

**ENVIRONMENTAL COMPLIANCE APPROVAL (ECA)  
For a Municipal Stormwater Management System**

**ECA Number: 0X0-SWM601**

**Issue Number: 1**

Pursuant to the *Environmental Protection Act*, R.S.O 1990, c. E. 19 (*Environmental Protection Act*), and the regulations made thereunder and subject to the limitations thereof, this Municipal Stormwater Management System to:

**#{OWNERNAME}**

**#{OWNERUNITID}**

**#{OWNERSTNO}#{OWNERSUFFIX} #{OWNERSTREET} #{OWNERSTTYPE}**

**#{OWNERSTDIR}**

**#{OWNERPBOX}**

**#{OWNERMUNICIPALITY}, #{OWNERPROV}, #{OWNERPCODE}**

For the following Municipal Stormwater Management System:

**#{SYSTEMNAME}**

This Municipal Stormwater Management System ECA includes the following:

<b>Schedule</b>	<b>Description</b>
Schedule A	System Information
Schedule B	Municipal Stormwater Management System Description
Schedule C	All documents issued as Schedule C to this Environmental Compliance Approval which authorize alterations to the System
Schedule D	General
Schedule E	Operating Conditions
Schedule F	Residue Management
Appendix A	Stormwater Management Criteria

DATED at TORONTO this #{DAY} day of #{MONTH}, #{YEAR}

Signature

#{CURRENTUSER}, P.Eng.

Director, Part II.1, *Environmental Protection Act*

**Schedule A: System Information**

System Owner	\${OWNERNAME}
ECA Number	[ECA No]
System Name	\${SYSTEMNAME}
ECA Effective Date	\${MONTH} \${DAY}, \${YEAR}

**1.0 ECA Information**

ECA Issue Date	\${ISSUEDATE}
ECA Effective Date	Date
Application for ECA Renewal Date	\${APPRENEWAL}

- 1.1 The Owner shall, within thirty (30) calendar days of issuance of this ECA, submit a Municipal Wastewater System Profile Information Form.

**2.0 Related Documents****2.1 Detailed Description of System**

Document Title	Version
File Name	

**2.2 Other Documents**

Document Title	Version
Design Criteria for Sanitary Sewers, Storm Sewers and Forcemains for future Alterations Authorized under ECA	Most recent version

**3.0 Stormwater Master Plan and Asset Management Placeholder**

Asset Management Plan	Most recent version
Stormwater Master Plan	Most recent version
Watershed/Subwatershed Plan(s)	Most recent version

**4.0 Operating Authority**

System or Operational Subsystems	Operating Authority
[Operational System/Subsystem Name]	[O.A. Name]

**Schedule B: Municipal Stormwater Management System Description**

System Owner	\${OWNERNAME}
ECA Number	[ECA No]
System Name	\${SYSTEMNAME}
ECA Effective Date	\${MONTH} \${DAY}, \${YEAR}

**1.0 System Description**

- 1.1** The following is a summary description of the Works comprising the above Municipal Stormwater Management System:

**Overview**

The Municipal Stormwater Management (SWM) System serving the City of Blank's drainage area, is a separate system for stormwater (i.e. designed not to convey sanitary sewage, combined sewage) within the Lake Something and the Blank watersheds. The Municipal SWM System consists of storm sewers, culverts, ditches, Stormwater Management Facilities and outlets.

This ECA covers the entire Municipal SWM System owned and operated by the City of Blank. This ECA does not cover industrial or commercially owned sewage works.

- 1.2** The main components of the Municipal SWM System include the Works described below:

1.2.1 Municipal Stormwater Management System included in Table 1:

**Table 1. Municipal Stormwater Management System**

Plan / Files	Revision Date
Stormwater Infrastructure Map	

- 1.2.2 Classification of the Municipal SWM System at the date of issue of this ECA:

**Table 2. Stormwater Collection System by Diameter**

System Type	Pipe Diameter (mm)	Length (km)	System Totals (km)
Storm Sewers	0-250	8	
Storm Sewers	300-500	217	
Storm Sewers	525-1050	199	
Storm Sewers	>=1200	39	
Total Storm Sewers			463
Ditches / Swales	NA	144	250
Total System Length (km)			713

**Table 3. Stormwater Management Facilities by Type**

System Type	Basic Treatment for Suspended Solids*	Normal Treatment for Suspended Solids *	Enhanced Treatment for Suspended Solids *	System Totals
Oil and Grit Separators				58
Stormwater Management Ponds - Dry	10			10
Stormwater Management Ponds – Wet (includes wetlands, hybrids)	10	10	10	30
LID Facilities				2
Pumping Stations				
Total Number of Facilities				100

\*Basic, normal, and enhanced treatment correspond to 60%, 70% and 80% suspended solids removal on an annual average long-term basis, respectively.

1.2.3 Municipal SWM System Works that have been added, modified, replaced or extended according to the provisions of this ECA.

**1.3** The information contained in the Stormwater Infrastructure Map under Table 1 shall include, but not be limited to, the following minimum information:

1.3.1 Existing municipally owned stormwater Works, including but not limited to storm sewers, ditches, swales, outlets, oil and grit separators, LID and end of pipe control, at the date of issuance of this ECA

1.3.2 Works that have been added, modified, replaced or extended in accordance to Schedules C and D of this ECA

- 1.3.3 Identification of the main tributaries and receiving water bodies to which the Works discharge to
- 1.3.4 Asset IDs for each of stormwater Works under 1.3.2 and 1.3.3
- 1.3.5 Delineation of municipal, watershed and subwatershed boundaries, as available
- 1.3.6 Identification of the storm sewersheds for each outlet
- 1.3.7 Identification of any source protection vulnerable areas
- 1.3.8 Identify any stormwater works that receive sanitary overflows
- 1.4** The Stormwater Infrastructure Map under Table 1 can be provided electronically as a .pdf or AutoCAD file, or, as an online GIS-based database with ministry access.
- 1.5** In addition to condition 1.3, the following minimum information for Stormwater Management Facilities must be provided, either in electronic form as an Appendix to this ECA, or as part of the online GIS-based database referenced in condition 1.4:

**\*Unique Identifier\* \*Type of Facility\* (e.g. 201 – SWM Wet Pond)**

Location	e.g. UTM coordinates or physical address
Watershed/Subwatershed	e.g. Lake Simcoe/Bunkers Creek
Receiver of discharge	e.g. Surface discharge to “BLANK” creek
Outlet location	e.g. UTM coordinates
Catchment Area	e.g. 10 ha
Level of Treatment for suspended solids	e.g. Level 1/2/3 60/70/80% Long-term suspended solids removal
Treatment for other contaminants, as required	e.g. phosphorus, water temperature
Level of Volume control	e.g. Local 90 <sup>th</sup> percentile rainfall event or local water balance (X mm)
Design Storm	e.g. Quantity: X-yr storm; Quality: X-yr storm
Reference ECA(s)	
Reference Works as part of treatment train	e.g. 102-LID Bioretention Facility
Brief Description	*Include model number if equipment is used (e.g. OGS/filters)*
Schedule C Works	Y/N

**Schedule C: Authorization to alter the Municipal Stormwater Management System**

System Owner	\${OWNERNAME}
ECA Number	[ECA No]
System Name	\${SYSTEMNAME}
ECA Effective Date	\${MONTH} \${DAY}, \${YEAR}

\*Placeholder for Director approved alterations (via direct submission applications) to the system subject to an ECA application submission. Schedule Cs are numbered forms with a description of the works to be constructed. Once constructed, a Director notification form is submitted and the Schedule C form is revoked and incorporated into Schedule B upon commission. Below is what would be seen in subsequent renewals of the ECA. The first issuance of this ECA will have the below section blank.\*

**1.0 General**

**1.1** Table 4 provides a reference list of all documents to be incorporated into Schedule C that have been issued as of the date that this ECA was issued.

1.1.1 Table 4 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 ECA has been issued is considered part of this ECA.

**Table 4: Schedule C Documents**

<b>Column 1 Issue #</b>	<b>Column 2 Issued Date</b>	<b>Column 3 Description</b>	<b>Column 4 Status</b>	<b>Column 5 DN#</b>

**1.2** For each document described in columns 1, 2 and 3 of **Table 5**, 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 ECA have been updated to reflect the altered Works. These 'Archived' Schedule C documents remain as a record of the alterations.

## Schedule D: General

System Owner	\${OWNERNAME}
ECA Number	[ECA No]
System Name	\${SYSTEMNAME}
ECA Effective Date	\${MONTH} \${DAY}, \${YEAR}

## 1.0 Definitions

1.1 For the purpose of this environmental compliance approval, the following definitions apply:

**“Appurtenance”** includes a valve, valve chamber, flow meter, maintenance access point, maintenance hole, manhole, grate, catch basin, catch basin lead, ditch inlet chamber or other minor accessory part of a sewer;

**"Class Environmental Assessment Project"** means an Undertaking that does not require any further approval under the EAA if the planning process set out in the class environmental assessment document is followed and successfully completed.

**"CWA"** means the Clean Water Act, R.S.O. 2006, c.22, as amended;

**“Deemed Impairment”** means same as in OWRA;

**"Director"** means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

**"District Manager"** means the District Manager or a designated representative of the appropriate local office of the Ministry, where the Works are geographically located; and

**"EAA"** means the Environmental Assessment Act, R.S.O. 1990, c. E.18, as amended;

**“ECA”** means an Environmental Compliance Approval;

**"EPA"** means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;

**"Licensed Engineer Practitioner”** means a person who holds a licence, limited licence or temporary licence under the Professional Engineers Act;

**"LID"** refers to Low Impact Development and generally means lot level and conveyance control measures that use or mimic natural processes to manage stormwater close to where rain falls and snow melts to reduce runoff and mitigate stormwater pollution;

**"Minister"** means the Minister of the Environment, Conservation and Parks;

**"Ministry"** means the ministry of the government of Ontario responsible for the EPA, CWA and OWRA and includes all officials, employees or other persons acting on its behalf;

**"MNRF"** means the Ministry of Natural Resources and Forestry of the government of Ontario and includes all officials, employees or other persons acting on its behalf;

**"Municipal Drain"** means a municipal drain under the *Drainage Act*;

**"Municipal Drainage Engineer's Report"** means an approved report signed by a municipal drainage engineer and approved in writing by municipal council;

**"Municipal Stormwater Management System"** means a stormwater management system or part of a municipal stormwater management system,

- a) that is owned by a municipality or by a municipal service board established under the *Municipal Act, 2001* or a city board established under the *City of Toronto Act, 2006*;
- b) that is owned by a corporation established under sections 9, 10 and 11 of the *Municipal Act, 2001* in accordance with section 203 of that Act or under sections 7 and 8 of the *City of Toronto Act, 2006* in accordance with sections 148 and 154 of that Act;
- c) that does not include municipally owned or operated waste disposal sites as defined under the EPA, and snow dump/melt facilities;
- d) that does not include industrial or commercial sewage works.

**"Natural Environment"** has the same meaning as the *Environmental Protection Act*;

**"Operating Authority"** means, in respect of a municipal sewage system, the person or entity that is given responsibility by the Owner for the operation, management, maintenance or alteration of the system;

**"Owner"** means the [Municipality or Municipal Services Board], and includes its successors and assignees;

**"OWRA"** means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended;



**"Part II Order"** means an order issued by the Minister that makes a Class Environmental Assessment Project an Undertaking that is subject to Part II of the EAA;

**"Prescribed Persons"** means persons prescribed as per O. Reg. 208/19;

**"Qualified Person"** means the persons who have obtained the appropriate education and training and have demonstrated experience and expertise in the areas relating to the work required to be carried out by this ECA.

**"Sewage"** means drainage, storm water, commercial wastes and industrial wastes and such other matter or substance as is specified by the regulations;

**"Sewer"** means any system of pipes, drains and appurtenances used for the collection or transmission of sewage, but does not include plumbing to which the *Building Code Act, 1992* applies or a pumping facility;

**"Significant Drinking Water Threat"** has the same meaning as in the CWA;

**"Significant Threat Policy(ies)"** has the same meaning as in the CWA;

**"Source Protection Authority"** has the same meaning as in the CWA;

**"Source Protection Plan"** means a drinking water source protection plan prepared under the CWA;

**"Storm Sewer"** means pipes that collect and convey, but not exfiltrate or lose, runoff resulting from precipitation and snowmelt;

**"Stormwater"** means rainwater runoff, water runoff from roofs, snowmelt and surface runoff

**"Stormwater Management Facility"** means a facility for the treatment, retention, infiltration or control of stormwater;

**"Stormwater Management System"** means Works for the collection, treatment, and disposal of stormwater but does not include plumbing to which the *Building Code Act, 1992* applies or a pumping facility;

**"Third Pipe System"**

**"Undertaking"** has the same meaning as in the EAA;

**"Works"** means the sewage works described in the Owner's application, this ECA, and the future alterations authorized under Schedules C and D.

## 2.0 Applicability

- 2.1 In addition to any other requirements, the Municipal Stormwater Management System identified above shall be altered and operated in accordance with the conditions of this ECA.
- 2.2 No alteration to the works may be undertaken until those works has been documented under Schedule B.
- 2.3 The issuance of this ECA does not negate the requirements of other regulatory bodies, which includes but is not limited to, MNRF and the local Conservation Authority.

**3.0 Alterations to the Municipal Stormwater Management System**

- 3.1 Any document issued by the Director as a Schedule C to this ECA shall provide authority to alter the Municipal Stormwater Management System in accordance, where applicable, with the conditions of this ECA.
- 3.2 All Schedule C documents issued by the Director for the Municipal Stormwater Management System shall form part of this ECA.
- 3.3 Any addition, modification, replacement or extension of the Municipal Stormwater Management System authorized through Schedule D of this ECA is to be accompanied by an engineering assessment and technical information as outlined in O. Reg. 255/11 and the ministry's publication titled "Guide to applying for an environmental compliance approval", as amended.
- 3.4 The Owner shall notify the Director through the Director Notification form within thirty (30) days of the placing into service or the completion of any addition, modification, replacement or extension of the Municipal Stormwater Management System which had been authorized through:
  - 3.4.1 Schedule D to this ECA which would require an alteration of the description of a Municipal Stormwater Management System component described in Schedule B of this Environmental Compliance Approval;
  - 3.4.2 Any Works approved under Schedule C to this ECA respecting Works other than storm sewers; or
  - 3.4.3 Any other approval issued and Works not constructed prior to the issue date of this ECA.
- 3.5 For greater certainty, the notification requirements set out in condition 3.4 do not apply to any addition, modification, replacement or extension in respect of the Municipal Stormwater Management System which:
  - 3.5.1 Is exempt from subsection 53 of the OWRA or by Ontario Regulation (O. Reg.). 525/98;

[ECA No]

**Schedule D**

**\$(MONTH) \$(DAY), \$(YEAR)**

3.5.2 Constitutes routine maintenance of the Municipal Stormwater Management System; or

3.5.3 Is a storm sewer authorized by condition 4.1 of Schedule D of this ECA.

**3.6** The Owner shall notify the Director through the Director Notification form within ninety (90) days of the discovery of existing works not documented in Schedule B, or if changes in the description are made of existing Works in Schedule B.

**3.7** The Owner shall notify the Prescribed Persons of any part of the Stormwater Management System that is prescribed as a Municipal Stormwater Management System as defined under O. Reg. 208/19 of the requirements of this ECA.

**3.8** For greater certainty, any alteration to the Municipal Stormwater Management System made in accordance with this ECA may only be carried out after other legal obligations have been complied with including those arising from the *Environmental Assessment Act, 1990; Niagara Escarpment Planning and Development Act, 1990; Oak Ridges Moraine Conservation Act, 2001, Places to Grow Act, 2005; Lake Simcoe Protection Act (2008) and Greenbelt Act, 2005, Endangered Species Act, 2007.*

**4.0 Authorizations of Future Alterations for Storm Sewers, Ditches or Culverts - Additions, Modifications, Replacements and Extensions**

**4.1** The Municipal Stormwater Management System may be altered by adding, modifying, replacing or extending a storm sewer, ditch or culvert within the Municipal Stormwater Management System subject to the following conditions:

4.1.1 The design of the storm sewer, ditch and culvert addition, modification, replacement or extension:

- a) Has been prepared by a Licensed Engineer Practitioner;
- b) Has been designed only to collect and transmit stormwater;
- c) Has not been designed to collect or treat any sanitary sewage;
- d) Has not been designed to collect, store, treat, control or manage groundwater;
- e) Satisfies the design criteria set out in the Ministry's publication "Design Criteria for Sanitary Sewers, Storm Sewers and Forcemains dated November 2019" as amended from time to time; and

- f) Satisfies the standards as set in OPSS and OPSD as applicable to ditches and culverts;
  - g) Is consistent with or otherwise addresses the design objectives contained within the Ministry of the Environment, Conservation and Parks publication “Design Guidelines for Sewage Works, 2008”, and has been planned, designed and built to be consistent with the “Stormwater Management Planning and Design Guidance Manual, 2003” as amended from time to time.
  - h) Is part of a stormwater treatment train approach that satisfies the requirements outlined in Appendix A – Stormwater Management Criteria
  - i) Includes design considerations to protect sources of drinking water, as may be included in a Standard Operating Policy for Sewage Works and Implementing Source Protection Policies developed by the Ministry, or Policy summaries published on the Environmental Registry (Posting #012-2968), as amended.
- 4.1.2 The storm sewer, ditch or culvert addition, modification, replacement or extension will not adversely affect the collection system’s ability to maintain a gravity flow without surcharging any manholes, provide smooth flow transition to existing gravity storm sewers.
- 4.1.3 Any alteration of the Municipal Stormwater Management System by adding, modifying, replacing or extending a storm sewer, ditch or culvert, under condition 4.1, shall not result in:
- a) Deemed impairment to the natural environment within the Municipal Stormwater Management System or downstream; or
  - b) An adverse impact on the approved effluent quality and quantity of downstream stormwater treatment facilities.
- 4.1.4 The storm sewer, ditch or culvert addition, modification, replacement or extension is wholly located within the municipal boundary over which the Owner has jurisdiction.
- 4.1.5 The Owner of the Municipal Stormwater Management System consents in writing to the storm sewer, ditch or culvert addition, modification, replacement or extension.
- 4.1.6 A Licensed Engineer Practitioner has verified in writing that the storm sewer, ditch or culvert addition, modification, replacement or extension meets the requirements of condition 4.1.1.

- 4.1.7 The Owner has verified in writing that the storm sewer, ditch or culvert addition, modification, replacement or extension has complied with the **inspection and testing requirements** in the Ministry publication “Design Criteria for Sanitary Sewers, Storm Sewers and Force mains” dated November 2019, as amended.
- 4.1.8 The Owner of the Municipal Stormwater Management System has verified in writing that the storm sewer, ditch or culvert addition, modification, replacement or extension meets the requirements of conditions 4.1.2 to 4.1.7.
- 4.2** The authorization for the addition, modification, replacement or extension of a storm sewer, ditch, or culvert provided for in condition 4.1 does not include the addition, modification, replacement or extension of a storm sewer that:
- 4.2.1 Passes under or through a body of surface water, unless trenchless construction methods are used;
- 4.2.2 Has a nominal diameter greater than 2,400 mm, or equivalent sizing;
- 4.2.3 Is a combined sewer; or
- 4.2.4 Is designed at any time to convey, store, or control sanitary sewage;
- 4.2.5 Converts rural road cross section ditches to curb, gutter and storm sewers if the **level of runoff is increased and no water quality treatment is planned or demonstrated to be achieved.**
- 4.2.6 Discharges to a Municipal Drain without written approval by the municipality and an engineer’s drainage report in accordance with the Drainage Act.
- 4.2.7 Establishes a new outlet with direct discharge into the environment without treatment and monitoring in accordance with this ECA
- 4.2.8 Increases stormwater flow or hydraulic capacity of an existing storm sewer or ditch without providing treatment in accordance with this ECA
- 4.2.9 Connects to another Municipal Stormwater Management System, unless:
- a) Prior to construction, the Owner of the system seeking the connection obtains written consent from the Owner or Owner’s delegate of the municipal system being connected to; and
- b) The Owner of the Municipal Stormwater Management System seeking the connection retains a copy of the written consent from the Owner or Owner’s delegate of the Municipal

Stormwater Management System being connected to as part of the record that is recorded and retained under condition 4.3.

- 4.3** The verifications required in conditions 4.1.6, 4.1.7 and 4.1.8 shall be:
- 4.3.1 Recorded on "Form SW1 - Record of Storm Sewers Authorized as a Future Alteration", as published by the Ministry of the Environment, Conservation and Parks, as amended, prior to the storm sewer, ditch or culvert addition, modification, replacement or extension being placed into service; and
- 4.3.2 Retained for a period of ten (10) years by the Owner.
- 4.4** For greater certainty, the verification requirements set out in condition 4.3 do not apply to any addition, modification, replacement or extension in respect of the Municipal Stormwater Management System which:
- 4.4.1 Is exempt from subsection 53(6) of the OWRA or O. Reg. 525/98; or
- 4.4.2 Constitutes routine maintenance of the Municipal Stormwater Management System-
- 4.5** The document(s) or file(s) referenced in Table 1 of Schedule B of this ECA that sets out storm sewers shall be retained by the Owner and shall be updated, as per the requirements listed in Schedule B, to include storm sewer, ditch or culvert additions, modifications, replacements and extensions within 12 months of the addition, modification, replacement or extension.
- 5.0 Stormwater Management Facility Additions, Modifications, Replacement and Extensions**
- 5.1** Stormwater Management Facilities in the Municipal Stormwater Management System may be altered by adding, modifying or replacing or extending the following components:
- 5.1.1 Rooftop storage
- 5.1.2 Parking lot storage
- 5.1.3 Superpipe storage
- 5.1.4 Reduced lot grading
- 5.1.5 Roof leader to ponding area
- 5.1.6 Roof leader to soakaway pit
- 5.1.7 Infiltration trench

5.1.8 Grassed swales

5.1.9 Pervious pipes

5.1.10 Pervious catchbasins

5.1.11 Vegetated filter strips

5.1.12 Natural buffer strips

5.1.13 Rooftop gardens

5.1.14 Wet pond

5.1.15 Artificial wetland

5.1.16 Dry pond

5.1.17 Infiltration basin

5.1.18 Filters

5.1.19 Oil/grit separators

5.1.20 LID that relies on one or more of the following mechanisms to achieve treatment and control:

- a) evapotranspiration,
- b) infiltration into the ground,
- c) rainwater harvesting and reuse of the stormwater at the site where it was generated but excludes distribution of stormwater on the surface of the ground for the purpose of disposing of the stormwater.
- d) filtration

5.1.21 Any other Stormwater Management Facilities accepted by the Director.

**5.2** Any alteration of the Stormwater Management Facilities made under condition 5.1 is subject to the following conditions:

5.2.1 The design of the alteration:

- a) Has been prepared by a Licensed Engineer Practitioner;
- b) Has been designed to collect, receive, treat or control only stormwater and has not been designed to collect, receive, treat or control sanitary sewage;

- c) Is planned, designed and built to be consistent with the "Stormwater Management Planning and Design Guidance Manual, 2003" as amended.
- d) Is part of a stormwater treatment train approach that satisfies the requirements outlined in Appendix A – Stormwater Management Criteria
- e) Includes design considerations to protect sources of drinking water, as may be included in a Standard Operating Policy for Sewage Works and Implementing Source Protection Policies developed by the Ministry, or Policy summaries published on the Environmental Registry (Posting #012-2968), as amended.

5.2.2 Any alteration of the Stormwater Management Facilities made under condition 5.1 shall not result in:

- a) Deemed impairment to the natural environment within the Municipal Stormwater Management System, or upstream or downstream of the system; or
- b) An adverse impact on the approved effluent quality and quantity of stormwater treatment facilities.

5.2.3 Any alteration of the Stormwater Management Facilities made under condition 5.1 can be designed to incorporate co-benefits and shall not diminish functionality or efficiency of the Stormwater Management Facility.

5.2.4 Any new outlets established with the alteration under condition 5.1 must be undertaken in accordance with condition 7.0 of Schedule D.

5.2.5 Any new oil/grit separators established with the alteration in condition 5.1 shall be:

- a) Credited a maximum of 50% suspended solids removal in achieving the water quality criteria specified in Appendix A.
- b) In accordance with the City of \_\_\_\_\_'s Manufactured Treatment Device Guideline, dated X, as amended.

5.2.6 When it is necessary to use privately owned stormwater works in the stormwater treatment train to achieve Appendix A criteria as per condition 5.2.1.d, the following conditions apply:

- a) The Owner, through legal instruments such as the Drainage Act, has the right to access, operate and maintain the private stormwater works;



- b) The Owner ensures on-going operation and maintenance of the private stormwater works; and
  - c) The private stormwater works have obtained separate approval under the OWRA, as required.
- 5.2.7 The Stormwater Management Facility alteration is wholly located within the municipal boundary over which the Owner has jurisdiction.
- 5.2.8 The Owner of the Municipal Stormwater Management System consents in writing to the alteration.
- 5.2.9 A Licensed Engineer Practitioner shall verify in writing that any alterations to the Municipal Stormwater Management System under condition 5.1 have met the requirements of the conditions listed in condition 5.2.1.
- 5.2.10 The Owner of the Municipal Stormwater Management System has verified in writing that the Stormwater Management Facility alteration meets the requirements of conditions 5.2.2 to 5.2.9.
- 5.3** The authorization for the Stormwater Management Facility alterations provided for in condition 5.1 does not include an alteration that:
- 5.3.1 Establishes a regional stormwater management end-of-pipe control facility;
  - 5.3.2 Discharges to a Municipal Drain without written approval by the municipality and an engineer's drainage report in accordance with the Drainage Act;
  - 5.3.3 Establishes a new outlet with direct discharge into the environment without treatment and monitoring in accordance with this ECA; or
  - 5.3.4 Services a drainage area greater than 15 ha.
- 5.4** Any alteration of the Stormwater Management Facility made under conditions 5.1, shall be made in accordance with the requirements outlined in Appendix A – Stormwater Management Criteria.
- 5.5** Any alteration to LID or end-of-pipe Stormwater Management Facilities made under condition 5.1 shall be accompanied by a land survey before operation of the alteration.
- 5.6** Prior to construction of the alteration of the Stormwater Management Facility, the verifications and documentation required in conditions 5.2.9 and 5.2.10 shall be:

- 5.6.1 Recorded on “Form SW2 – Record of Modifications or Replacements to the Stormwater System”, as published by the Ministry of the Environment, Conservation and Parks, as amended; and
- 5.6.2 Retained for a period of ten (10) years by the Owner.
- 5.7** For greater certainty, the verification requirements set out in condition 5.6 does not apply to any addition, modification, replacement or removal in respect of the Municipal Stormwater Management System which:
- 5.7.1 Is exempt from the requirements of the OWRA or O. Reg 525/98; or
- 5.7.2 Constitutes routine maintenance or repair of the Municipal Stormwater Management System.
- 5.8** The Owner shall update any drawings maintained for the Municipal Stormwater Management System to reflect the alteration of the Works, where applicable.
- 5.9** The document(s) referenced in Table 1 of Schedule B of this ECA that sets out Stormwater Management Facilities shall be retained by the Owner and shall be updated, as per the requirements listed in Schedule B, to include Municipal Stormwater Management System alterations made under condition 5.1 within 12 months of the alteration.
- 6.0 Third Pipe Collection System Additions, Modifications, Replacements and Extensions**
- 6.1** The Owner may add, modify, replace or extend, and operate part of a municipal third pipe collection system to collect foundation drain, groundwater and roof leaders where:
- 6.1.1 The design of the third pipe addition, modification, replacement or extension:
- a) Has been prepared by a Licensed Engineer Practitioner;
  - b) Has been designed only to collect, transmit, reuse and/or treat only stormwater, foundation drainage, and groundwater, and has not been designed to collect or treat sanitary sewage;
  - c) Has been designed to primarily function for the reuse of stormwater, foundation drainage and/or groundwater, and only discharge to a storm or sanitary sewer if there is excess volume that cannot be reused.
  - d) Has been designed such that the alteration does not surcharge the storm sewers;

- e) Will not result in an exceedance of the uncommitted reserve capacity of the Municipal Stormwater Management System if connecting to the Municipal Stormwater Management System;
  - f) Satisfies the local municipal sewer use by-law, as applicable; and
  - g) Satisfies the design criteria set out in the Ministry of the Environment, Conservation and Parks publication “Design Criteria for Sanitary Sewers, Storm Sewers and Forcemains dated November 2019” as amended from time to time.
- 6.1.2 The third pipe addition, modification, replacement or extension is not located on a contaminated site, or where natural occurring conditions result in contaminated discharge, or where the site receives contaminated groundwater or stormwater from another site, unless the discharge being received has been remediated or treated prior to acceptance by the third pipe system.
- 6.1.3 The Owner has undertaken a site assessment for water quantity, water quality and hydrogeological site conditions regarding the municipal third pipe addition, modification, replacement or extension.
- 6.1.4 Any new outlets established with the alteration in 6.1 must be undertaken in accordance with condition 7.0 of Schedule D.
- 6.1.5 The third pipe addition, modification, replacement or extension is wholly located within the municipal boundary over which the Owner has jurisdiction.
- 6.1.6 The Owner of the Municipal Stormwater Management System consents in writing to the third pipe addition, modification, replacement or extension.
- 6.1.7 A Licensed Engineer Practitioner has verified in writing that the third pipe addition, modification, replacement or extension meets the requirements of condition 6.1.1.
- 6.1.8 The Owner of the Municipal Stormwater Management System has verified in writing that the third pipe addition, modification, replacement or extension meets the requirements of conditions 6.1.2 to 6.1.7.
- 6.2** Prior to construction of the alteration of the third pipe addition, modification, replacement or extension, the verifications and documentation required in conditions 6.1.7 and 6.1.8 shall be:

6.2.1 Recorded on “Form SW3 – Record of Third Pipe System Alterations”, as published by the Ministry of the Environment, Conservation and Parks, as amended; and

6.2.2 Retained for a period of ten (10) years by the Owner.

**6.3** For greater certainty, the verification requirements set out in condition 6.2 does not apply to any addition, modification, replacement or extension in respect of the third pipe system which:

6.3.1 Is exempt from the requirements of the OWRA or O. Reg 525/98; or

6.3.2 Constitutes routine maintenance or repair of the Municipal Stormwater Management System.

**6.4** The Owner shall update any drawings maintained for the Municipal Stormwater Management System to reflect the alteration of the Works, where applicable.

**6.5** The document(s) referenced in Table 1 of Schedule B of this ECA that sets out Third Pipe Collection Systems shall be retained by the Owner and shall be updated, as per the requirements listed in Schedule B, to include Municipal Stormwater Management System alterations made under condition 5.1 within 12 months of the alteration.

**7.0 Outlets**

**7.1** Outlets established in Conditions 3.0, 4.0, 5.0 and 6.0 of Schedule D shall not discharge to land not owned by the municipality without the expressed written consent of the owner(s) of such private land(s) that the Works will discharge to, unless the discharge is within the existing pre-development flows or water balance.

**8.0 Previously Approved Works**

**8.1** The Owner may add, modify, replace or extend, and operate part of a Municipal Stormwater Management System if permitted through a previously issued approval and the approval was revoked by virtue of the issuance of this ECA.

**Schedule E: Operating Conditions**

System Owner	\${OWNERNAME}
ECA Number	[ECA No]
System Name	\${SYSTEMNAME}
ECA Effective Date	\${MONTH} \${DAY}, \${YEAR}

**1.0 General Conditions**

- 1.1** The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Municipal Stormwater Management System is notified of this ECA and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
- 1.2** Except as otherwise provided by these conditions, the Owner and/or Prescribed Persons shall design, build, install, operate and maintain the Works in accordance with the description given in this ECA and the application for approval of the Works.
- 1.3** Where there is a conflict between a provision of any document in any schedule referred to in this ECA and the conditions of this ECA, the conditions in this ECA shall take precedence, and where there is a conflict between the documents in any schedule, the document bearing the most recent date shall prevail.
- 1.4** The conditions of this ECA are severable. If any condition of this ECA, or the application of any requirement of this ECA to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this ECA shall not be affected thereby.

**2.0 General Operations**

- 2.1** The Owner shall ensure that, at all times, the municipal stormwater system and the related equipment and appurtenances used to achieve compliance with this ECA are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of this ECA and the EPA, OWRA, CWA and regulations, adequate laboratory services, process controls and alarms and the use of process chemicals and other substances used in the municipal stormwater system.
- 2.2** The Owner shall construct, operate and maintain the Works with the objective that the effluent from the Works is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen, foam or discoloration on the receiving waters.

- 2.3** The Owner shall ensure that the Stormwater Management Facility shall be operated and maintained to function as a Stormwater Management Facility. Co-benefits and additional functions may be considered and achieved to the extent possible, but not if there is significantly diminished functionality or efficiency as a Stormwater Management Facility.
- 2.4** The Owner shall ensure that any storm sewers or ditches authorized under Schedule D are not placed into operation until the associated Stormwater Management Facilities to provide treatment, as per Schedule D, Condition 4.1.1.h, are constructed and operated.

### **3.0 Duties of Owners and Operating Authorities**

- 3.1** Every Owner of this system, and, if an operating authority is responsible for the operation of the system, the operating authority for the system shall ensure the following:
- 3.1.1 That, at all times in which it is in service, the Municipal Stormwater Management System,
- a) is operated in accordance with the requirements under the OWRA and EPA.
  - b) is maintained in a state of good repair, and
  - c) is operated to convey, collect, receive, store, treat, or control stormwater and not sanitary sewage.
- 3.1.2 That the municipal stormwater system is operated by persons who are familiar with the requirements of this ECA.
- 3.1.3 That all sampling, testing and monitoring requirements under the OWRA and EPA that relate to the Municipal Stormwater Management System are complied with.
- 3.1.4 That the persons who carry out functions in relation to the Municipal Stormwater Management System comply with such reporting requirements as may be prescribed or that are required by the conditions in this ECA issued or granted for the system under the EPA.
- 3.1.5 The Owner shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the Works do not constitute a safety or health hazard to the general public.
- 3.1.6 Where a Stormwater Management Facility ceases to function as a Stormwater Management Facility, whether by intent, accident or otherwise, the Owner will develop a workplan with local community notification, for rehabilitating the Stormwater Management Facility to

proper function in a reasonable time, and any actions that will be taken to prevent reoccurrences and implement the workplan

## 4.0 Operations and Maintenance

### 4.1 Inspection

- 4.1.1 The Owner shall inspect the Stormwater Management Facilities authorized in **Schedule D, Section 5** at a minimum of once a year and, clean and maintain the Works to prevent the excessive build-up of sediments, oil and grit and/or vegetation to ensure the Works perform as designed
- 4.1.2 The Owner shall inspect the Stormwater Management Facilities, and **any outfalls that discharge** to a receiver, in Schedule B within three (3) years and, clean and maintain the Works to prevent the excessive build-up of sediments, oil and grit and/or vegetation to ensure the Works perform as designed.
- 4.1.3 **The Owner shall inspect the Stormwater Management Facilities after significant flooding events.**
- 4.1.4 The Owner shall ensure records of each inspection are recorded and maintained by the Owner and available at the Owner's administrative office. The records shall include the following:
- a) Name of the inspector;
  - b) Asset ID of the Works inspected;
  - c) Date and time of each inspection; and
  - d) As applicable to the type of Works, observations resulting from the inspection including:
    - i hydraulic operation of the Works (e.g. length of occurrence since the last rainfall event, evidence or occurrence of overflows);
    - ii condition of vegetation in and around the Works;
    - iii occurrence of obstructions at the inlet and outlet of the Works;
    - iv evidence of spills and/or oil/grease contamination;
    - v frequency of trash build-up;
    - vi measurements of sediment accumulation, water levels, suspended solids, water temperature\*, dissolved

oxygen\*, pH, conductivity\*, and other parameters, as required in the monitoring plan developed in Schedule E, condition 5.0, and methods by which these measurements were obtained. (\* top and bottom water measures)

4.1.5 The Owner shall ensure the Prescribed Persons will implement and maintain erosion and sediment control measures during construction, in accordance with Appendix A.

#### 4.2 Operations & Maintenance (O&M) Manual

4.2.1 The Owner shall ensure operations and maintenance in accordance with an O&M manual that has been signed by management with the authority delegated by the municipality to do so.

4.2.2 The Owner shall prepare an O&M manual for facilities within twelve (12) months of the issuance date of this ECA, that includes or references, but is not necessarily limited to the following information:

- a) operating and maintenance procedures for routine operation of the Works;
- b) inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;
- c) repair and maintenance programs, including:
  - i the frequency of repair and maintenance for the Works;
  - ii stormwater pond sediment cleanout, dewatering and management; and
  - iii excavation, modification, replacement of LID soil/media, such as rain garden, green roof, permeable pavement.
- d) operational and maintenance requirements to protect sources of drinking water, including those referenced in a Standard Operating Policy for Sewage Works and Implementing Source Protection polices developed by the Ministry, or Policy summaries published on the Environmental Registry (Posting #012-2968), as amended;
- e) procedures for the inspection and calibration of monitoring equipment in accordance with the monitoring plan in condition 5.0;



- f) Emergency Response, Spill Reporting and Contingency Plans and Procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification to the Spills Action Centre (SAC), the Medical Officer of Health, and the Water Supervisor;
- g) procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken;
- h) as-built drawings; and
- i) The Owner shall maintain the O&M manual current and have access to a copy for each Stormwater Management Facility for the operational life of such Works. Upon request, the Owner shall make the manual available to Ministry staff.

4.2.3 Prior to operations of the alterations authorized under Schedules C or D, draft operations and maintenance sections in the O&M manual shall be developed, as applicable to the alterations.

## 5.0 Monitoring Plan

**5.1** Within one (1) year of the date of issuance of this ECA, the Owner will develop a Monitoring Plan for the Municipal Stormwater Management System, which has been:

5.1.1 Signed and approved by management with the authority delegated by the Owner to do so; and

5.1.2 Peer-reviewed by a third party Qualified Person to verify the adequacy of the Monitoring Plan in complying with conditions 5.4 and 5.5, subject to the following requirements:

- a) Written confirmation from the Qualified Person that they have the experience and qualifications to carry out the work; and
- b) Written confirmation from the Qualified Person of the adequacy of the Monitoring Plan.

**5.2** The Owner of the Municipal Stormwater Management System may jointly develop the Monitoring Plan in partnership with owner(s) of other Municipal Stormwater Management Systems as long as the Municipal Stormwater Management Systems are within the same watershed.

**5.3** The Monitoring Plan shall be carried out by the Owner, or a delegated third party Qualified Person, with data recorded in an electronic database.

**5.4** The Monitoring Plan shall be designed to:

- 5.4.1 Verify that the operational performance of the Municipal Stormwater Management System is as designed/planned;
  - 5.4.2 Assess the environmental impact of the Municipal Stormwater Management System; and
  - 5.4.3 Inform any corrective action that may be required to address any performance deficiencies or environmental impacts identified from above 5.4.1 or 5.4.2.
- 5.5** The Monitoring Plan will consist of, but not be limited to:
- 5.5.1 Identification of the Works, as per the inventory of the Municipal Stormwater Management System Works, to be monitored including outlets and any Works that provide quality and/or quantity control;
  - 5.5.2 Identification of the key receivers to be monitored within the Owner's municipal boundaries and the monitoring locations;
  - 5.5.3 Consideration of relevant municipal land use and environmental planning documents (e.g. Stormwater Management Master Plan, Class Environmental Assessments, asset management plan, subwatershed studies, planned development);
  - 5.5.4 Locations of rainfall gauges to be used;
  - 5.5.5 Inspections, measurements, sampling, analysis and/or other monitoring activities that informs condition 5.4.
  - 5.5.6 Development of a monitoring program for the Works and the receivers identified in conditions 5.5.1 and 5.5.2, that includes:
    - a) Characterization of water quality and quantity conditions and identification of water users to be protected;
    - b) Development of water quality and quantity goals, as it relates to stormwater management, using the information collected in condition 5.5.6 a);
    - c) Hydrological, chemical, physical and biological parameters, as appropriate, in alignment with the goals identified in 5.5.6 b);
      - i Water level of the Stormwater Management Facilities identified in condition 5.5.1 shall be measured, with the water level gauge clearly visible to take readings; and
    - d) Monitoring methodology, including the frequency and protocols for sampling, analysis and recording, with consideration of dry and wet weather events and timing of sampling during wet weather events.

i Time of sample or measurement must be recorded.

5.5.7 An implementation plan of the Monitoring Program. If monitoring the Works on a rotational basis (e.g. a subset of Works monitored annually), provide a description of the rotational schedule and associated Works;

5.5.8 Report with analysis of monitoring information and data, with findings and recommendations; and

5.5.9 Adaptive management (e.g. evidence-based decision making).

**5.6** The Owner shall keep current the Monitoring Plan following any alterations to the stormwater system or as required for adaptive management.

**5.7** The Owner shall make information available to the members of the public, upon request.

## **6.0 Reporting**

**6.1** The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to members of the public.

**6.2** The Owner shall prepare and submit electronically in a format acceptable to the ministry a performance report to the Director, or as otherwise specified by the Director, on or before March 31<sup>st</sup> of each year. The report shall contain, but shall not be limited to, the following information:

6.2.1 a summary and interpretation of all monitoring information and data, including an overview of the operational performance of the Works and impact on the environment;

6.2.2 a description of any operating problems encountered and corrective actions taken or may be taken;

6.2.3 a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works,

6.2.4 a summary of the calibration and maintenance carried out on all monitoring equipment;

6.2.5 a summary of any complaints received during the reporting period and any steps taken to address the complaints;

6.2.6 a summary of all works under Forms ASW, BSW and Schedule C's installed during the reporting period, including a list of alterations that pose a Significant Drinking Water Threat. Accompanying the summary will be a statement by the Owner, certified by a Licensed

Engineering Practitioner, that Stormwater Management Facilities were altered and/or constructed in accordance with the engineered specifications and drawings;

6.2.7 a summary of all spills or abnormal discharge events; and

6.2.8 a plan to improve or correct performance of any aspect of the Municipal Stormwater Management System

**6.3** The report described in condition 6.2 shall be:

6.3.1 Made available, on request, to members of the public who are served by the Municipal Stormwater Management System without charge, and

6.3.2 Made available, by June 1<sup>st</sup>, to members of the public without charge through publication on the Internet, if the Owner maintains a website on the Internet

**6.4** The Owner shall retain for a minimum of ten (10) years from the date of their creation, all records and information related to or resulting from the operation, maintenance and monitoring activities required by this ECA.

## **7.0 Review of ECA**

**7.1** No later than the date identified in schedule A of this ECA, the Owner shall submit to the Director an application to have the ECA reviewed. The application shall include, at minimum, the following information:

7.1.1 an updated description of the Works, including any modifications to the Works that were made since the ECA was last reviewed in accordance with the terms and condition of this ECA.

7.1.2 Any other information requested by the Director or District Manager.

## **8.0 Source Water Protection**

**8.1** The Owner shall ensure that the Works are designed, constructed and operated in such a way to be protective of sources of drinking water in vulnerable areas.

**8.2** The Owner shall prepare a report within six (6) months of the issuance date of this ECA, that includes, but is not necessarily limited to:

8.2.1 an outline of the circumstances under which the Works pose a significant threat to sources of drinking water based on the Director's Technical Rules established under the Clean Water Act, 2006 as amended;

- 8.2.2 an outline of how the Owner screens the Works to identify drinking water threats under the Clean Water Act;
- 8.2.3 a summary of the design considerations and mitigating measures during operation of the Works that protect sources of drinking water, and
- 8.2.4 a list of which components of the Works were found to be a Significant Drinking Water Threat.
- 8.3 The Owner shall maintain the report in section 8.2 current, for the operational life of the Works, and upon request, the Owner shall make the report available to the Ministry or Source Protection Authority staff.

## 9.0 Sewer Catchment Asset Inventory

- 9.1 The Owner shall prepare and submit to the Director an inventory of the storm sewersheds and classify in accordance with Tables 5 and 6, within three (3) years of the issuance of this ECA. Classification of the **level of stormwater management** is as follows:
- 9.1.1 Level A – Stormwater receives treatment for water quality and quantity prior to discharge to the environment
- 9.1.2 Level B – Stormwater receives no treatment for water quality prior to discharge to the environment

**Table 5. Storm Sewershed and Associated Treatment**

<b>Outfall Asset ID</b>	<b>Sewershed Catchment Area (ha)</b>	<b>Tributary or Receiver</b>	<b>Subwatershed/ Watershed</b>	<b>Stormwater Management Level (A or B)</b>
101				
102				
103				

**Table 6. Summary of Storm Sewersheds**

<b>Stormwater Management Level</b>	<b>Total Number of Outfalls to Environment</b>	<b>Total Sewershed Catchment Area (ha)</b>
Level A		
Level B		
Total:		

- 9.2** The Municipal Stormwater Infrastructure Map under Table 1 of Schedule B shall be updated to include the information prepared in condition 9.1 of Schedule E, as follows:
- 9.2.1 Identification of the storm sewersheds for each outlet, and their level of stormwater management as outlined in condition 9.1.

### Schedule F: Residue Management System

System Owner	\${OWNERNAME}
ECA Number	[ECA No]
System Name	\${SYSTEMNAME}
ECA Effective Date	\${MONTH} \${DAY}, \${YEAR}

\*Placeholder for residue management systems and activities if the municipality has them and they have been approved by the ministry. This is a direct application submission and as such nothing to populate below as of yet. The direct application submission may include a set of residue management activities, that once approved, that class of activity becomes pre-authorized in Schedule F. Any new type of undertaking not previously captured would require direct application submission. Terms and Conditions will be populated as required and informed by ministry review of the direct application submissions\*

#### 1.0 Residue Management System

1.1 The following waste management sites, sewage works and waste management systems are considered part of the Municipal Stormwater Management System described in this ECA.

##### Item 1

Location	
UTM Coordinates	
Description	

#### 2.0 Applicable Residue Activities

2.1 The following residue activities have been authorized:

#### 3.0 Terms & Conditions

3.1 The operation of the residue management systems described in condition (above) are subject to the following conditions:

## Appendix A - Stormwater Management Criteria

Table 1. Performance Criteria

<p><b>Water Balance</b> <sup>[3]</sup></p>	<p><b>FOR DEVELOPMENT SCENARIOS</b> <sup>[8]</sup></p> <p><b>Assessment Studies:</b></p> <p>i) Control as per the criteria identified in the water balance assessment completed in one or more of the following studies: a watershed/subwatershed plan, Source Protection Plan (Assessment Report component), Master Stormwater Management Plan, Master Environmental Servicing Plan, Class EA LID feasibility study, or local site study including natural heritage, EGRA, inflow and infiltration strategies, if undertaken. The assessment should include sufficient detail to be used at a local site level and consistent with the various level of studies; <b>OR</b></p> <p><b>IF Assessment Studies in i) NOT completed:</b></p> <p>i) Control <sup>[1]</sup> the recharge to meet pre-development <sup>[7]</sup> conditions on property; <b>OR</b></p> <p>ii) Control <sup>[1]</sup> the runoff from the 90<sup>th</sup> percentile storm event.</p> <p><b>Lake Simcoe Watershed:</b></p> <p>i) The evaluation of anticipated changes in water balance between pre-development and post-development through a stormwater management plan in support of an application for Major Development <sup>[11]</sup> shall be undertaken and adhered by. The assessment should include sufficient detail to be used at a local site level. If it is demonstrated, using the LIDTTT tool <sup>[9]</sup>, that the site's post to pre-development water balance cannot be met, and Maximum Extent Possible <sup>[6]</sup> has been attained, the proponent may use LSRCA's Recharge Compensation Program <sup>[10]</sup>.</p> <p><b>FOR RETROFIT SCENARIOS</b> <sup>[5]</sup></p> <p><b>Assessment Studies:</b></p> <p>i) Control as per criteria identified in the water balance assessment completed in one or more of the following studies: a watershed/subwatershed plan, Source Protection Plan (Assessment Report component), Master Stormwater Management Plan, Master Environmental Servicing Plan, Class EA LID feasibility study, or local site study including natural heritage, EGRA, inflow and infiltration strategies, if undertaken. The assessment should include sufficient detail to be used at a local site level and consistent with the various level of studies; <b>OR</b></p> <p>ii) If constraints <sup>[2]</sup> identified in i) Maximum Extent Possible <sup>[6]</sup> based on environmental site feasibility studies.</p> <p><b>IF Assessment Studies in i) NOT completed:</b></p> <p>i) Control <sup>[1]</sup> the recharge to meet pre-development <sup>[7]</sup> conditions on property; <b>OR</b></p> <p>ii) Control <sup>[1]</sup> the runoff from the 90<sup>th</sup> percentile storm event.</p>
<p><b>Water Quality</b> <sup>[3]</sup></p>	<p><b>FOR DEVELOPMENT SCENARIOS</b> <sup>[8]</sup></p> <p><b>General:</b></p> <p>i) Characterize the water quality to be protected, including identification of stormwater contaminants (e.g. suspended solids, nutrients, bacteria, water temperature) for potential impact on the natural environment, and control as necessary, <b>OR</b></p> <p>ii) As per the watershed/subwatershed plan or similar area-wide stormwater study.</p>



	<p><b>Suspended Solids:</b></p> <p>i) Control <sup>[1]</sup> 90<sup>th</sup> percentile storm event and if conventional methods are necessary, then 80%, 70% or 60% suspended solids removal (based on the receiver) as per full ETV or local particle size distribution</p> <p><b>Phosphorus:</b></p> <p>i) Minimize existing phosphorus loadings to Lake Erie and its tributaries, as compared to 2018 or conditions prior to the proposed development, <b>OR</b></p> <p>ii) Minimize phosphorus loadings to Lake Simcoe and its tributaries. Proponents located in the Lake Simcoe watershed shall evaluate anticipated changes in phosphorus loadings between pre-development and post-development through a stormwater management plan in support of an application for Major Development <sup>[11]</sup>. The assessment should include sufficient detail to be used at a local site level. If, using the LIDTTT tool <sup>[9]</sup>, it is demonstrated that the site's post to pre-development phosphorus budget cannot be met, and Maximum Extent Possible <sup>[6]</sup> has been attained, the proponent may use LSRCA's Phosphorus Offsetting Policy <sup>[10]</sup>.</p> <p><b>FOR RETROFIT SCENARIOS</b> <sup>[5]</sup></p> <p>i) Improve the level of water quality control currently provided on site, <b>AND</b></p> <p>ii) As per the 'Development' criteria for Suspended Solids, <b>OR</b></p> <p>iii) <b>If 'Development' criteria for Suspended Solids cannot be met</b>, Works are designed as part of a treatment train in a multi-year retrofit undertaking, in accordance with a rehabilitation study or similar area-wide stormwater study, such that the completed treatment train will achieve the 'Development' criteria for Suspended Solids, within 10 years.</p>
<p><b>Erosion Control (Watershed)</b> <sup>[3]</sup></p>	<p>i) As per erosion assessment completed in watershed/subwatershed plan, Master Stormwater Management Plan, Master Environmental Servicing Plan, Drainage Plan, Class EA, local site study, geomorphologic study or erosion analysis; <b>OR</b></p> <p>ii) As per the Detailed Design Approach or Simplified Design Approach methods described in the MECP 2003 SWM Manual:</p> <p>a) The Detailed Design Approach may be selected by the proponent for any development regardless of size and location within the watershed provided technical specialists are available for the completion of the technical assessments; or considered more appropriate than the simplified approach given the size and location of the development within the watershed and the sensitivity of the receiving waters in terms of morphology and habitat function.</p> <p>b) The Simplified Design Approach may be adopted for watersheds whose development area is generally less than twenty hectares AND either one of the following two conditions apply:</p> <ol style="list-style-type: none"> <li>1) The catchment area of the receiving channel at the point-of-entry of stormwater drainage from the development is equal to or greater than twenty-five square kilometres; or</li> <li>2) Meets the following conditions: <ul style="list-style-type: none"> <li>• The channel bankfull depth is less than three quarters of a metre;</li> <li>• The channel is a headwater stream;</li> <li>• The receiving channel is not designated as an Environmentally Sensitive Area (ESA) or Area of Natural or Scientific Interest (ANSI) and does not provide habitat for a sensitive aquatic species;</li> <li>• The channel is stable to transitional; and</li> <li>• The channel is slightly entrenched; <b>OR</b></li> </ul> </li> </ol> <p>iii) In the absence of a guiding study, detain a minimum of 25 mm over 24 to 48 hours.</p>

<b>Water Quantity (Minor and Major System)</b> <sup>[3]</sup>	As per municipal standards, Master Stormwater Management Plan, Class EA and/or ECA, as appropriate for the type of undertaking <sup>[4]</sup>
<b>Flood Control (Watershed Hydrology)</b> <sup>[3]</sup>	Manage peak flow control as per watershed/subwatershed plans, municipal criteria being a minimum 100 year return storm (except for site-specific considerations and proximity to receiving water bodies), municipal guidelines and standards, Individual/Class EA, ECA, Master Plan, as appropriate for the type of undertaking.
<b>Construction Erosion and Sediment Control</b> <sup>[3]</sup>	<p>Manage construction erosion and sediment control through development and implementation of an erosion and sediment control (ESC) plan. The ESC plan is to:</p> <ul style="list-style-type: none"> <li>a) Have regard to 2002 CCME Suspended Solids Guideline (as amended); <b>OR</b></li> <li>b) Have regard to CSA Erosion and Sediment Control Inspection and Monitoring Standard (as amended); <b>OR</b></li> <li>c) Have regard to Erosion and Sediment Control Guideline for Urban Construction 2019 by TRCA (as amended).</li> </ul>
<b>Footnote</b>	<ol style="list-style-type: none"> <li>1. Stormwater runoff volumes generated from the geographically specific 90th percentile rainfall event on an annual average basis from all surfaces on the entire site are targeted for control. Control is in the following hierarchical order, with each step exhausted before proceeding to the next: 1) retention (infiltration, reuse or evapotranspiration), 2) LID filtration, and 3) conventional stormwater management. Step 3, conventional stormwater management, should proceed only once Maximum Extent Possible <sup>[6]</sup> has been attained for Steps 1 and 2 for retention and filtration.</li> <li>2. Site constraints must be documented. A list of site constraints can be found in Table 2.</li> <li>3. Where the opportunity exists on your project site or the same subwatershed, reallocation of development elements may be optimal for management as described in footnote <sup>[1]</sup>.</li> <li>4. Possible to look at combined grey infrastructure and LID system capacity jointly.</li> <li>5. Retrofit means: 1) a modification to the management of the existing infrastructure, 2) changes to major and minor systems, or 3) adding stormwater infrastructure, in an existing area on municipal right-of-way, municipal block or easement. It does not include conversion of a rural cross-section into an urban cross-section.</li> <li>6. Maximum Extent Possible means maximum achievable runoff volume control through retention and LID filtration engineered/landscaped/technical stormwater practices, given the site restrictions.</li> <li>7. Pre-development is defined as the stringer of the two following scenarios: 1) a site's existing condition, or 2) as defined by the local municipality.</li> <li>8. Development includes new development, redevelopment, infill development, or conversion of a rural cross-section into an urban cross-section</li> <li>9. Low Impact Development Treatment Train Tool developed in partnership by TRCA, LSRCA and CVC.</li> <li>10. See MECP Guide for ECA Application for more background information.</li> <li>11. Major Development has the same meaning as in the Lake Simcoe Protection Plan, 2009.</li> </ol>

**Table 2. Stormwater Management Practices Site Constraints**

<b>Site Constraints</b>
a) Shallow bedrock† and Karst;
b) High groundwater† or areas where increased infiltration will result in elevated groundwater levels which can be shown through an appropriate area specific study to impact critical utilities or property (e.g., susceptible to flooding);
c) Swelling clays or unstable sub-soils;
d) Contaminated soils (e.g., Brownfields);
e) High Risk Site Activities including spill prone areas;
f) Prohibitions and or restrictions per the approved Source Protection Plans and where impacts to private drinking water wells and /or Vulnerable Domestic Well Supply Areas cannot be appropriately mitigated;
g) Flood risk prone areas or structures and/ or areas of high inflow and infiltration (I/I) where wastewater systems (storm and sanitary) have been shown through technical studies to be sensitive to groundwater conditions that contribute to extraneous flow rates that cause property flooding / sewer back-ups and where LID BMPs have been found to be ineffective;
h) For existing Linear infrastructure where reconstruction is proposed and where surface and subsurface areas are not available based on a site-specific assessment completed by a qualified person.
i) For developments within partially separated wastewater systems where reconstruction is proposed and where based on a site-specific assessment completed by a qualified person can be shown to: <ol style="list-style-type: none"> <li>1. Increase private property flood risk liabilities that cannot be mitigated through design,</li> <li>2. Impact pumping and treatment cost that cannot be mitigated through design,</li> <li>3. Increase risks of structural collapse of sewer and ground systems due to infiltration and the loss of pipe and/or pavement support that cannot be mitigated through design,</li> </ol>
j) Surface water dominated or dependant features including but not limited to marshes and/or riparian forest wetlands which derive the all or a majority of their water from surface water, including streams, runoff, and overbank flooding. Surface water dominated or dependant features which are identified through approved site specific hydrologic or hydrogeologic studies, and/or Environmental Impact Statements (EIS) may be considered for a reduced volume control target. Pre-consultation with the MECP and local agencies is encouraged;
k) Existing urban areas where risk to water distribution systems has been identified and substantiated by a qualified person through an appropriate area specific study and where the risk cannot be reasonably mitigated per the relevant design guidelines;
l) Existing urban areas where risk to life, human health, property or infrastructure has been identified and substantiated by a qualified person through an appropriate area specific study and where the risk cannot be reasonably mitigated per the relevant design guidelines;
m) Water reuse feasibility study has been completed to determine non-potable reuse of stormwater for onsite or shared use. Potable reuse may be considered on case specific basis.
<b>Footnote:</b> † May limit infiltration capabilities if bedrock and groundwater is within 1m of the proposed facility invert per Table 3.4.1 of the LID Stormwater Planning and Design Guide (2010, V1.0 or most recent). Detailed assessment or studies are required to demonstrate infiltration effects and results may permit relaxation of the minimum 1m offset.

**Table 3. Applicable Land Size Categories**

<b>Criteria</b>	<b>≤ 0.1 ha</b>	<b>&gt; 0.1ha and &lt; 5.0ha</b>	<b>≥ 5.0ha and ≤ 15 ha</b>
<b>Water Balance</b>		X	X
<b>Water Quality</b>		X	X
<b>Erosion Control (Watershed)</b>	X	X	X
<b>Water Quantity (Minor and Major System)</b>		X	X
<b>Flood Control (Watershed Hydrology)</b>		X	X
<b>Construction Erosion and Sediment Control</b>	X	X	X
<b>Monitoring</b>		X	X