



APPENDIX A
DRINKING WATER WORKS PERMIT (No. 04-202) AND
PERMIT TO TAKE WATER (No. 6281-7WFQB3)



DRINKING WATER WORKS PERMIT

Permit Number: 004-202

Issue Number: 3

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

The Regional Municipality of Halton

**1151 Bronte Road
Oakville ON L6M 3L1**

For the following municipal residential drinking water system:

Acton 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

DATED at TORONTO this 14th day of December, 2011

Signature

A handwritten signature in black ink that reads "Aziz Ahmed". The signature is written in a cursive style and is underlined.

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

Schedule A: Drinking Water System Description

System Owner	The Regional Municipality of Halton
Permit Number	004-202
Drinking Water System Name	Acton Drinking Water System
Schedule A Issue Date	December 14th, 2011

1.0 System Description

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

Overview

The **Acton Drinking Water System** consists of five (5) groundwater wells, four (4) pumphouses, one (1) drinking water treatment plant, one (1) storage reservoir, and approximately 46.4 kilometres of trunk watermains and 5.2 kilometres of distribution watermains.

Well Fields

- Davidson Well Field
 - Davidson Well No. 1
 - Davidson Well No. 2
 - Davidson Well No. 1 and Well No. 2 Pumphouse
- Fourth Line Well Field
 - Fourth Line Well
 - Fourth Line Well Pumphouse
- Prospect Park Well Field
 - Prospect Park Well No. 1 and Pumphouse
 - Prospect Park Well No. 2 and Pumphouse

Water Treatment Plants

- Prospect Park Water Treatment Plant

Storage Reservoirs

- Acton Reservoir

Davidson Well Field

Davidson Well No. 1

Location	14032 3 rd Line, Town of Halton Hills, ON
UTM Coordinates	NAD 83, Zone 17, +/- 5 m, Easting 576873.000 m, Northing 4833284.000 m
Description	A drilled groundwater production well
Source Type	GUDI with effective in-situ filtration
Dimensions	250 mm, 14.6 m deep
Equipment	7 stage vertical turbine pump, rated at 14.2 L/s, 56.4 m TDH 200 mm diameter discharge line connected to the well pump header in the pumphouse including a vented watertight galvanized steel enclosure over the well head
Notes	

Davidson Well No. 2

Location	14032 3 rd Line, Town of Halton Hills, ON
UTM Coordinates	NAD 83, Zone 17, +/- 5 m, Easting 576873.000 m, Northing 4833284.000 m
Description	A drilled groundwater production well
Source Type	GUDI with effective in-situ filtration
Dimensions	250 mm, 14.3 m deep
Equipment	7 stage vertical turbine pump, rated at 14.2 L/s, 56.4 m TDH 200 mm diameter discharge line connected to the well pump header in the pumphouse including a vented watertight galvanized steel enclosure over the well head
Notes	

Davidson Well No. 1 and Well No. 2 Pumphouse

Location	14032 3 rd Line, Town of Halton Hills, ON
UTM Coordinates	NAD 83, Zone 17, +/- 5 m, Easting 576873.000 m, Northing 4833284.000 m
Equipment	<p>One (1) flow meter for monitoring flow from Well No. 1 and one (1) flow meter for monitoring flow from Well No. 2</p> <p>A turbidity meter</p> <p>A 300 mm diameter feeder watermain with no fire hydrants and no service connections on its entire length of approximately 200 m from the Pump House to the connection with the Distribution System</p> <p>A valve, flow meter and associated appurtenances, including a backflow preventer, to allow discharge of raw water to the stream on the neighboring property for non-potable purposes</p>
Cartridge Filters	Two (2) housings, each containing thirty-three (33) one-micron rated microfiber cartridge filters for a total of sixty-six (66) cartridges. Each 70 mm (2.75 inch) diameter cartridge is 763 mm (30 inches) in length and has an effective filtration area of 0.41 m ² .
UV Treatment	A primary disinfection ultraviolet (UV) system consisting of two (2) UV units, each unit having a design dosage rate of 40 millijoules per square-centimetre at a design maximum flowrate of 2,500 cubic metres per day with associated piping, monitoring equipment including UV transmittance analyzer, controls and alarm systems
Chlorine Disinfection	<p>A chlorine disinfection system located in a separate room of the pumphouse consisting of a chlorine booster pump, scales for two chlorine cylinders, a manifold, automatic switchover, one (1) 4.54 kg/day capacity duty chlorinator, one (1) stand-by chlorinator rated at 4.54 kg/day, with a stand-by chlorination pump, chlorine diffuser with all associated valves, piping, spill containment area, equipment, controls and instrumentation including a continuous chlorine residual analyzer</p> <p>A chlorine contact chamber having a minimum effective contact volume of 77 cubic metres and chlorine booster pump (No. 2) complete with a sampling line from the chlorine contact tank to the pump house</p>
Fluoridation	A fluoridation system using hydrofluosilicic acid, consisting of one weigh scale, a storage tank (carboy) of hydrofluosilicic acid complete with spill containment, two (2) metering pumps (duty and standby) rated at 3.785 L/h at 120 m TDH, all installed in a equipment/storage room
Standby Power	One (1) standby diesel generator set, having a rating of 50 kilowatts, to provide power for the Davidson Wells Pumping Station during emergency situations
Notes	

Fourth Line Well Field

Fourth Line Well

Location	9098 32 nd Sideroad, Town of Halton Hills, ON
UTM Coordinates	NAD 83, Zone 17, +/- 5 m, Easting 576369.813 m, Northing 4834397.000 m
Description	A drilled groundwater production well
Source Type	GUDI with effective in-situ filtration
Dimensions	250 mm, 20.7 m deep
Equipment	7 stage vertical turbine pump, rated at 15.8 L/s, 59.1 m TDH 150 mm diameter discharge line connected to the well pump header in the pumphouse
Notes	

Fourth Line Well Pumphouse

Location	9098 32 nd Sideroad, Town of Halton Hills, ON
UTM Coordinates	NAD 83, Zone 17, +/- 5 m, Easting 577000.000 m, Northing 4835296.000 m
Equipment	A magnetic flow meter on the discharge pipe to monitor the flow entering the distribution system A 150 mm diameter watermains and associated valves connecting to the chlorine contact chamber A 150 mm diameter feeder watermain with fire hydrants and no service connections for approximately 15 m from the Fourth Line Pump house to the Distribution System All associated piping, valves and controls
UV Treatment	A primary disinfection ultraviolet (UV) system located in a separate room of the pumphouse consisting of two (2) UV units, each unit having a design dosage rate of 40 millijoules per square-centimeter at a design maximum flowrate of 15.8 L/s with associated piping, monitoring equipment including UV transmittance analyzer, controls and alarm systems, connected to SCADA system
Chlorine Disinfection	A disinfection system consisting of two (2) chlorine booster pumps, scales for two chlorine cylinders, a manifold, automatic switchover, one 2.0 kg/d capacity chlorinator, chlorine diffuser, and associated equipment, instrumentation and controls, including weigh scales and a continuous chlorine residual analyzer Two (2) chlorine contact chambers, each 1.8 m nominal diameter x 9.936 m long pressure pipe, equipped with perforated inlet and outlet pipes, three perforated baffles plates and bulkhead ends, having an effective contact volume of approximately 26 cubic metres complete with a sampling line from the chlorine contact tank to the pump house
Fluoridation	A fluoridation system using hydrofluosilicic acid, consisting of one weigh scale, a carboy storage tank of hydrofluosilicic acid complete with spill containment, one metering pump of 3.785 L/h capacity at 120 m TDH

Notes	
-------	--

Prospect Park Well Field

Prospect Park Well No. 1

Location	Prospect Park adjacent to Fairy Lake in the upper reaches of the Black Creek Drainage Basin in the Town of Halton Hills, ON
UTM Coordinates	NAD 83, Zone 17, Easting 576819.00 m and Northing 4830867.00 m
Description	A drilled groundwater production well
Source Type	GUDI with effective in-situ filtration
Dimensions	300 mm, 17.7 – 23.8 m deep
Equipment	7 stage vertical turbine pump, rated at 53 L/s, 82.3 m TDH with VFD 200 mm diameter discharge line connected to the well pump header in the pumphouse
Notes	

Prospect Park Well No. 1 Pumphouse

Location	Prospect Park adjacent to Fairy Lake in the upper reaches of the Black Creek Drainage Basin in the Town of Halton Hills, ON
UTM Coordinates	NAD 83, Zone 17, Easting 576819.00 m and Northing 4830867.00 m
Equipment	A magnetic flow meter on the discharge pipe to monitor the flow entering the water treatment plant 300 mm diameter feeder watermain with no fire hydrants and service connections from Prospect Park Pump House to the Water Treatment Plant
Chlorine Disinfection	Two (2) disinfection systems consisting of two (2) chlorine booster pumps, two (2) scales for two (2) chlorine cylinders, two (2) manifolds, two (2) automatic switchovers, two (2) 9.07 kg/d capacity chlorinators, chlorine diffuser, and associated equipment, instrumentation and controls including weigh scales capable of feeding pre-filter chlorination to either Well N. 1 or Well No. 2
Notes	

Prospect Park Well No. 2

Location	Prospect Park adjacent to Fairy Lake in the upper reaches of the Black Creek Drainage Basin in the Town of Halton Hills, ON
UTM Coordinates	NAD 83, Zone 17, Easting 576802.96m and Northing 4830882.81m
Description	A drilled groundwater production well (alternate source to Prospect Well No. 1)
Source Type	GUDI with effective in-situ filtration
Dimensions	300 mm, 23.2 m deep
Equipment	Vertical turbine pump, rated at 53 L/s, 82.3 m TDH, with a variable frequency drive (located in the WTP) and all associated piping and valves, located in the well pumphouse 200 mm diameter discharge line connected to the well pump header in the pumphouse
Notes	

Prospect Park Well No. 2 Pumphouse

Location	Prospect Park adjacent to Fairy Lake in the upper reaches of the Black Creek Drainage Basin in the Town of Halton Hills, ON
UTM Coordinates	NAD 83, Zone 17, Easting 576802.96m and Northing 4830882.81m
Equipment	Complete with all associated valves and piping including a 150 mm discharge line to the Prospect Park WTP, sample lines, sink, electrical, and instrumentation
Chlorine Disinfection	Capable of pre-filter chlorination via the chlorination system located in Well No. 1 Pumping Station
Notes	

Prospect Park Water Treatment Plant**Location and System Type**

Street Address	30 Park Street, Halton Hills ON
UTM Coordinates	NAD 83, Zone 17, +/- 5 m, Easting 576941.353 m, Northing 4831064.453 m
System Type	Treatment
Notes	

Filtration

Filters

Description	Two (2) greensand manganese pressure filters
Dimensions	Each filter with 1,136 m ³ /d maximum capacity, 5.3 m/h filtration rate, and 65 L/s backwash rate with the following design criteria: 7.3 m ² surface area with 0.3 m deep sand, 0.6 m greensand, 0.3 m anthracite
Equipment	Complete with associated appurtenances such as filter control panel, flow control valves, flow meter at each filter effluent line, a continuous chlorine residual analyzer and turbidity meter
Notes	

Filter Backwash Wastewater Management System

Description	Filter backwash wastewater management system
Equipment	One (1) 150 m ³ capacity backwash holding tank Two (2) submersible pumps each rated at 3.5 L/s to transfer the backwash to the sewer system and spray nozzles
Notes	

Air Scour System

Description	Two (2) positive displacement blowers (one duty and one stand-by)
Equipment	Each blower rated at 170 scfm capacity, 0.6 m ³ /m ² /min air scour supply rate, 100 kPa discharge pressure, 6.25 kW blower motor rating
Notes	

Primary Disinfection

Ultraviolet (UV) Reactors

Description	Two (2) UV reactors
Capacity	Each reactor rated at 53 L/s and a minimum pass-through dose of 40 mJ/cm ² complete with all associated piping, controls, and instrumentation
Notes	

Chlorine Contact Chamber

Description	One (1) baffled contact chamber
Dimensions	Total usable volume of 48.3 m ³ with a baffle factor of 0.5

Notes	
-------	--

Instrumentation and Control

SCADA System

Description	Integrated process control system
Notes	Combines system control with data acquisition including various in-line analyzers and monitors

Emergency Power

Backup Power Supply

Description	A 100 kW diesel engine stand-by power generator set and associated equipment with a 1,135 L diesel fuel tank supplying the generator, located in a separate room
Notes	

Chemical Addition

Chlorine

Description	Chlorine addition for disinfection
Feed Point	200 mm diameter discharge pipe downstream of the UV units
Equipment	Dual cylinder weigh scale with one (1) 68 kg chlorine cylinder on each side
	Automatic switchover valves, duplex chlorinators rated at 6 kg/d each with a spare V-notch and meter tube for 12 kg/d
	Two (2) booster pumps, injectors, and piping to the injection point
Notes	

Hydrofluosilicic Acid

Description	Hydrofluosilicic acid addition for fluoridation
Feed Point	Immediately after UV disinfection
Equipment	One (1) weigh scale and a carboy storage tank for hydrofluosilicic acid
	One (1) metering pump
Notes	

Potassium Permanganate

Description	Potassium permanganate addition for iron and manganese removal and filter media regeneration
Feed Point	Prior to filtration system
Equipment	Two (2) 400 L capacity mixing tanks with one (1) mixer in each tank One (1) metering pump rated at 10 L/hr at 1,035 kPa
Notes	

Storage Reservoirs**Acton Reservoir**

Location	14386 Churchill Road, Town of Halton Hills ON
UTM Coordinates	NAD 83, Zone 17, +/- 5 m, Easting 576253.612m, Northing 4834145.090m
Description	In Ground Storage Reservoir
Dimensions	Total volume 4,456 m ³ and useable volume 2,584.48 m ³
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.

Table 1: Watermains	
Column 1 Document or File Name	Column 2 Date
Acton Water Distribution System	November 28, 2008

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 Regional Municipality of Halton
Permit Number	004-202
Drinking Water System Name	Acton Drinking Water System
Schedule B Issue Date	December 14th, 2011

1.0 Applicability

- 1.1 In addition to any other 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.
- 1.2 The definitions and conditions of the licence shall also apply to this drinking water works permit.

2.0 Alterations to the Drinking Water System

- 2.1 Any document issued by the Director as a Schedule C to this drinking water works permit shall provide authority to alter the drinking water system in accordance, where applicable, with the conditions of this drinking water works permit and the licence.
- 2.2 All Schedule C documents issued by the Director for the drinking water system shall form part of this drinking water works permit.
- 2.3 All parts of the drinking water system in contact with drinking water which are:
 - 2.3.1 Added, modified, replaced, extended; or
 - 2.3.2 Taken out of service for inspection, repair or other activities that may lead to contamination,shall be disinfected before being put into service in accordance with the provisions of the AWWA C651 – Standard for Disinfecting Water Mains; AWWA C652 – Standard for Disinfection of Water-Storage Facilities; AWWA C653 – Standard for Disinfection of Water Treatment Plants; or AWWA C654 – Standard for Disinfection of Wells; or an equivalent procedure.
- 2.4 The owner shall notify the Director within thirty (30) days of the placing into service or the completion of any addition, modification, replacement 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 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 For greater certainty, the notification requirements set out in condition 2.4 do not apply to any addition, modification, replacement or extension in respect of the drinking water system which:
- 2.5.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03;
- 2.5.2 Constitutes maintenance or repair of the drinking water system; or
- 2.5.3 Is a watermain authorized by condition 3.1 of Schedule B of this drinking water works permit.
- 2.6 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.
- 2.7 For greater certainty, any alteration to the drinking water system made in accordance with this drinking water works permit may only be carried out after other legal obligations have been complied with 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 drinking water system may be altered 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:
- Has been prepared by a Professional Engineer;
 - Has been designed only to transmit water and has not been designed to treat water;
 - Satisfies the design criteria set out in the Ministry of the Environment publication "Watermain Design Criteria for Future Alterations Authorized under a Drinking Water Works Permit – March 2009", as amended from time to time; and
 - Is consistent with or otherwise addresses, the design objectives contained within the Ministry of the Environment 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 to the watermain addition, modification, replacement or extension.
- 3.1.7 A Professional Engineer 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 Connects to another drinking water system; or
 - 3.2.4 Results in the fragmentation of the drinking water system.
- 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 of the Environment; 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.

4.0 Minor Modifications to the Drinking Water System

- 4.1** The drinking water system may be altered by modifying or replacing the following components:

4.1.1 Raw water, treatment process or treated water pumps;

4.1.2 Chemical metering or chemical handling pumps;

4.1.3 Valves;

4.1.4 Instrumentation and controls;

4.1.5 Cathodic corrosion protection; or

4.1.6 Spill containment works.

- 4.2** The drinking water system may be altered by replacing the following:

4.2.1 Raw water, treatment process or treated water piping within the treatment subsystem.

- 4.3** The modification or replacement of a drinking water system component set out in condition 4.1 or the replacement of a drinking water system component set out in condition 4.2 must not result in:

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

4.3.2 The bypassing of any unit process within a treatment subsystem;

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

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

4.3.5 An negative impact on the ability to undertake compliance and other monitoring; or

4.3.6 An adverse effect on the environment.

- 4.4** The owner shall verify in writing that the modification or replacement of drinking water system components in accordance with conditions 4.1 and 4.2 has met the requirements of the conditions listed in condition 4.3.

- 4.5** The verifications required in condition 4.4 shall be:

- 4.5.1 Recorded on “Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System” as published by the Ministry of the Environment; and
- 4.5.2 Retained for a period of ten (10) years by the owner.
- 4.6 For greater certainty, the verification requirements set out in conditions 4.4 and 4.5 do not apply to any modification or replacement in respect of the drinking water system which:
 - 4.6.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
 - 4.6.2 Constitutes maintenance or repair of the drinking water system.
- 4.7 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 atmosphere:
 - 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;
 - 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 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; and

- 5.1.12 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 add, modify or replace a drinking water system component set out in condition 5.1 for an activity that is not directly related to the treatment and distribution of drinking water.
- 5.3 The emergency generators identified in condition 5.1.12 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 oxide emissions only, for each addition, modification or replacement of emergency generators identified in condition 5.1.12.

Performance Limits

- 5.5 The owner shall ensure that a drinking water system component identified in conditions 5.1.1 to 5.1.12 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 populations shall not exceed the applicable point of impingement limit, and at non-sensitive populations shall not exceed the Ministry of the Environment half-hourly screening level of 1880 ug/m³ as amended;
- 5.5.3 The noise emissions comply at all times with the limits set out in publication NPC-205 and/or publication NPC-232, as applicable; and
- 5.5.4 The vibration emissions comply at all times with the limits set out in publication NPC-207.
- 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 5.5.3 and 5.5.4 is being achieved, through noise abatement equipment and/or operational procedures.
- 5.8 The verifications required in condition 5.6 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 of the Environment.
- 5.8.2 Retained for a period of ten (10) years by the owner.

- 5.9** For greater certainty, the verification 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.

Form 1 – Record of Watermains Authorized as a Future Alteration**Part 1 – Drinking Water Works Permit Number:** _____*(Insert the Drinking Water Works Permit number authorizing the addition, modification, replacement or extension of watermains)***Part 2 – Description of watermain addition, modification, replacement or extension (Use attachments if required)**

The description shall include:

- 1) A brief description above of the undertaking (e.g. street name(s); subdivision name; project name); and
- 2) An attachment including a plan view drawing identifying at a minimum:
 - a) location(s) of the undertaking (e.g. showing street names, easements, etc.); and
 - b) nominal diameter of the watermain(s) associated with the addition, modification, replacement or extension.

Part 3 – Verification by Professional Engineer

I hereby verify that I am a Professional Engineer who is licensed to practice in the Province of Ontario and the design of the watermain addition, modification, replacement or extension:

- 1) Has been prepared by a Professional Engineer who is licensed to practice in the Province of Ontario;
- 2) Has been designed only to transmit water and has not been designed to treat water;
- 3) Satisfies the design criteria set out in the Ministry of the Environment publication “Watermain Design Criteria for Future Alterations Authorized under a Drinking Water Works Permit – March 2009”, as amended from time to time; and
- 4) Is consistent with or otherwise addresses, the design objectives contained within the Ministry of the Environment publication “Design Guidelines for Drinking Water Systems, 2008”, as amended from time to time.

Name: (Print) _____ Signature: _____

PEO Licence Number: _____ Date: _____

Part 4 – Verification by Owner

I hereby verify that:

- 1) 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;
- 2) 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) Secondary disinfection will be provided to water within the added, modified, replaced or extended watermain to meet the requirements of O. Reg. 170/03;
- 4) The watermain addition, modification, replacement or extension is wholly located within the municipal boundary over which the owner has jurisdiction;
- 5) The owner consents to the watermain addition, modification, replacement or extension; and
- 6) I am authorized by the owner to complete this verification.

Name of Owner: (Print) _____

Name: (Print) _____
Owner Representative

Signature: _____

Date: _____

Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System**Part 1 – Drinking Water Works Permit Number:** _____*(Insert the Drinking Water Works Permit number authorizing minor modifications or replacements to the Drinking Water System)***Part 2 – Description of Minor Modifications or Replacements (Use attachments if required)**

The description shall include:

- 1) An identification of the system component being modified or replaced;
- 2) The location of the works being modified or replaced; and
- 3) A brief description of the modification or replacement.

Part 3 – Verification by Owner

I hereby verify that:

- 1) The minor modifications or replacements described in Part 2 of this form meets the requirements of the conditions of the Drinking Water Works Permit identified in Part 1 of this form which authorizes the minor modifications or replacements; and
- 2) I am authorized by the owner to complete this verification.

Name of Owner: (Print) _____

Name: (Print) _____ Signature: _____
Owner Representative

Date: _____

**Form 3 – Record of Addition, Modification or Replacement of Equipment
Discharging a Contaminant of Concern to the Atmosphere****Part 1 – Drinking Water Works Permit Number:** _____*(Insert the Drinking Water Works Permit number authorizing the addition, modification or replacement of equipment discharging a contaminant of concern to the atmosphere)***Part 2 – Description of Equipment Added, Modified or Replaced (Use attachments if required)***The description shall include:*

- 1) *A brief description of the undertaking; and*
- 2) *An attachment including a plan view drawing identifying at a minimum the location of the undertaking and the location of the stack or vent discharging to the atmosphere*

Part 3 – Verification by Owner

I hereby verify that:

- 1) The addition, modification or replacement of equipment discharging a contaminant of concern to the atmosphere described in Part 2 of this form meets the requirements of the conditions of the Drinking Water Works Permit identified in Part 1 which authorizes the addition, modification or replacement;
- 2) Where required, an Emission Summary Table was prepared by a Professional Engineer who is licensed to practice in the Province of Ontario; and
- 3) I am authorized by the owner to complete this verification.

Name of Owner: (Print) _____

Name: (Print) _____ Signature: _____
Owner Representative

Date: _____

AMENDED PERMIT TO TAKE WATER
Ground Water
NUMBER 6281-7WFQB3

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

The Regional Municipality of Halton
1151 Bronte Rd
Oakville, Ontario
L6M 3L1

For the water taking from: Prospect Park Well 1, Prospect Park Well 2
Davidson Well 1, Davidson Well 2
4th Line Well A

Located at: Lot 28, Concession II
Halton Hills, Regional Municipality of Halton

14032 Churchill Rd
Halton Hills, Regional Municipality of Halton

4th Line
Halton Hills, Regional Municipality of Halton

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

- (a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.
- (b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.
- (c) "Ministry" means Ontario Ministry of the Environment.
- (d) "District Office" means the Halton-Peel District Office.
- (e) "Permit" means this Permit to Take Water No. 6281-7WFQB3 including its Schedules, if any, issued in accordance with Section 34 of the OWRA.
- (f) "Permit Holder" means The Regional Municipality of Halton.
- (g) "OWRA " means the *Ontario Water Resources Act*, R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

- 1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated August 26, 2009 and signed by John McIntosh, and all Schedules included in this Permit.
- 1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.
- 1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.
- 1.4 This Permit is not transferable to another person.
- 1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.
- 1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.
- 1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

- 2.1 Inspections
The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act*, R.S.O. 1990, the *Pesticides Act*, R.S.O. 1990, or the *Safe Drinking Water Act*, S. O. 2002.
- 2.2 Other Approvals
The issuance of, and compliance with this Permit, does not:
 - (a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act*, and the *Environmental Protection Act*, and any regulations made thereunder; or
 - (b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including

the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

- (a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or
- (b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. **Water Takings Authorized by This Permit**

3.1 **Expiry**

This Permit expires on **May 31, 2015**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Prospect Park Well No.1 * Note: See Conditions Section 3 Below	Well Drilled	Municipal	Water Supply	1,578	24	2,273,000	365	17 576827 4830878
2	Prospect Park Well No.2 * Note: See Conditions Section 3 Below	Well Drilled	Municipal	Water Supply	1,578	24	2,273,000	365	17 576821 4830857
3	Davidson Well No.1	Well Drilled	Municipal	Water Supply	868	24	1,250,000	365	17 576866 4833280
4	Davidson Well No.2	Well Drilled	Municipal	Water Supply	868	24	1,250,000	365	17 576873 4833288
5	4th Line Well No. A	Well Drilled	Municipal	Water Supply	909	24	1,309,000	365	17 577000 4835322
							Total Taking:	6,082,000	

- 3.3 From the date of issuance of this Permit until **May 31, 2010** the Permit Holder may operate either or both Prospect Park Well 1 and Prospect Park Well 2 **singly or in combination** at individual rates of taking up to **2000 L/min**. The maximum combined daily takings from the 2 wells shall not however, exceed **4546 m³ / day** during the test period.
- 3.4 During the testing of the Prospect Park Wells, the Permit Holder shall maintain a daily log of all operations for the Prospect Park Wells including the time and date of all pump rate changes and the total combined daily taking from these two wells up to and including May 31, 2010.
- 3.5 On **June 1, 2010**, the maximum rate of **1578 L/min** listed in **Table A** for Prospect Park Well 1 and Prospect Park Well 2 shall apply and remain in effect for the remaining life under

this Amended Permit. In addition, Prospect Park Well 1 and Prospect Park Well 2 may **not be operated simultaneously** after May 31, 2010.

- 3.6 From **June 1, 2010 to September 30, 2010** and for each identical time period in ensuing years over the life of this Amended Permit the maximum combined daily takings from Prospect Park Well 1 and Prospect Park Well 2 shall be limited to **2273 m³ / day**.
- 3.7 From **October 1, 2010 to May 31, 2011** and for each identical time period in ensuing years over the life of this Amended Permit the maximum combined daily takings from Prospect Park Well 1 and Prospect Park Well 2 shall be limited to **1137 m³ / day**.
- 3.8 In the event of an emergency within the Acton Municipal Water Supply System, the limitations imposed by **Conditions 3.6 or 3.7** may be temporarily suspended to allow the Permit Holder to increase the combined daily taking takings from Prospect Park Well 1 and Prospect Park Well 2 to a maximum of **3456 m³ /day** for up to **20 non consecutive days** or **4546 m³ /day** for **5 consecutive days** in any one year. To accommodate these temporary increases after June 1, 2010, contrary to Condition 3.5 simultaneous pumping of the two wells is permissible for the duration of the emergency taking. The Permit Holder shall notify the Director and DW Inspector in writing as reasonably practical in the event of an emergency and shall include details as to the action that has or will be taken to correct the problem.
- 3.9 With respect to Davidson Wells 1 and 2 as described in Table A, the Permit Holder shall take such action that will maintain a sufficient flow in the stream on the Acri property to provide water for the rearing of trout in at least three smaller ponds, and only when the ponds are used for this purpose, provided that at no time the Permit Holder be required to maintain a flow in the stream in excess of **304.5 L / min.** during the period from May 1 to October 31 and **227 L / min.** during the period from November 1 to April 30.

4. Monitoring

- 4.1 The Permit Holder shall install and maintain flow meters in each of the wells listed in Table A. Using the Region's SCADA System, the Permit Holder shall maintain a record of the daily rate, hours of operation and total volumes pumped from each production well in the system. All records shall be available for inspection by a Provincial Officer upon his or her request.
- 4.2 With respect to the proposed test of the Prospect Park well field, the Permit Holder shall implement and follow the water level quality and quantity program proposed in the Dillon Consulting Limited plan dated August 11, 2009. A complete list of monitoring sites and the method of monitoring for each site shall be provided to the Director in advance of the start of the proposed test. The list shall include the past period of monitoring and a projection of future service for each site once the test has been completed.
- 4.3 With regard to the monitoring of water levels at the Davidson Well site, **TW 1/85**

and **TW 2/85** shall be equipped with continuous water level recorders or linked to the SCADA System to provide a record of on going water levels at this location.

4.4 With regard to the monitoring of water levels at the 4th Line Well site, **OW 4** and **TW 1/84** shall be equipped with continuous water level recorders or linked to the SCADA System to provide a record of on going water levels at this location.

4.5 All data collected under Conditions 4.2, 4.3 and 4.4 shall be available to Ministry staff electronically upon request.

4.6 Any request for a permanent increase from the Prospect Park Wells beyond June 1, 2010 or the future renewal of this Amended Permit must be accompanied by a report by a Qualified Person (P.Geo. or equivalent) detailing the results of the proposed test of the Prospect Park wells and the conclusions reached from the assessment of the data collected.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 The Permit Holder shall provide public notice of the proposed pumping of Prospect Park Well 1 and Prospect park Well 2 at the higher daily amount in advance of the start of the test program. That notice shall include a contact telephone number for any complaints that may be related to the pumping activity. The Permit Holder shall have a plan of action in place prior to the test period to investigate and implement corrective action to resolve the complaint where necessary. The Permit Holder shall maintain a complete log of all calls received listing the time and date and the action taken to resolve the issue. This information shall be available to a

Provincial Officer upon his or her request.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.
2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.
3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, as amended, provides that the Notice requiring the hearing shall state:

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

*The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto ON
M5G 1E5*

AND

*The Director, Section 34
Ministry of the Environment
8th Floor
5775 Yonge St
Toronto ON M2M 4J1
Fax: (416)325-6347*

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600

by fax at (416) 314-4506

by e-mail at www.ert.gov.on.ca

This Permit cancels and replaces Permit Number 7672-6BFJYL, issued on 2005/05/13.

Dated at Toronto this 16th day of October, 2009.

Christopher Munro
Director, Section 34
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 6281-7WFQB3, dated October 16, 2009.

1. Permit amendment application signed by John McIntosh on August 26, 2009.
2. Dillon Consulting Limited report entitled " Acton Water Supply System Prospect Park Well Field 2009 Pumping Test Work Plan" dated August 11, 2009 submitted in support of this application.