

## DRINKING WATER WORKS PERMIT

**Permit Number: 123-201**

**Issue Number: 5**

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 Town of New Tecumseth**

**10 Wellington St. E. Box 910  
Alliston ON, L9R 1A1**

For the following municipal residential drinking water system:

### **New Tecumseth Drinking Water System**

This drinking water works permit includes the following:

<b>Schedule</b>	<b>Description</b>
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 #123-201, all previously issued versions of permit #123-201 are revoked and replaced by this permit.

DATED at TORONTO this 11th day of March, 2024.

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 Town of New Tecumseth
Permit Number	123-201
Drinking Water System Name	New Tecumseth Drinking Water System
Permit Effective Date	March 11, 2024

### 1.0 System Description

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

#### Overview

The New Tecumseth Drinking Water System is supplied by a 57 km of 600mm transmission main from the Raymond A. Baker Ultra-filtration Plant in Collinwood and is supplemented by seven groundwater wells in Alliston and by four groundwater wells in Tottenham.

#### Allison Wells

- Alliston Well No. 1
- Alliston Well No. 4
- Alliston Well No. 5
- Alliston Well No. 6
- Alliston Well No. 7
- Alliston Well No. 8

#### Hillcrest Well

- Hillcrest Well

#### Walkem Drive Wells #4 & #5

- Well #4; Well #5
- Well Pumphouse

#### Coventry Park Wells #6A & #7

- Well #6A; Well #7
- Well Pumphouse

The New Tecumseth Drinking Water System also consists of four in- ground reservoirs and pumping stations, and one elevated tank in Alliston, and one storage reservoir and booster pumping station, and one elevated tank in Tottenham.

#### Off-site Storage Facilities and Pumping Stations in Alliston

- Springs Reservoir
- Alliston Elevated Water Storage Tank
- Parsons Road Reservoir and Booster Pumping Station
- McKelvey Reservoir and Booster Station

### **Off-site Storage Facilities and Pumping Stations in Tottenham**

- Mill Street Reservoir and Booster Station
- Tottenham Elevated Storage Tank

There is an approximately 8 km of 400 mm transmission main to convey water from Alliston to Tottenham.

## Allison Well Water Supply System

### Alliston Well No. 1

Location	46 Fletcher Lane, L9R 1M1
UTM Coordinates	NAD83: UTM Zone 17: 590247 m E, 4889773 m N
Description	Drilled groundwater well, pumphouse, and appurtenances
Source Type	Non-GUDI groundwater
Dimensions	305 mm diameter, 80 m deep
Equipment	One (1) submersible pump rated at 19 L/s at a TDH of 106 m, complete with VFD
Chlorine Disinfection	Two (2) chemical feed pumps with feed lines connected to the well pump discharge pipe Complete with two sodium hypochlorite solution tanks 16 m long and 1,200 mm diameter chlorine contact pipe and 10.2 m long and 1,800 mm diameter chlorine contact pipe in series, connected to the well pump discharge header and located underground outside the pumphouse enclosure building
Iron and Manganese Sequestering	Iron sequestration system consisting of one (1) liquid chemical storage tank and one (1) chemical feed pump with feed line connected to the well pump discharge pipe downstream of the sodium hypochlorite application
Stand-by Power	60 kW diesel generator complete with subbase dual-wall 750 L fuel tank and acoustic enclosure
Notes	

### Alliston Well No. 4

Location	4262 Tottenham Road, L9R 1V4
UTM Coordinates	NAD83: UTM Zone 17: 593214 m E, 4886633 m N
Description	Drilled groundwater well, pumphouse, and appurtenances
Source Type	Non-GUDI groundwater
Dimensions	254 x 508 mm diameter, 75 m deep
Equipment	One (1) vertical turbine pump rated at 2,280 L/min at a TDH of 130 m Complete with a rate of flow control valve Associated SCADA, electrical, mechanical, and controls for an operable system

Chlorine Disinfection	Two (2) chemical feed pumps with feed lines connected to the well pump discharge pipe
	Complete with one sodium hypochlorite solution tank
	Connected to a 400 mm diameter transmission main to Parsons Road Reservoir and Booster Pumping Station with one active irrigation system marked as not potable.
Iron and Manganese Sequestering	Iron sequestration system consisting of one (1) liquid chemical storage tank and one (1) chemical feed pump with feed line connected to the well pump discharge pipe downstream of the sodium hypochlorite application
Stand-by Power	250 kW diesel generator complete with subbase dual-wall 2000 L fuel tank and acoustic enclosure
Notes	

**Alliston Well No. 5**

Location	6854 industrial Parkway, L9R 1V4
UTM Coordinates	NAD83: UTM Zone 17: 592087 m E, 4888333 m N
Description	Drilled groundwater well, pumphouse, and appurtenances
Source Type	Non-GUDI groundwater
Dimensions	254 x 508 mm diameter, 78 m deep
Equipment	One (1) vertical turbine pump rated at 2,046 L/min at a TDH of 109 m
	Complete with a rate of flow control valve
	Associated SCADA, electrical, mechanical, and controls for an operable system
Chlorine Disinfection	Two (2) chemical feed pumps with feed lines connected to the well pump discharge pipe
	Complete with one sodium hypochlorite solution tank
	Connected to a 400 mm diameter transmission main to Parsons Road Reservoir and Booster Pumping Station with no active service connections at this time for the entire length of the transmission main
Iron and Manganese Sequestering	Iron sequestration system consisting of one (1) liquid chemical storage tank and one (1) chemical feed pump with feed line connected to the well pump discharge pipe downstream of the sodium hypochlorite application
Stand-by Power	one (1) 150 kW diesel engine stand-by power generator set
Notes	

**Alliston Well No. 6**

Location	4262 Tottenham Road, L9R 1V4
UTM Coordinates	NAD83: UTM Zone 17: 593195 m E, 4886656 m N
Description	Drilled groundwater well, pumphouse, and appurtenances
Source Type	Non-GUDI groundwater
Dimensions	305 x 610 mm diameter, 72 m deep
Equipment	One (1) vertical turbine pump rated at 2,273 L/min at a TDH of 125.5 m
	Complete with a rate of flow control valve
	Associated SCADA, electrical, mechanical, and controls for an operable system
Chlorine Disinfection	Two (2) chemical feed pumps with feed lines connected to the well pump discharge pipe
	Complete with one sodium hypochlorite solution tank
	Connected to a 400 mm diameter transmission main to Parsons Road Reservoir and Booster Pumping Station with one active irrigation system marked as not potable.
Iron and Manganese Sequestering	Iron sequestration system consisting of one (1) liquid chemical storage tank and one (1) chemical feed pump with feed line connected to the well pump discharge pipe downstream of the sodium hypochlorite application
Stand-by Power	one (1) 100 kW diesel engine stand-by power generator set
Notes	

**Alliston Well No. 7**

Location	4383 King Street South (Adjala/Tec Townline), L9R 1V4
UTM Coordinates	NAD83: UTM Zone 17: 590265 m E. 4886578 m N
Description	Drilled groundwater well, pumphouse, and appurtenances
Source Type	Non-GUDI groundwater
Dimensions	305 x 610 mm diameter, 51 m deep
Equipment	One (1) vertical turbine pump rated at 1,364 L/min at a TDH of 102 m
	Complete with a rate of flow control valve
	Associated SCADA, electrical, mechanical, and controls for an operable system
Chlorine Disinfection	Two (2) chemical feed pumps with feed lines connected to the well pump discharge pipe
	Complete with one sodium hypochlorite solution tank
	23.8 m long and 600 mm diameter chlorine contact pipe, connected to the well pump discharge header and located underground outside the pumphouse enclosure building

Iron and Manganese Sequestering	Iron sequestration system consisting of one (1) liquid chemical storage tank and one (1) chemical feed pump with feed line connected to the well pump discharge pipe downstream of the sodium hypochlorite application
Stand-by Power	one (1) 60 kW diesel engine stand-by power generator set
Notes	

**Alliston Well No. 8**

Location	Rogers Road - in Road R.O.W., L9R 1J9
UTM Coordinates	NAD83: UTM Zone 17: 592770 m E, 4890242 m N
Description	Drilled groundwater well, pumphouse, and appurtenances
Source Type	Non-GUDI groundwater
Dimensions	250 mm x 500 mm diameter, 68 m deep
Equipment	One (1) vertical turbine pump rated at 1,364 L/min at a TDH of 119 m Complete with a rate of flow control valve Associated SCADA, electrical, mechanical, and controls for an operable system
Chlorine Disinfection	Two (2) chemical feed pumps with feed lines connected to the well pump discharge pipe Two (2) top-up chemical feed pumps with feed lines connected to connected to the supply line from Collingwood Complete with two sodium hypochlorite solution tanks 41.5 m long and 750 mm diameter chlorine contact pipe, connected to the well pump discharge header and located underground outside the pumphouse enclosure building
Stand-by Power	80 kW diesel generator complete with subbase dual-wall 750 L fuel tank and acoustic enclosure
Notes	

## Hillcrest Well Water Supply System

### Well Pumphouse

#### Hillcrest Well

Location	47 George Street, L9R 1W9
UTM Coordinates	NAD83: UTM Zone 17: 589914 m E, 4890182 m N
Source Type	Non-GUDI groundwater
Dimensions	96 m deep, 150 mm diameter
Pump Type	Submersible well pump
Pump Capacity	Pump rated at 522.8 L/min at TDH of 84 m
Notes	Well pumphouse housing well pump, treatment and control facilities

### Chemical Addition

#### Chlorine

Description	Sodium hypochlorite disinfection
Feed Point	Feed line connected to the well pump discharge pipe
Equipment	Two (2) chemical feed pumps (duty and standby) Complete with two sodium hypochlorite solution storage tanks
Notes	

### High Lift Pumping Stations

#### Hillcrest Well High Lift Pumping Station

Location	47 George Street, L9R 1W9
UTM Coordinates	NAD83: UTM Zone 17: 589914 m E, 4890182 m N
Description	In-ground reservoir and high lift pumping station for pumping treated water from Hillcrest Well to distribution system
Dimensions	4.93 m long by 4.88 m wide by 1.98 m side water depth in-ground reservoir with a usable volume of approximately 48 m <sup>3</sup> , located adjacent to the Plant Enclosure Building
Equipment	Two (2) centrifugal high lift pumps (one duty and one stand-by), each rated at 500 L/min at a TDH of 56 m
Notes	



## Off-site Storage Facilities and Pumping Stations

### Storage Reservoirs

#### Springs Reservoir

Location	5966 7 <sup>th</sup> line, L0G 1A0
UTM Coordinates	NAD 83: UTM Zone 17, 598219 m E, 4880570 m N
Description	One grade level, concrete reservoir
Dimensions	An operating capacity of 1,360 m <sup>3</sup>
Notes	Allow automatic operation of the McKelvey high lift pumps based on water level in the storage reservoir

### Elevated Storage Tanks

#### Alliston Elevated Water Storage Tank

Location	160 Fletcher Crescent, L9R 1M1
UTM Coordinates	NAD83: UTM Zone 17 590053 m E, 4889815 m N
Description	Composite design steel water storage reservoir
Dimensions	An operating capacity of 4,540 m <sup>3</sup>
Equipment	
Notes	

### Storage Reservoirs and Pumping Stations

#### Parsons Road Reservoir and Booster Pumping Station

Location	139 Parsons Road, L9R 1E9
UTM Coordinates	Cells A, B, and C: NAD83: UTM Zone 17: 591139 m E, 4889017 m N Cell D: NAD27: UTM Zone 17: 591028.00 m E, 4888414.00 m N
Description	One underground reservoir with Cells A, B, C and D, with separate lines for surface and groundwater inflows, and one booster pumping station
Dimensions	Total useable volume of 5,448 m <sup>3</sup> in Cells A, B, and C; and a total storage capacity of approximately 4,500 m <sup>3</sup>
Equipment	Two (2) vertical turbine pump rated at 282 L/s at a TDH of 70.8 m with VFDs One (1) vertical turbine pump rated at 143 L/s at a TDH of 88m

	Two (2) chemical feed pumps with feed lines connected to the well water inlet pipe
	Two (2) chemical feed pumps for the top-up chlorination of the Plant discharge water with feed lines connected to the high lift pump discharge header to the Alliston distribution system
	Complete with three sodium hypochlorite solution storage tanks
	Three (3) vertical turbine high lift pumps, each rated at 42 L/s at a TDH of 62 m, dedicated to the Honda of Canada Plant supply
Standby Power	- One (1) 1250 kW diesel engine stand-by power generator to serve high lift pumps at the Honda of Canada Plant and Alliston distribution
Notes	

### McKelvey Reservoir (Beeton WTP) and Booster Station

Location	3377 10 <sup>th</sup> Sideroad, L0G 1A0
UTM Coordinates	NAD83: UTM Zone 17 597198 m E, 4883528 m N
Description	One underground reservoir and one booster pumping station
Dimensions	Total capacity of 1600 m <sup>3</sup>
Equipment	Three (3) high lift pumps each rated at 33.3 L/s at a TDH of 74 m
Standby Power	One (1) 750 kW diesel engine standby power generator
Notes	Supply from Alliston distribution system Serving the community of Beeton

## Instrumentation and Control

### SCADA System

Description	Process control and monitoring equipment for Alliston Well Water Supply System
Notes	System control with data acquisition including various in-line analyzers and monitors

## Fuel Oil Systems

### Parsons Road Reservoir

Location	590039 m E, 4889017 m N
Description	Diesel – 9463 litres
Fuel Type	Diesel
Source Protection Area	
Notes	Low drinking threat level

**Alliston Well #1**

Location	590247 m E, 4889773 m N
Description	Diesel – 750 litres
Fuel Type	Diesel
Source Protection Area	
Notes	Low drinking threat level

**Alliston Well #4**

Location	593241 m E, 4886633 m N
Description	Diesel – 2000 litres
Fuel Type	Diesel
Source Protection Area	
Notes	Low drinking threat level

**Alliston Well #5**

Location	592087 m E, 4888333 m N
Description	Diesel – 935 litres
Fuel Type	Diesel
Source Protection Area	
Notes	Low drinking threat level

**Alliston Well #6**

Location	593195 m E, 4886656 m N
Description	Diesel – 1135 litres

Fuel Type	Diesel
Source Protection Area	
Notes	Low drinking threat level

**Alliston Well #7**

Location	590265 m E, 4886578 m N
Description	Diesel – 935 litres
Fuel Type	Diesel
Source Protection Area	
Notes	Moderate drinking threat level

**Alliston Well #8**

Location	592770 m E, 4890242 m N
Description	Diesel – 750 litres
Fuel Type	Diesel
Source Protection Area	
Notes	Low drinking threat level

**Mowder Boulevard Reservoir**

Location	597243 m E, 4890748 m N
Description	Diesel – 4500 litres
Fuel Type	Diesel
Source Protection Area	
Notes	Low drinking threat level

## Tottenham Well Water Supply System

### Walkem Drive Wells #4 & #5

#### Well #4

Location	78 Walkem Drive, LOG 1W0
UTM Coordinates	NAD83: UTM Zone 17: 595513 m E, 4875384 m N
Source Type	Groundwater
Dimensions	89 m deep, 300 mm diameter
Pump Type	Submersible well pump
Pump Capacity	Pump rated at 18.9 L/s at a TDH of 73.2 m
Notes	Well pump electrical control system designed to allow the operation of one (1) well pump only at any given time

#### Well #5

Location	78 Walkem Drive, LOG 1W0
UTM Coordinates	NAD83: UTM Zone 17: 595513 m E, 4875384 m N
Source Type	Groundwater
Dimensions	89 m deep, 400 mm diameter
Pump Type	Submersible well pump
Pump Capacity	Pump rated at 18.9 L/s at a TDH of 73.2 m
Notes	Well pump electrical control system designed to allow the operation of one (1) well pump only at any given time

#### Well Pumphouse

Location	78 Walkem Drive, LOG 1W0
UTM Coordinates	NAD83: UTM Zone 17: 595513 m E, 4875384 m N
Description	Housing treatment and control facilities
Notes	

## Coventry Park Wells #6A & #7

### Well #6

Location	6840 4 <sup>th</sup> Line, LOG 1W0
UTM Coordinates	NAD83: UTM Zone 17: 594887 m E, 4875699 m N
Source Type	Groundwater
Dimensions	88 m deep, 150 mm diameter
Pump Type	Submersible well pump
Pump Capacity	Pump rated at 7.57 L/s at a TDH of 93.0 m
Notes	This well is now a monitoring well according to the PTTW

### Well #6A

Location	6840 4 <sup>th</sup> Line, approximately 80 m south east of the pumphouse, LOG 1W0
UTM Coordinates	NAD83: UTM Zone 17: 594913 m E, 4874552 m N
Source Type	Groundwater
Dimensions	86.6 m deep, 250 mm diameter
Pump Type	Submersible well pump
Pump Capacity	Pump rated at 20 L/s at a TDH of 93.0 m
Notes	

### Well #7

Location	6840 4 <sup>th</sup> Line, LOG 1W0
UTM Coordinates	NAD83: UTM Zone 17: 594887 m E, 4875699 m N
Source Type	Groundwater
Dimensions	88 m deep, 250 mm diameter
Pump Type	Submersible well pump
Pump Capacity	Pump rated at 30.3 L/s at a TDH of 93.0 m
Notes	

### Well Pumphouse

Location	6840 4 <sup>th</sup> Line, LOG 1W0
UTM Coordinates	NAD83: UTM Zone 17: 594887 m E, 4875699 m N
Description	Housing treatment and control facilities
Standby Power	One (1) 100 kW diesel engine stand-by power generator set
Notes	

## Off-site Storage Facilities and Pumping Stations

### Storage Reservoirs and Pumping Stations

#### Mill Street Reservoir and Booster Station

Location	42 Mill Street, L0G 1W0
UTM Coordinates	NAD83: UTM Zone 17:595435 m E, 4875010 m N
Description	Storage reservoir and booster pumping station
Dimensions	Total usable volume of approximately 890 m <sup>3</sup> with dimensions of approximately 17.9 m long x 17.9 m wide x 2.78 m deep
Chlorine Disinfection	<ul style="list-style-type: none"> <li>- Two (2) chemical feed pumps (one duty, one standby) each capable of 40 L/hr, complete with separate feed lines discharging into the common well pump discharge header upstream of the reservoirs for primary disinfection</li> <li>- Two (2) chemical feed pumps (one duty, one standby) each capable of 6.62 L/hr, complete with separate feed lines discharging into the common high lift pump discharge header to provide secondary chlorination</li> <li>- Complete with one (1) sodium hypochlorite solution storage tank and two (2) day tanks with transfer pump capable of 100L/min</li> </ul>
Iron and Manganese Sequestering	<ul style="list-style-type: none"> <li>- One (1) chemical feed pump capable of 8 L/hr, with a feed line discharging into the common well pump discharge header upstream of the reservoir</li> <li>- Complete with one (1) sodium silicate solution storage tank</li> </ul>
Aeration	<ul style="list-style-type: none"> <li>- Two (2) SN10 Spray aerators, each with capacity of 40 L/s, discharging to reservoirheadspace.</li> <li>- One (1) blower with capacity of 5100 m<sup>3</sup>/hr.</li> </ul>
Equipment	Three (3) horizontal split case high lift pumps each rated at 50 L/s at a TDH of 76 m
Standby Power	One (1) 150 kW diesel engine stand-by power generator set complete with spill containment
Notes	The untreated groundwater from Well No. 4 & 5 and Wells No. 6A & 7 through dedicated water transmission mains without any consumer connection in Tottenham will be blended with the treated water supplied from the Alliston/Beeton water supply through the transmission main that discharges into the Mill St Reservoir.

## Instrumentation and Control

### SCADA System

Description	Process control and monitoring equipment for Tottenham Well Water Supply System
Notes	System control with data acquisition including various in-line analyzers and monitors

## Fuel Oil Systems

### Coventry Park Wells #6A & #7

Location	594887 m E, 4875699 m N
Description	Diesel – 935 litres
Fuel Type	Diesel
Source Protection Area	
Notes	Low drinking water threat level

### Mill Street Reservoir

Location	Mill Street Reservoir
Description	Diesel – 935 litres
Fuel Type	Diesel
Source Protection Area	
Notes	

## Elevated Storage Tanks

### Tottenham Elevated Storage Tank

Location	6830 4 <sup>th</sup> Line, L0G 1W0
UTM Coordinates	NAD83: UTM Zone 17:594941 m E, 4875074 m N
Description	Elevated storage tank
Dimensions	Usable capacity of 4,540 m <sup>3</sup>
Notes	



## Watermains

1.2 Watermains within the distribution system comprise:

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

<b>Table 1: Watermains</b>	
<b>Column 1 Document or File Name</b>	<b>Column 2 Date</b>
Alliston Water Distribution System	December 29, 2020
Tottenham Water Distribution System	December 29, 2020

1.2.2 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.

1.2.3 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 Town of New Tecumseth
Permit Number	123-201
Drinking Water System Name	New Tecumseth Drinking Water System
Permit Effective Date	March 11, 2024

### 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 #123-101.
- 1.2 The definitions and conditions of licence #123-101 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 #123-101.
- 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 July 30, 2021, the ministry's Watermain Disinfection Procedure, dated November 2015. As of August 1, 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<sup>3</sup> 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	<b>The Corporation of the Town of New Tecumseth</b>
Permit Number	<b>123-201</b>
Drinking Water System Name	<b>New Tecumseth Drinking Water System</b>
Permit Effective Date	<b>March 11, 2024</b>

### 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.

<b>Table 2: Schedule C Documents</b>				
Column 1 Issue #	Column 2 Issued Date	Column 3 Description	Column 4 Status	Column 5 DN#
1 (from the previous Alliston Drinking Water System 123-101)	2011/09/02	Upgrades at the Parsons Road Pumphouse and Reservoir (MOE#0593-8FGRP, originally as CofA application)	Archived	NA
2 (from the previous Alliston Drinking Water System 123-101)	2012/02/02	New booster pumping station, reservoir and trunk watermain	In progress	NA
3 (from the previous Alliston Drinking Water System 123-101)	2018/10/05	Addition of diesel standby generator at Well 1, 4 and 8. New chlorine contact tank and vertical turbine pump at Well 1.	Archived	2
1 (from the previous Tottenham Drinking Water System 123-102)	2019/10/08	Addition of spray aerators, and a blower in Mill street reservoir	Archived	1

2 (from the previous Tottenham Drinking Water System 123-102)	2020/08/10	New Transmission main to extend the Alliston/Beeton water supply to the community of Tottenham	Archived	2
---	------------	--	----------	---

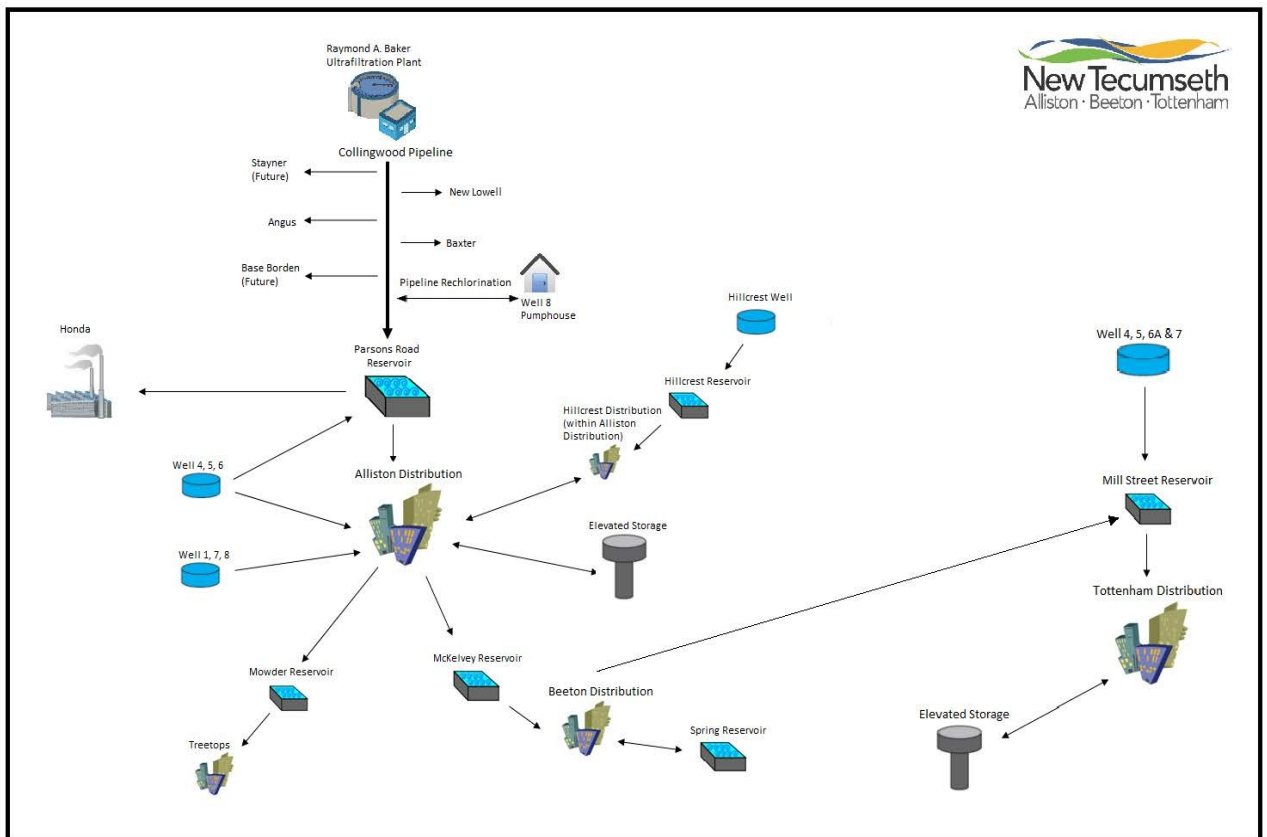
- 1.2** For each document described in columns 1, 2 and 3 of Table 2, the status of the document is indicated in column 4. Where this status is listed as 'Archived', the approved alterations have been completed and relevant portions of this permit have been updated to reflect the altered works. These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

## Schedule D: Process Flow Diagrams

System Owner	The Corporation of the Town of New Tecumseth
Permit Number	123-201
Drinking Water System Name	New Tecumseth Drinking Water System
Permit Effective Date	March 11, 2024

### 1.0 Process Flow Diagrams

#### New Tecumseth Water Supply System



**Note: this process flow diagram is for reference only, and represents a high level overview of the system as of January 25, 2024.**