into service; and

5.8.2 Retained for a period of ten (10) years by the owner.

5.9 For greater certainty, the verification and documentation requirements set out in conditions 5.6 and 5.8 do not apply to any addition, modification or replacement in respect of the drinking water system which:

5.9.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or

5.9.2 Constitutes maintenance or repair of the drinking water system.

5.10 The owner shall update any drawings maintained for the works to reflect the addition, modification or replacement of the works, where applicable.

6.0 Previously Approved Works

6.1 The owner may add, modify, replace or extend, and operate part of a municipal drinking water system if:

6.1.1 An approval was issued after January 1, 2004 under section 36 of the SDWA in respect of the addition, modification, replacement or extension and operation of that part of the municipal drinking water system;

6.1.2 The approval expired by virtue of subsection 36(4) of the SDWA; and

6.1.3 The addition, modification, replacement or extension commenced within five years of the date that activity was approved by the expired approval.

7.0 System-Specific Conditions

7.1 Not Applicable

8.0 Source Protection

8.1 Not Applicable

Schedule C: Authorization to Alter the Drinking Water System

System Owner	**The Corporation of the Municipality of Trent Hills**
Permit Number	**150-202**
Drinking Water System Name	**Campbellford Drinking Water System**
Permit Effective Date	**June 25, 2021**

1.0 General

1.1 Table 2 provides a reference list of all documents to be incorporated into Schedule C that have been issued as of the date that this permit was issued.

1.1.1 Table 2 is not intended to be a comprehensive list of all documents that are part of Schedule C. For clarity, any document issued by the Director to be incorporated into Schedule C after this permit has been issued is considered part of this drinking water works permit.

Table 2: Schedule C Documents

Column 1 Issue #	Column 2 Issued Date	Column 3 Description	Column 4 Status	Column 5 DN#
1	August 24, 2017	New reservoir and high lift pumping station; and other plant upgrades.	Archived	3 & 4

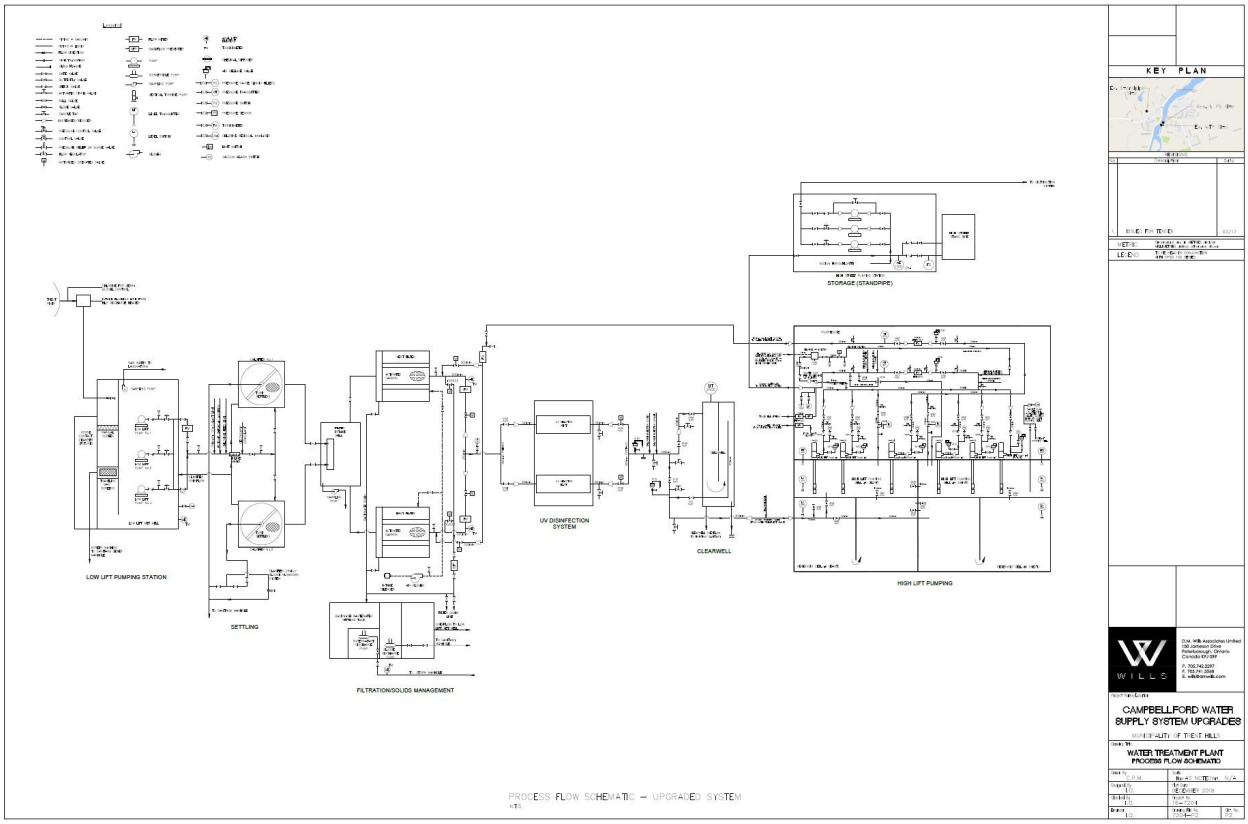
1.2 For each document described in columns 1, 2 and 3 of Table 2, the status of the document is indicated in column 4. Where this status is listed as 'Archived', the approved alterations have been completed and relevant portions of this permit have been updated to reflect the altered works. These 'Archived' Schedule C documents remain as a record of the alterations.

Schedule D: Process Flow Diagrams

System Owner	**The Corporation of the Municipality of Trent Hills**
Permit Number	**150-202**
Drinking Water System Name	**Campbellford Drinking Water System**
Permit Effective Date	**June 25, 2021**

1.0 Process Flow Diagrams

Campbellford Water Treatment Plant



[Source: DM Wills & Associates Ltd., December 2018]

Note: this process flow diagram is for reference only, and represents a high level overview of the system as of December 2018.