Guide: Obtaining Approval for a Greenhouse Stormwater Management Facility

This Guide describes:

- The means to demonstrate that an existing or proposed stormwater management facility separates and manages non-contact runoff from precipitation events;
- The supporting documents necessary when seeking an Environmental Compliance Approval (ECA) for a greenhouse stormwater management facility;
- An abbreviated ECA application form which can be used by greenhouse operators seeking approval for their stormwater management facilities;
- Examples of conditions that would appear in an ECA for a greenhouse stormwater management facility.

Ministry of the Environment and Climate Change October 2016

PIBS 9953E



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1 Introduction

Greenhouse operations with stormwater management facilities which discharge to the natural environment, such as a stream, are required by the *Ontario Water Resources Act* to have an Environmental Compliance Approval (ECA). The Ministry of the Environment and Climate Change (ministry) has devised streamlined ECA application processes for greenhouse stormwater management facilities.

As shown in the table on page 4 – "Minimum Requirements for ECA Applications for Greenhouse Stormwater Management Facilities"- greenhouse operations have been divided into two groups based on the date their municipal building permit was issued. The two groups have somewhat different documentation requirements for their ECA application package. The two groups are:

- Group A Greenhouse operations which obtained a building permit on or before December 31, 2011; and
- Group B Greenhouse operations which obtained (or will obtain) a building permit on or after January 1, 2012.

BOTH GROUPS MAY APPLY IN SOME CASES

If a portion of a greenhouse operation received a building permit before December 31, 2011, while the remaining portion of the greenhouse operation received its building permit after January 1, 2012,

AND

the stormwater management systems (composed of both the stormwater management facility and the stormwater conveyance systems) for the two portions of the operation are <u>fully separated</u>, including discharging into different stormwater detention ponds,

THEN the supporting documentation requirements for Group A can be used for the portions issued building permits on or before December 31, 2011 while the Group B documentation requirements must be used for the remainder. This should be explained in the cover letter for the application submission. One ECA application would be submitted for both portions and one ECA would be issued.

If the stormwater management systems are not fully separated and any building permits were received after January 1, 2012, the Group B requirements apply to the entire operation.

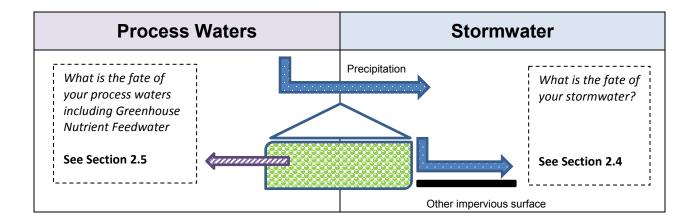
Some greenhouse operators may have more than one physical location for their operations. As the stormwater management systems for non-adjacent parcels of land will be separate, a separate ECA application, including a separate ECA application fee, needs to be submitted for each site.

If two operations operate on the same property and use the same stormwater management facility, one application listing both operations can be submitted.

1.1 Using this Guide

The Guide, the streamlined process described within it and the abbreviated ECA application form provided in Appendix B allow operators of an existing greenhouse to apply for an ECA for their stormwater management facilities, if they have not already done so, while also allowing proposed new greenhouses to apply for an ECA.

The figure below will help users of the Guide conceptualize the distinction between non-contact *stormwater* and onsite *process waters*.



1.2 Definitions

"Greenhouse Nutrient Feedwater" (GNF) means material that is generated when nutrient solution, other than a test solution, is removed from a closed circulation system at a greenhouse operation.

"Non-contact" indicates that stormwater is kept separate from and free of Nutrient Solution, GNF, process wastewaters (i.e., floor drainage, wash water, filter backwash, boiler blowdown/condensate etc.) and substances other than runoff from precipitation events.

- "Nutrient Solution" means a solution of nutrients and water for growing plants.
- "Stormwater Conveyance System" is all of the physical components, including the rooftop drainage pipe network and the surface drainage pipe/ditch system, needed to move stormwater from all impervious surfaces (glass rooftops, other building rooftops, and paved areas, such as parking lots or loading areas) to its place of detention and ultimate discharge point.
- "Stormwater Management Facility" means a facility for the management of the quality and/or quantity of stormwater and includes stormwater ponds, oil/grit separators and grassed swales.

1.3 Minimum Requirements for ECA Applications for Greenhouse Stormwater Management Facilities

	Group A	Group B
Criteria *	Obtained building permit prior to December 31, 2011	Obtained building permit after January 1, 2012
Minimum Requirements	 Abbreviated Application Form in Appendix B. Any engineering reports submitted to the municipality and/or conservation authority. Municipal and Conservation Authority Clearance. Project Description (of existing stormwater management facility). Site Plan and Drawings showing the stormwater management system. Engineering Opinion regarding the hydraulic functioning of the stormwater management facility. Note: If a Group A operation has the engineering drawings and completed design calculations necessary for Group B operations, those can be submitted instead of an engineering opinion as that exceeds the Group A requirements. Description of management of Nutrient Solution, Grouphouse Nutrient 	 Abbreviated Application Form in Appendix B. Any engineering reports submitted to the municipality and/or conservation authority. Municipal and Conservation Authority Clearance. Project Description (existing or proposed stormwater management facility) Stormwater management design brief consisting of the following: Design Calculations for the storage volume and outlet flow rates of the stormwater management facility. Site Plan and Engineering Drawings, all signed and stamped by a professional engineer. Description of management of Nutrient Solution, Greenbouse Nutrient
	Solution, Greenhouse Nutrient Feedwater, and other process water.	Solution, Greenhouse Nutrient Feedwater, and other process water.

[★] The grouping, criteria and minimum requirements are based on the results of outreach and communications to the sector as a result of ministry's implementation of its compliance pathway in 2011.

More details on the required contents of each of the supporting documents listed in the table above (excluding the first two in each column) are provided in Section 2 of this Guide, in subsections named after each of the supporting documents. Ensuring those supporting documents are

complete is an important step in seeking approval for an existing or proposed stormwater management facility.

A complete application package for either Groups A and B will also include the following:

- Cover letter (See Appendix A).
- Completed Abbreviated ECA Application Form (Appendix B) including all required documentation. (Can be completed by typing information into the form or by printing it out and hand-writing the information).
- Applicant Proof of Identity (See Appendix B).
- Copy of building permit(s) for greenhouses issued by the municipality.
- Payment of the \$2,000.00 fee for the technical review of your documents + \$200.00 processing fee (\$2,200.00 total) payable to the "Minister of Finance".

Note – An Operator may choose to use the ministry's Standard Online ECA Application Form instead of the Abbreviated ECA Application Form.

Appendix E provides an overview of the elements of the Standard On-line ECA Application form that would need to be completed if an operator wishes to proceed on this basis. If completing the standard online application all of the documents specified in the Minimum Requirements Table and the bullet list above, must still be provided, including a Cover Letter as shown in Appendix A. The Supporting Documentation Checklist found in Section 5 of the Abbreviated ECA Application Form must be attached to an application using the Standard Online Form to verify all these required documents have been submitted.

2 Required Supporting Documents

This section of the Guide describes the information and documents that are to be provided to the ministry as part of a complete submission for a streamlined Environmental Compliance Approval (ECA) for Groups "A" and "B".

2.1 Municipal and Conservation Authority Clearance – Group "A" and Group "B"

- ➤ The applicant (i.e., greenhouse operator) shall provide a clearance letter or email from both the local municipality and the local conservation authority.
- ➤ The clearance letter from the local municipality should indicate that the local municipality:
 - Has no concerns with the existing or proposed stormwater management facility;
 - Is satisfied that the zoning for the property permits the greenhouse use (covers 4.2 of the Abbreviated ECA Application Form); and,
 - No further municipal approvals relating to stormwater are necessary.
- ➤ The municipality clearance letter may take the form of a letter related to a past or current approval that is required. Examples of the format of clearance documents for an approval appear on the pages 8 and 9.
- Approvals which may have been or may be required from the municipality could pertain to:
 - Authorization from the municipality to discharge to a municipal drain;
 - Zoning by-law amendment or minor variance from the zoning by-law to permit the proposed use of the property and location of structures; or
 - Site plan approval for the operation or plan of subdivision approval if land is being subdivided for the operation.
- > Building permits are not acceptable as a municipal clearance letter.
- ➤ The clearance letter from the local Conservation Authority should indicate that the Conservation Authority:

- Does not need to issue an approval as the greenhouse operation is outside an area regulated by a Conservation Authority's; OR
- Authorizes the greenhouse operation's stormwater management facility discharging to a watercourse (Box 4.4 of the Abbreviated Application Form); AND, if applicable;
- Authorizes the construction of structures within flood plain regulated by the Conservation Authority.
- ➤ The clearance letter from the local Conservation Authority dealing with one or more of the items in the above bullet list may be from a previously issued approval, authorization or statement that no approval and/or authorization is needed from the Conservation Authority.
- ➤ If the clearance letter from the Conservation Authority is not yet available, an explanation that it has been requested should be provided with the ECA application. The ministry can issue an ECA before receipt of the Conservation Authority's clearance letter or approval, but if the Conservation Authority requires any changes to the stormwater management facility as part of its approval, an application to amend the ECA to reflect the required changes may be necessary.
- Applicants may also refer to the local Conservation Authority for information required in Sections 4.2 and 4.3 of the Abbreviated ECA Application Form, which relates to:
 - The Source Water Protection area the greenhouse operation is located within:
 - Whether the greenhouse operation is located within a vulnerable source water protection zone; and,
 - The final discharge receiver of the operation's stormwater.

Page 1 of 18 County File: 07-SDIO

PROSPEROUS COUNTY CONDITIONS FOR FINAL APPROVAL ACME DEVELOPMENTS INC. ANYTOWN SUBDIVISION DRAFT APPROVED BY THE OTARIO MUNICIPAL BOARD 21/07/2007

The County of Prosperous' conditions applying to the approval of the final plan for registration of ACME Developments Inc. Anytown Subdivision (06T-06010) are as follows:

GENERAL

- 1. This approval applies to the draft plan certified by Joe Surveyor OLS, dated 1 June 2006, showing 292 lots for single detached dwellings, 1 block for parkland, 1 commercial, 1 elementary school block and one block for stormwater purposes.
- 2. The owner agrees, by entering into subdivision agreements, to satisfy all requirements, financial and otherwise, of the City of Anytown, including but not limited to, the phasing of the plan for registration, the provision of roads, installation of services and utilities, and drainage.
- 3. The plan shall be revised to place 0.3 m reserves in the following locations:
 - A) the southern boundary of Block No. 449 including the daylighting triangle;
 - B) the south boundary of Blocks Nos. 421, 427, 430, Lot Nos. 1, 14, I5 and 43 including any daylighting triangles;
 - C) the south boundary of Block No. 447, Lot Nos. 386 and 347 to 353;
 - D) the east side of Lot Nos. 88, 109, 148, 163, 164, and 353 inclusive of any daylighting triangles; and
 - E) the west side of Lot Nos. 87, 180, 206, 205, 300 and 407.

Clean River Conservation Authority

File: P08-06T-06010

August 5, 2008

Ms. Jane Smith Regional Planner Prosperous County 567 Main Street Anytown, ON N9N 4M4

RE: DRAFT PLAN OF SUBDIVISION APPLICATION, ACME DEVELOPMENTS

LOT 21, CONCESSION 11, PART OF REGISTERED PLAN 4M-XXX

CITY OF ANYTOWN

Ms. Smith,

Staff of Clean River Conservation Authority (CRCA) have reviewed the report "ACME Developments Subdivision, Site Servicing Design Report" (July 8, 2008), the Grading and Drainage Plans and Drawing 08-0108-GD1 (January 1, 2008) Stormwater Management Plan and Details. We have also had a conversation with the City of Anytown staff regarding the subdivision agreement and have received further information regarding the regulatory history of the site.

We have found that this information addresses the watershed impact of this development to our satisfaction. Therefore we clear all of our draft plan conditions and have no objection to the registration of this subdivision.

We expect that the monitoring requirements for the stormwater management pond will be specified in the Environmental Compliance Approval issued by the Ministry of the Environment and Climate Change (MOECC).

If you have any further questions please contact the undersigned.

Yours truly,

RJones

Robert Jones, P.Eng. Resources Management Coordinator

CC: Joe Consultant, Consulting Ltd.

Virginia Trust-Worthy, ACME Developments Inc.

Walter Main, City of Anytown

2.2 Project Description - Group "A" and "B"

- ➤ The project description of an existing or proposed stormwater management facility should be inserted in the Project Description box on the Abbreviated ECA Application Form, as it will be used for an Environmental Bill of Rights Registry posting and will be inserted into the ECA for the operation.
- Project descriptions outline the components of a stormwater management system, for example:
 - o roof-top drainage systems,
 - o ponds,
 - o swales,
 - o pipes,
 - o pumps,
 - o area, depth and volume of the stormwater management facility.
- ➤ The applicant shall describe the collection and movement of stormwater throughout the site.

SAMPLE: Outline of Project Description

➤ The project description can be developed by completing the following statement with text similar to that shown in the below box: "The project for which I am seeking approval includes the following built components...."

......Stormwater Management Facilities (facilities) that drain a total impervious area of approximately 5.7 hectares located at XXX Road East, in the Town of ABC. The facilities consist of the following:

- roof water drainage pipe systems, and grassed swales along the south, east and north property lines, discharging roof-top runoff and other surface runoff into a stormwater detention pond;
- one (1) stormwater detention pond, having a storage volume of 627 cubic metres with a maximum water depth of 1.5 metres for the 100-year storm event, complete with a 300 millimetre diameter outlet pipe and an emergency spillway, discharging, with a maximum release rate of 184 litres per second for the 100-year storm event, into the existing roadside ditch along XXX Road East.

2.3 Site Plan and Drawings - Group "A" and Group "B"

- ➤ The applicant shall provide a site plan and drawings of the existing or proposed stormwater management facility.
- For Group "A", these drawings do not have to be engineering drawings, signed and stamped by a professional engineer. Instead, an Engineering Opinion, prepared by a professional engineer, licensed to practice in Ontario, describing the functioning of the existing stormwater management system and assessing whether it meets current stormwater flows, can be provided. Please see Appendix D for the required contents of this opinion.
 - The <u>Engineering Opinion</u> includes a set of ten questions about the system which, if answered adequately, should provide adequate information for the ministry to review the application and, in most cases, issue an ECA;
 - Questions to be answered include:
 - Are the conveyance pipes/swales adequately sized?
 - Are there signs of overflow from the stormwater management facility?
 - Is there any evidence of erosion occurring at the outlet?
 - Are there any connections between the stormwater management facility and process waters?
 - If certain requirements of the Engineering Opinion cannot be completely fulfilled, explanation of why and a description of alternative steps used should be provided within the opinion.
 - If questions about adequacy of system to accommodate existing stormwater flow arise, additional information may be required.
- For Group "B", these drawings need to be engineering drawings signed and stamped by a professional engineer, licensed to practice in Ontario, and they become part of the required Stormwater Management Design Brief listed in the Minimum Requirements Table on page 4.
 - <u>The Stormwater Management Design Brief</u> is a textual report which includes engineering drawings, the design calculations specified in Section 2.4 accompanied by a description of how they were performed, and a description of the functioning of the existing or proposed stormwater management system.

- ➤ The site plan is a set of plans or drawings that collectively show the geographic location of the activity, as well as the geographic and structural features that may affect the activity or the discharges from the activity. The site plan must, at a minimum, include:
 - The boundary of the site with adequate geographic coordinates to be able to accurately describe the boundary and locate the site;
 - A clear indication of the area of the activity, by a circle or an arrow, or some distinctive marking.
 - The location on the site of any buildings, structures, roads, railway tracks, utility corridors, paved areas, bermed areas, site fencing and pollution control devices located at the project location.
 - Stationary structures, things, or areas where waste is deposited, disposed, handled, stored, transferred, treated or processed; and,
- Either on the site plan or on more detailed drawings, the details/features of the stormwater conveyance system, <u>including all roof-top conveyance</u> <u>features</u>, and the stormwater management facility need to be shown.
- ➤ The drawings (and any accompanying description) should demonstrate that the stormwater conveyance system will only collect precipitation (e.g., rain, snow meltwater) and not any process water (e.g., Nutrient Solution, Greenhouse Nutrient Feedwater or other process waters).
- ➤ The conveyance system would include some or all of the below:
 - eaves troughs/gutters/downspouts on buildings;
 - o pipes, including the outlet pipe;
 - o catchbasins,
 - o pumps,
 - o swales.
 - o ditches, and
 - orifices or gate valves.
- ➤ The drawings must also show all stormwater management facilities, which could include:

- stormwater management ponds (wet, dry, infiltration, storage pond with no discharge);
- o oil/grit separators (provide sizing and/or model name); and
- o grassed swales.
- ➤ The dimensions of all stormwater conveyance and management features/components shall be provided on drawings.
- ➤ The site plan and other drawings should be drawn to scale, must indicate geographic north, must show all units of measurement in metric and must be of adequate size so that all measurements can be clearly read.
- An example of a site plan for a stormwater collection system in a residential subdivision is included in Appendix C for illustration purposes only, i.e., the plan depicts the key generic elements of a site plan and design details for the stormwater management pond. The contents of a site plan for a greenhouse operation will be necessarily different.

TIP

The details regarding site plans and drawings, the applicant can also refer to the drawings and plans in Appendix C:

- ✓ The Appendix's drawings and plans are meant to provide ideas of how stormwater information can be depicted.
- ✓ The Appendix's drawings and plans are likely more complex and detailed than required for most existing greenhouse operations.
- ✓ Effective use of drawings and plans can reduce the need for extensive written descriptions about how your facility operates.

2.4 Design Calculations for Storage Volume and Outlet Flow Rates – Group "B" Only

- ➤ The design calculations shall be accompanied by a textual description of the process by which they were performed and becomes a part of the Stormwater Management Design Brief (see Section 2.3). The design calculations shall include the following:
- Identification of the total drainage area and the percentage of impervious surface.
- ➤ Summary of information about anticipated storms and stormwater flows for pre-development and post-development conditions, including a 100-year or Regional storm, and the methodology used for the calculations.
- ➤ Information about the hydraulic capacity of the receiving watercourse (swale, natural channel or storm sewer) should include water balance calculations for determining the receiving watercourse's baseflow.
- ➤ Summary of applicable design criteria (provide source) such as: level of treatment required, land use restrictions, maximum percentage of imperviousness, and minimum watercourse buffer strips.
- Calculations showing the stormwater management facility can accommodate anticipated and 100-year or Regional storm flows. It should include hydrographs, full hydraulic flow modelling, and textual explanation of why quality and quantify control measures, such as erosion and sediment control facilities, and discharge controls and emergency overflow features are necessary or not necessary.
- > Statement of the storage volume, based on area and depth, of the stormwater detention facilities, e.g., pond, rooftop storage, tank.
- Information on the eventual receiving watercourse, if applicable, i.e., into what drain, stream, creek or lake does the stormwater from the greenhouse operation enter?
- ➤ The discharge volume and flow rate from the stormwater management facilities into the receiving watercourse.
- ➤ A description of proposed operation and maintenance procedures for the stormwater management facility including an agreement with the municipality setting forth the operating authority or person responsible.

2.5 Management of Nutrient Solution, Greenhouse Nutrient Feedwater and Other Process Water – Groups "A" and "B"

- ➤ The applicant shall provide a textual description about how Nutrient Solution and, if applicable, Greenhouse Nutrient Feedwater (GNF) are managed.
- The Nutrient Solution description should:
 - Identify the source of water used to create the solution, e.g., municipal supply, well, water body;
 - Include an estimate of the quantity of nutrient solution produced on a weekly basis (if available) or if not, on a monthly basis.
- ➤ The GNF description needs to demonstrate:
 - How the GNF is captured and conveyed to any onsite storage (ponds, tanks) if storage is used onsite;
 - Whether the GNF is discharged or sent to disposal;
 - Where the GNF is sent for discharge or disposal, e.g.:
 - land applied under the Nutrient Management Act,
 - hauled by a licenced hauler to a wastewater treatment plant, or
 - discharged into sanitary sewer with municipal authorization.
- ➢ If your operation produces any other type of wastewater, e.g., boiler/ blowdown condensate, antiseptic rinse water, filter backwash, floor drainage, sanitary sewage, the applicant shall document how these are processed on-site and/or discharged. (Note – the *Nutrient Management* Act does not permit these waters to be included with GNF applied to land).

3 Example of ECA Terms and Conditions

This section describes examples of Terms and Conditions that will likely apply to an Environmental Compliance Approval issued using this process.

DEFINITIONS

"Approval" means this entire document and any schedules attached to it, and the application;

"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 of the MOECC District Office;

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

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

"Owner" means the person or entity that retains ownership of the works, including its successors and assignees;

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

"Works" means the sewage works described in the Owner's application, and this Approval.

1. GENERAL PROVISIONS

- (1) The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
- (2) Except as otherwise provided by these conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the

description given in this Approval and in the application for approval of the Works.

- (3) Where there is a conflict between a provision of any document in the Schedule referred to in this Approval and the conditions of this Approval, the Conditions in this Approval shall take precedence, and where there is a conflict between the documents in the Schedule, the document bearing the most recent date shall prevail.
- (4) The Conditions of this Approval are severable. If any Condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected.
- (5) The issuance of and compliance with the Conditions of this Approval does not:
 - (a) relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority and/or municipality necessary to construct or operate the sewage Works; or
 - (b) limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.

2. EXPIRY OF APPROVAL

The authorization provided by this Approval will cease to apply to those proposed parts of the Works remaining unconstructed ten (10) years after the date of this Approval.

3. CHANGE OF OWNER

- (1) The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:
 - (a) change of Owner;
 - (b) change of address of the Owner;
 - (c) change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the

- <u>Business Names Act</u>, R.S.O. 1990, c.B17 shall be included in the notification to the District Manager; and
- (d) change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the <u>Corporations Information Act</u>, R.S.O. 1990, c. C39 shall be included in the notification to the District Manager.
- (2) In the event of any change in ownership of the Works, other than a change to a successor municipality, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager and the Director.

4. EFFLUENT LIMITS

(1) The Owner shall operate and maintain the Works such that the four (4) month rolling average concentrations of the materials named below as effluent parameters are not exceeded in the effluent from the Works.

Table 1 - Effluent Limits						
Effluent Parameter	Concentration Limit					
	Four (4) month Rolling Average**					
	(milligrams per litre unless otherwise indicated)					
Total Phosphorus	0.5					
Nitrate Nitrogen	20					
Potassium	25					
Copper	0.02					
Chloride	200					
Sulphate	200					
Zinc	0.10					
pH of the effluent maintained between 6.5 to 10.0*						

- * Note: pH would be an individual event discreet sample, not a four (4) month rolling average.
- ** For an example of rolling average, see Figure A: "Understanding Rolling Average" at the end of this section.
- (2) Notwithstanding any other conditions of this Approval, the Owner shall ensure that the effluent from the Works is essentially free of floating and settable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.

5. OPERATION AND MAINTENANCE

- (1) The Owner shall inspect the Works at least two (2) times per year and, if necessary, clean and maintain the Works to prevent the excessive build-up of sediments, oil/grit, and/or vegetation.
- (2) The Owner shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook available for inspection by the Ministry.

6. MONITORING AND RECORDING

The Owner shall, upon commencement of operation of the Works, carry out the following monitoring program:

- (1) All samples and measurements taken for the purposes of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.
- (2) Samples shall be collected at the following sampling points, at the frequency specified, by means of the specified sample type and analyzed for each parameter listed and all results recorded:

Ta	Table 2 - Effluent Monitoring						
Sampling Station	Effluent from the stormwater management system during a discharge event, or in the stagnant storage facility in the vicinity of the outlet when no discharge is occurring and which is representative of the volume of stormwater as a whole.						
Sampling Type	Grab						
Sample Frequency	Monthly (year-round)						
Sampling Parameters	Total Suspended Solid, Total Ammonia Nitrogen, Nitrate Nitrogen, Total Phosphorus, Ortho Phosphorus (Phosphorus as Phosphate), Zinc, Copper, Manganese, Iron, Molybdenum, Boron, Chloride, Sulphate, Potassium, Hardness, pH. These parameters provide the ministry with water quality analysis capability that cannot be achieved otherwise. If a water quality anomaly occurs, these parameters will assist in troubleshooting and providing advice on rectifying the anomaly.						

- (3) All samples collected under Condition 6 shall be analyzed by a laboratory accredited by ISO/IEC:17025 for the specified parameter or via an established protocol such as through Plant Products or Sun Parlour using the SGS Canada Inc., Lakefield's office.
- (4) The sampling frequencies and parameters specified in subsection (2) are minimum requirements which may, after twelve (12) months of monitoring in accordance with this Condition, be modified by the Director in writing from time to time. The sampling frequencies and/or parameters specified may be reduced where authorized in writing by the Director if the Owner is able to demonstrate satisfactory performance for two (2) consecutive years.
- (5) In the event of an exceedance of the four (4) month rolling average concentration values of the trigger parameters listed in Table 3 during the prescribed monitoring events per Table 2, the Owner shall develop a contingency plan within three (3) months of such an occurrence evaluating the root cause for the exceedance, and recommending actions / measures to be taken to prevent future occurrences of such events, and shall submit the plan to the Director for review and approval.

Table 3 – Trigger Concentration Values for Monitoring							
Trigger Parameter Concentration - four (4) monthly rolling							
	average (milligrams per litre)						
Nitrate Nitrogen	15						
Total Phosphorus	0.3						
Potassium	20						
Total Suspended Solid	30						

(6) Once accepted by the Director, the Owner shall implement the contingency plan within three (3) months of receiving approval.

7. <u>REPORTING</u>

(1) In addition to the obligations under Part X of the EPA, the Owner shall, within ten (10) business days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, or the bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken, and the schedule of implementation.

- (2) The Owner shall report to the District Manager or designate, any exceedance of any parameter specified in Condition 4 orally, as soon as reasonably possible, and in writing within seven (7) days of the exceedance.
- (3) The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
- (4) The Owner shall prepare, and submit to the District Manager upon request, a performance report, on an annual basis, by April 1 for the previous calendar year. The reports shall contain, but shall not be limited to, the following information:
 - (a) a summary and interpretation of all monitoring data and a comparison to the concentration limits and trigger concentration values of the parameters outlined in Conditions 4 and 6;
 - (b) a description of any operating problems encountered and corrective actions taken;
 - (c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works;
 - (d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;
 - (e) a summary of any complaints received during the reporting period and any steps taken to address the complaints;
 - (f) a summary of all by-pass, spill or abnormal discharge events;
 - (g) any other information the District Manager requires from time to time.

PROHIBITION

The Owner shall ensure that the Stormwater Management Facilities are operated exclusively for the collection, transmission, treatment and disposal of stormwater runoff. Under **no** circumstance shall any process wastewater (including, but not limited to, the leachate wastewater from irrigation of the plants, the wastewater from the washing of floors (if any), floor drain wastewater, or boiler blow downs or condensate) generated from the site be discharged into the Stormwater Management Facilities.

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

- 1. Condition 1 is imposed to ensure that the Works are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the Owners their responsibility to notify any person they authorized to carry out work pursuant to this Approval the existence of this Approval.
- 2. Condition 2 is included to ensure that the Works are constructed in a timely manner so that standards applicable at the time of Approval of the Works are still applicable at the time of construction, to ensure the ongoing protection of the environment.
- 3. Condition 3 is included to ensure that the Ministry records are kept accurate and current with respect to the approved works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.
- Condition 4 is imposed to establish effluent quality objectives which the Owner is obligated to use best efforts to strive towards on an ongoing basis.
- 5. Condition 5 is included to require that the Works be properly operated and maintained such that the environment is protected.
- 6. Condition 6 is included to enable the Owner to evaluate and demonstrate the performance of the Works, on a continual basis, so that the Works are properly operated and maintained at a level below the trigger concentrations specified in the Approval and that the Works does not cause any impairment to the receiving watercourse.
- 7. Condition 7 is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this Approval, so that the Ministry can work with the Owner in resolving any problems in a timely manner.

Figure A: Understanding Rolling Average

A four month rolling average is an average value based on the 4 most recent months of data. The average "rolls along" with the most recent data. Rolling average is a useful means of illuminating trends in data where there is wide variation in the data from sample event to sample event.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
P1	0.20	0.30	0.36	0.55	0.45	0.20	0.30					
P2	0.20	0.30	0.36	0.55	0.45	0.20	0.30	0.25				
P3	0.20	0.30	0.36	0.55	0.45	0.20	0.30	0.25	0.15			

For example: from the Table above:

- the 4 month rolling average for July reporting (for P1) is (0.55 +0.45 +0.20 +0.30)
 4 = 0.37
- the 4 month rolling average for august reporting (for P2) is (0.45 + 0.20 + 0.30 + 0.25) / 4 = 0.30
- the 4 month rolling average for September reporting (for P3) is (0.20 + 0.30 +0.25+ 0.15) / 4 = 0.22

Note – A summary of the sampling and monitoring data collected by the ministry may be available to the public through Ontario's Open Government initiative. Personal information is not released through Open Government.

Appendix A - Cover Letter for Submission

NB – a cover letter is needed for ALL greenhouse stormwater ECA applications including by making a submission with the Standard Online ECA Application Form

Date: MMM DD, 2016

Name of Applicant

Ministry of the Environment and Climate Change Environmental Approvals Access and Service Integration Branch 135 St. Clair Avenue West, 1st Floor Toronto ON M4V 1P5

RE: Greenhouse Stormwater Management Facility Submission

Please find attached the following documents:

• Please identify the materials in your submission

This submission is being made in support of seeking approval for the Greenhouse Stormwater Management Facility located at:

Business Name: (if applicable) Company / Limited / e.g., ABC Farms
Address – rural route, street address
Address – town/village/city/regional municipality
Address – postal code

Based on the building permit being issued on ______ this greenhouse operation is subject to a Group A/B (select one) process. The building permit(s) are attached. (If applicable, explain why the Group A and B processes might apply to different portions of the greenhouse operation).

Signed

Appendix B - Application for Approval of a Greenhouse Stormwater Management Facility

Environmental Compliance Approval

Abbreviated Application for a Greenhouse Stormwater Management Facility

General Information and Instructions	Page 2
Application Summary	Page 3
Section 1: Applicant Information	Pages 4-6
Section 2: Project Information	Page 7-8
Section 3: Environmental Bill of Rights Posting Requirements	Page 8
Section 4: Site Information	Pages 9-1
Section 5: Checklist of Supporting Documentation and Technical Requirements	Page 12
Section 6: Payment Information	Page 13



General Information and Instructions

General Information:

Information requested in this form is collected under the authority of the *Environmental Protection Act* (EPA), the *Ontario Water Resources Act* (OWRA) and the Environmental Bill of Rights (EBR) and will be used to evaluate applications for Environmental Compliance Approvals (ECAs) issued under Part II.1 of the EPA.

Information collected by the ministry is subject to the *Freedom of Information and Protection of Privacy Act*. If you are of the view that any part of the application is confidential on the grounds that such information constitutes a trade secret or scientific, technical commercial, financial or labour relations information, please make this known now. Otherwise, the ministry may make the information available to the public without further notice to you. It is an offence under the EPA and OWRA to provide false or misleading information in this application and/ or accompanying documents.

For all questions related to preparing or submitted this form or about the ministry's collection of information related to applying for an ECA, contact:

Environmental Approvals Access and Service Integration Branch

135 St. Clair Avenue West, 1st Floor Toronto ON M4V 1P5

Telephone outside Toronto 1-800-461-6290 or in Toronto 416-314-8001.

Instructions:

- 1. Applicants are responsible for ensuring that they submit a complete ECA Application to the ministry. The ministry may return incomplete applications to the applicant.
- 2. A complete application consists of:
 - A completed and signed application form
 - All required supporting documents and technical requirements identified in this form and the Guide: Obtaining Approval for a Greenhouse Stormwater Management Facility.
 - Payment of the \$2,200 application fee (in Canadian funds) by certified cheque, money order made payable to the Minister of Finance, or credit card payment.
- 3. Submit the complete ECA Application as follows:
 - One paper copy sent to the Ministry of the Environment and Climate Change, Environmental Access and Service Integration Branch at:

135 St. Clair Avenue West 1st Floor Toronto ON M4V 1P5

 One paper copy sent to the local ministry District Office that has jurisdiction over the area where the facilities are located. DO NOT send payment to the District Office. To locate the appropriate local District Office, visit the ministry's website.

For Office Use Only								
Reference Number	Payment Received	Date (yyyy/mm/dd)	Initials					
	\$							

Application Summary

Applicant Name
Project Name
Project Description (to be used for Environmental Bill of Rights Posting)

Section 1: Applicant Information

1.1 Applicant Information

Applicant Name (legal name of individual or organization as evidenced by legal documents) Business Number							
Business Name □ same as Ap	pplicant Name		Business We	ebsite Ad	ldress:		
Applicant Type: ☐ Corporation ☐ Federal Government ☐ Individual ☐ Municipal Government ☐ Partnership ☐ Provincial Government ☐ Sole Proprietor ☐ Other (describe):							
Business Activity Description							
Primary North American Industr	y Classification System (N	AICS) C	ode and other	NAICS o	codes (if ap	plicable)	
1.2 Applicant Physical A Civic Address - Street Information		, name,	type and direc	tion	Unit Identi	fier (suite or unit number)	
Survey Address							
Lot	Concession		Part			Reference Plan	

Abbreviated ECA Application for a Greenhouse Stormwater Management Facility										
Municipality/Unorganized Township or Territory Upper Tier/District				Province	Province/State Country			Postal Code/ZIP Code		
							l			
Telephone (+ area coo	e & ext.)	Fax Nı	umber (+ area cod	de)	Mobile (+	area cod	e)	T	E-mail Addres	S
Geo Reference (requir	ed)									
Description of	Map Dati	um	Zone	Accura		Geo-ref	ferencing	UT	ΓM Easting	UTM Northing
Southwest corner of				Estima	ale	Method				
property										
Physical location of										
front door of main entrance										
This information can	be found	on vou	r municipal or loc	cal cons	servation a	uthority	GIS mapi	oino	website.	
		•	, , , , , , , , , , , , , , , , , , ,						,	
1.3 Applicant Ma	_		0	- /l f			!:	_:::		
Same as Applicant F below.)	'nysicai A	aaress	? □ Yes □ No	o (ii no,	please pr	ovide ap	plicant m	allir	ig address into	ormation
bciow.)										
Civic Address - Street	Informatio	n (includ	des street number,	name, t	type and dir	ection)	Unit Ide	entifi	ier (suite or unit	number)
Delivery Designator Delivery Identifier Postal Station										
Municipality/Unorganiz	ed Towns	hip or Te	erritory Upper Tier	/District	Province	/State	Country		Postal Code/2	ZIP Code

1.4 Statement of the Applicant

I am authorized to prepare and submit this application and to make this certification. I have reviewed the complete application and I have made all inquiries that are necessary to declare to the best of my knowledge, information and belief:

- The information contained in this application is complete and accurate.
- The Technical Contact identified in this application has/have been authorized to prepare certain technical material, and act on behalf of the applicant to discuss this application with the Ministry of the Environment and Climate Change and to provide additional information about this application to the ministry on request.
- The information provided to the Technical Contact in relation to this application is complete and accurate.

Name of Applicant (please print)		Title
Telephone (+ area code & ext.)	Fax Number (+ area code)	Mobile (+ area code)
E-mail Address	Signature	Date (yyyy/mm/dd)

Section 2: Project Information

2.1	Reason for Applic ☐ New ECA existing ECA	cation ☐ Amendment to Existing ECA	☐ Revocation to	existing ECA	☐ Administrative amendment to						
2.1	Category of Green The building permit f	nhouse Operation or the greenhouse operation was is	ssued								
	☐ Group B (building	house operation is: permit obtained before December permit obtained after January 1, 2 eration qualify as Group A and oth	012)	o B (explain in o	cover letter).						
	☐ A copy of the build	☐ A copy of the building permit(s) is attached (this is required).									
2.1 Name	Technical Contact of Technical Contact	t	Com	npany							
Telep	none (+ area code & e	ext.) Fax Number (+ area code)	Mobile (+ area	code)	E-mail Address						
	ess Information as Applicant Mailing A	Address? □ Yes □ No (If not, p	lease provide technic	cal contact add	ress information below.)						
Civic	Address - Street Inforn	nation (includes street number, nar	me, type and direction	n) Unit Ider	ntifier (suite or unit number)						
Delive	ery Designator	Delivery Identifier	Postal Station								

Abbreviated ECA Application for a Greenhouse Stormwater Management Facility							
Municipality/Unorganized Towns	Province/State	Country	Postal Code/ZIP Code				
I have been authorized by the applicant to prepare the technical materials that are included in the application, I have reviewed those technical materials and I have made all inquiries that are necessary to declare to the best of my knowledge, information and belief: • The technical materials contained in this application are complete and accurate. • I have the relevant education and experience necessary to provide this certification.							
Signature	Date (yyyy/mm/dd)						

Section 3: Environmental Bill of Rights Posting Requirements

3.1 Environmental Bill of Rights (EBR) Posting Requirements

Proposals for new discharges of stormwater into the natural environment (including a municipal ditch) or discharges which did not previously have an ECA require a posting on the Environmental Registry. The project description executive summary will be used for this posting so it needs to be accurate. Some exceptions to this posting requirement apply. The exceptions are detailed in the online ECA application form.

☐ Yes, I verify the project description executive summary is accurate and can be used for the EBR posting.

Section 4: Site Information

4.1 Site Address Same as Applicant Physical Address? □ Yes □ No (If no, please complete the site address information below.)									
Civic Address - Street Information (includes street number, name, type and direction)					Unit Identifier (suite or unit number)				
Survey Address Lot		Conces	ssion		Part			Reference F	Plan
Municipality/Unorganized Township or Territory Upper Tier/District Province/State Country Postal Code/ZIP Code									
Telephone (+ area code & ext.) Fax Number (+ area cod			e)	Mobile (+ area code) E-m			E-mail Addr	ess	
Geo Reference (requir	red)							'	
Description of location	Map Dati	um	Zone	Accura Estima		Geo-refo	erencing	UTM Easting	UTM Northing
Southwest corner of property									
Physical location of front door of main entrance									

• •	for a Greenhouse Stormwater Manag	•	□ No				
Is the site (property) that is the subject of this application owned by the applicant? Yes No If no, please include the owner's name, address and a signed document indicating that the applicant has the authority to install and operate the proposed activity, or store vehicles or equipment on the land.							
	ng authority of the site that is the ating authority name, address and p		Yes □ No				
(NEPDA)? ☐ Yes ☐ No	ea of development control as defined the NEPDA permit for proposed ac		Planning & Development Act				
Is the site within an area co	vered by the Oak Ridges Moraine municipal planning approval for the	• Conservation Plan? ☐ Yes ☐					
4.2 Site Zoning and Cl	assification						
Current Land Use	Cur	rent Zoning					
proposed use?	espondence from the municipality to please attach correspondence from	•	f the property permits the				
4.3 Source Protection/ from the local Conservat	Drinking Water Threats (the in ion Authority)	formation is this sections 4.	3 and 4.4 should be obtained				
•	area(s) where the activity is/ will be I						
☐ Ausable Bayfield	☐ Grand River	☐ Raisin Region	☐ Lower Thames Valley				
☐ Maitland Valley	☐ Kettle Creek	☐ South Nation	☐ St. Clair Region				
□ Cataraqui Region□ Long Point□ Lakehead		☐ Grey Sauble☐ Upper Thames Rive☐ Northern Bruce Peninsula☐ Crowe Valley					
☐ Credit Valley	☐ Mattagami	□ Northern Bruce Perill	□ Ganaraska				
☐ Toronto and Region	☐ Mississippi Valley	☐ Saugeen Valley ☐ Sault Ste. Marie	☐ Kawartha-Haliburton				
☐ Essex	☐ Rideau Valley	☐ Catfish Creek	☐ Lower Trent				
☐ Halton	□ Niagara	□ Nottawasaga Valley	☐ Otonabee-Peterborough				
☐ Hamilton	☐ North Bay Mattawa	☐ Severn Sound	☐ Quinte				

Abbreviated ECA Applic	cation for a Greenhouse	Stormwater Managem	nent Facility		
☐ Sudbury	Sudbury □ Lake Simcoe & Couchiching/Black River				
	-			entified in a local assessment report under the <i>Cl</i> Tool on the ministry's website)	ean
If yes, what is/ are the vulnerable area(s)/ zone(s)? (Please check all that apply) □Wellhead Protection Areas □Highly Vulnerable Aquifers □Significant Groundwater Recharge Areas □Significant Groundwater Recharge Areas				Zones □Issue Contributing Area	
, , ,	blied for identified as a sease identify the source protect	•		d mitigation methods to prevent the contamination of drinkin	g
4.4 Receiver of E	ffluent Discharge				
Intermediate Receiver I	Name		Watershed N	Name	
☐ Surface Water	☐ Groundwater	□Other	(specify)		
Has the facility received environment)	d local Conservation Aut	hority clearance? (fo	r stormwater	er management facility discharging to the natural	
☐ Yes ☐ N/A If yes, please include a copy of the Conservation Authority clearance.					
☐ Lake Simcoe ☐	\ Ity discharge to any of th □ Rideau River □ Rouge River	□ Detroit River		□ Other:	

Section 5: Supporting Documentation

	Group A Obtained building permit prior to December 31, 2011	Group B Obtained building permit after January 1, 2012
Cover Letter	□ Yes	□ Yes
Applicant proof of legal name (see below for information regarding acceptable documents)	□ Yes	□ Yes
Signed document indicating that the applicant has the authority to install and operate the proposed activity.	☐ Yes ☐ N/A	☐ Yes ☐ N/A
Application Fee	□ Yes	□ Yes
Copy of building permit(s) issued for greenhouse operation.	□ Yes	□ Yes
Operating authority name, address and phone number	☐ Yes ☐ N/A	☐ Yes ☐ N/A
Municipal Clearance	□ Yes	□ Yes
Conservation Authority Clearance	□ Yes	□ Yes
Project Description	□ Yes	□ Yes
Any engineering reports submitted to the municipality and/or conservation authority.	☐ Yes ☐ N/A	☐ Yes ☐ N/A
Group A - Site Plan and Drawings showing the stormwater management system.	□ Yes	
Group A - Engineering Opinion regarding the hydraulic functioning of the stormwater management facility	□ Yes	
Group B – Stormwater Management Design Brief including:		□ Yes
Site Plan and Engineering Drawings, all signed and stamped by a professional engineer.		☐ Yes
Design Calculations for the storage volume and outlet flow rates of the stormwater management facility.		☐ Yes
Description of management of Nutrient Solution/Greenhouse Nutrient Feedwater and other process water.	□ Yes	☐ Yes
Note – An applicant for a Group A Greenhouse can choose to satisfy the Group B req	uirements for engineering dra	awings and design

calculations rather than the Group A requirements for site plans/drawings and an engineering opinion.

Section 6: Payment Information

Please Note:

- 1. All fees should be paid in Canadian funds, payable to the Minister of Finance.
- 2. Credit card payments are accepted for payments under \$10,000 only.
- 3. The information collected in this section of the form is considered confidential and will only be used to process your application fee.
- 4. DO NOT include this page in the copies of your application that are being provided to the local ministry District Office.

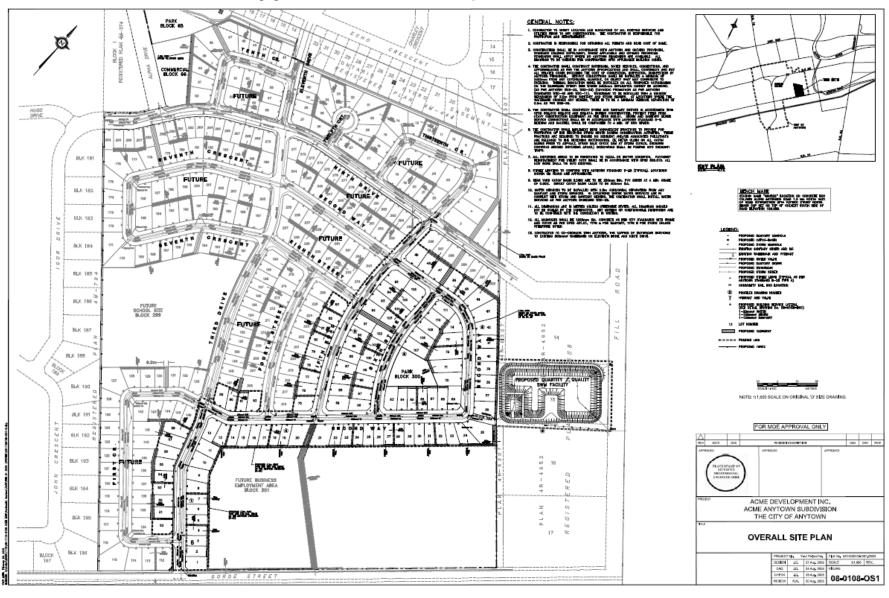
Amount Enclosed	Method of Payment				
	☐ Certified Cheque	☐ Money Order			
\$	☐ Visa	☐ MasterCard	☐ American Express		
Credit Card Information (If paying by Visa, MasterCa	ard or American Express)				
Name on card	Credit Card Number		Expiry Date (mm/yyyy)		
			·		
Cardholder Signature		[Date (yyyy/mm/dd)		
			(3333		
		<u> </u>			
If paying by cheque or money order, please attached here.					

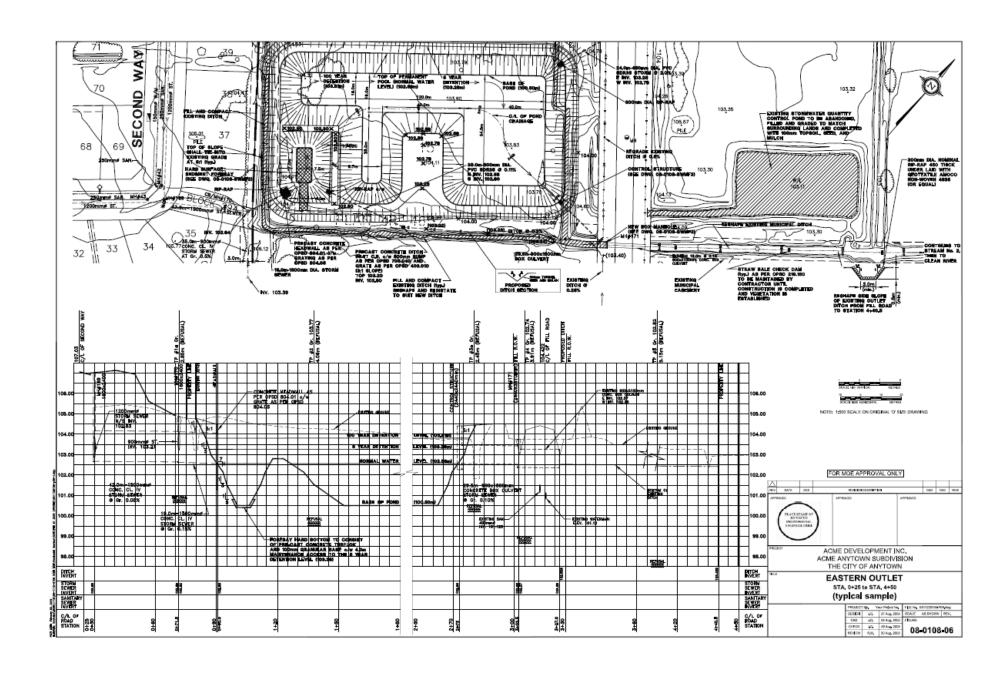
Applicant Proof of Identity

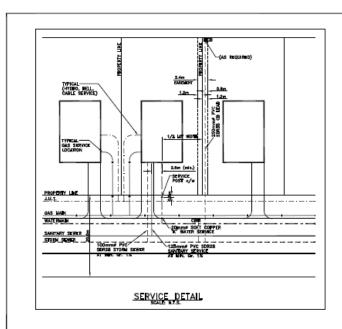
The applicant is the person (individual, organization, etc.) that has legal responsibility for the proposed works/facilities to which the application relates and is the person who will hold the ECA if issued. Typically, the applicant is the legal owner or operator of the facility or equipment and is the party that is ultimately responsible for compliance with all of the conditions in the ECA. Unless the applicant is a municipal, provincial or federal government, a proof of legal name of the applicant must be submitted with all applications. The table below shows acceptable documents for proof of legal name. The documents must be current and must accurately reflect the business name. Documents are acceptable only if they are provided by Ministry of Government Services or, if they are from other sources, they must be notarized as true copies that accurately reflect the current business name.

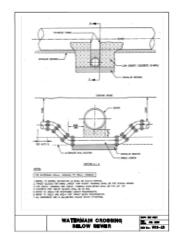
Applicant Type	Acceptable Documentation
Canadian Corporations	Certificate of Status and A current filing under the Corporation Information Act – e.g., Ontario Corporation Report and Single Business Number (SBN)
Foreign Corporations	Extra-provincial Licence under Extra-provincial Corporations Act and An original signed copy of the letter from a lawyer in Ontario confirming the status and jurisdiction of incorporation of the corporation concerned and that is duly authorized to carry on business in Ontario and Single Business Number (SBN)
Ontario General (GP) or Limited Liability Partnerships (LLP)	Ontario Business Name Registration Report under Business Names Act and Documents verifying legal names of all entities constituting the partnership appropriate for the type of each entity (corporation, individual* etc.) and Single Business Number (SBN)
Ontario Limited Partnership (LP)	Limited Partnership Report under Business Names Act and Documents verifying legal name of the general partner appropriate for the type of person (corporation, individual* etc.) and Single Business Number (SBN)
Extra-Provincial General (GP) or Limited Liability Partnerships (LLP)	Ontario Business Name Registration Report under Business Names Act and An original signed copy of the letter from a lawyer in Ontario confirming (a) the jurisdiction of the organization of the partnership; (b) that it is duly authorized to carry on business in Ontario; and (c) the legal names of the partners and Single Business Number (SBN)
Extra-Provincial Limited Partnership (LP)	Limited Partnership Report under Business Names Act and An original signed copy of the letter from a lawyer in Ontario confirming (a) the jurisdiction of the organization of the partnership; (b) that it is duly authorized to carry on business in Ontario; and (c) the legal names of the general partner and Single Business Number (SBN)
Individual/Sole Proprietor	Documents verifying legal name of the individual* and Master Business Licence to verify the business name (if applicable) and Single Business Number (if applicable)

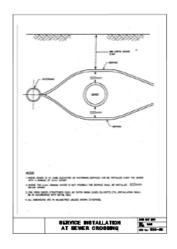
Appendix C – Drawings and Site Plans

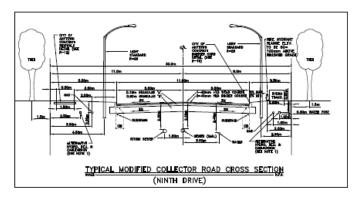


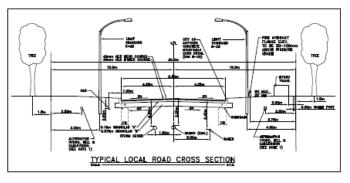


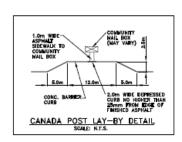












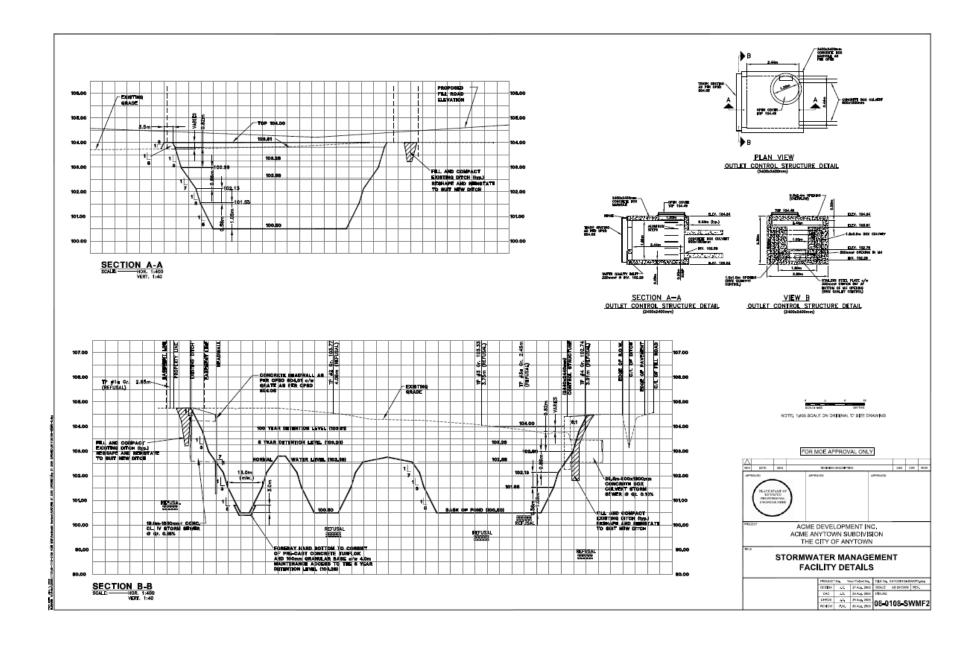
NOTES (ROAD CROSS SECTION)

- 1. MIN. COVER
 BELL AND CABLEVISION SOOmm
 HYDEO 1.0m
- SUB-EXCAVATE SOFT AREAS IN SUBBASE AND FILL WITH APPROVED NATIVE NATIONAL OR GRAIN. 'B' COMPACTED IN 150mm LAYERS.
- 3. ALL MATERIALS TO BE SUPPLIED AND PLACED AS MICR O.P.S. SPECIFICATIONS.
- 4. DEPTH OF GRANULAR "B" TO BE INCREASED AS REQUIRED BY SOL CONDITIONS AND TO EXTEND 600mm BEHIND F.O.C.
- 5. BOULEVARDS TO BE SOCCED.
- ON BUS POUTES THE PAYEMENT AND GRANULAR DEPTHS SHALL BE EQUIVALENT TO THOSE SPECIFIED FOR RESIDENTIAL COLLECTOR LANCS.
- TACK COAT PEQUIRED ON OVERLAYING OF BINDS COARSE UNLESS PRIOR APPROVAL IN WRITING.
- 8. GEDTECHNICAL CONSULTING ENGINEER TO PROVIDE A DESIGN FOR DEPTH OF GRAN. B-THYE I IN GRANULAR SOLS. DEPTH OF GRAN. B-THYE II NAY BE REDUCED TO A MIN. OF SOOMM, AND IN OTHER SOLS MIN. DEPTH MAY BE NOBEASED BY THE RECOMMONATION OF THE COSTOCHMONATION.

20 0 50 60

NOTE: 11,500 SCALE ON ORIGINAL 'D' SIZE DRAWING





Appendix D

CONTENTS OF ENGINEERING OPINION FOR GROUP A GREENHOUSES

The engineering opinion re: hydraulic functioning of the Stormwater Management Facility should address at a minimum the following questions:

- 1. What is the approximate total area of impermeable surface (i.e., greenhouse roof, parking lot, loading area, storage building, etc.) directed to the stormwater management facility?
- 2. How is the rooftop runoff from the greenhouses directed to the stormwater management facility? Are these pipes/swales sized adequately?
- 3. How is other runoff from other drainage areas (except greenhouse roof) directed to the stormwater management facility? Are these pipes/swales sized adequately?
- 4. Are there any cross connections between the stormwater management facility and the other process wastewater/sewage system (i.e., Greenhouse Nutrient Feedwater (GNF), floor drainage, wash water, filter backwash, boiler blowdown/condensate, overflow, nutrient supply, and sanitary sewage)?
- 5. What is the type(s) of stormwater management facility at the site (i.e., stormwater management pond, oil/girt separator, grassed swales, or any other types)?
- 6. For the stormwater management pond:
 - i) What is the type of the stormwater management pond (i.e., wet pond, dry pond, infiltration pond, storage pond with no discharge)?
 - ii) What is the approximate pond area, depth and volume? Are there any signs of overflow from the stormwater management pond? Is the pond storage volume sized adequately?
 - iii) What is the size of the outlet pipe for the pond? Is there any orifice and/or gate valve at the outlet?
- 7. For stormwater management facility other than ponds, please provide sizing information and/or model name. etc.
- 8. Where is the outlet pipe(s) of the stormwater management facility discharging into?
- 9. Is there any evidence of erosion occurring at the outlet(s) of the stormwater management facility?
- 10. Is there an operation and maintenance manual available at site for the stormwater management facility? If yes, is it appropriate? If there isn't one, propose one.

Appendix E - The Standard ECA Application Form

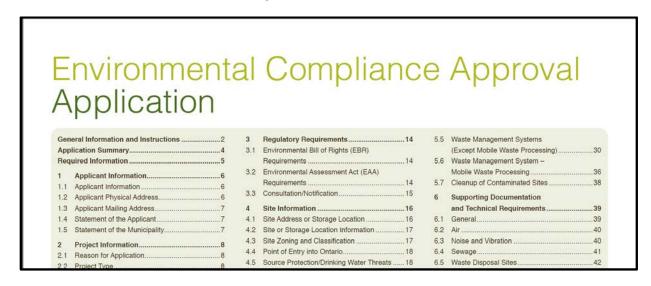
An operator of a Group A or B operation may choose to use the Standard Online ECA Application Form. If this is the case, the information below outlines how to obtain the Standard ECA form and the relevant sections to complete.

The applicant must still submit all of the documents specified in the Minimum Requirements Table and the bullet list in Section 1.3 of the Guide including a Cover Letter as shown in Appendix A. The Supporting Documentation Checklist found in Section 5 of the Abbreviated ECA Application Form must be attached to an application using the Standard Online Form to verify all these required documents have been submitted.

Obtaining the Standard ECA Application

The Standard ECA Application form (pictured below) and further instructions about completing the ECA Application can be found at this internet address under the heading "Apply for an ECA":

https://www.ontario.ca/page/environmental-compliance-approval



Methods of Completing the Standard Online ECA Application Form

The Standard Online ECA Application Form can be completed in one of two methods:

- 1. The Standard ECA application form can be downloaded (as a Portable Document Format or PDF file to be used with Adobe Acrobat®), saved to a computer, in-filled with your specific information in the fields of the electronic form, saved and submitted or printed to create a hardcopy.
- 2. A Standard ECA application form can be printed and completed in writing. Bear in mind that some fields may be difficult to complete by hand and the online help will not be available unless you have the form active on your computer monitor.

The key sections of the Standard Online ECA Application which will need to reviewed and completed are:

1. Applicant Information

- 1.1 Applicant Information
- 1.2 Applicant Physical Address
- 1.3 Applicant Mailing Address
- 1.4 Statement of the Applicant
- 1.5 Statement of the Municipality

2. Project Information

- 2.1 Reason for Application
- 2.2 Project Type
- 2.3 Approval Information
- 2.4 Other Approval/Permits for Facility
- 2.5 Technical Contacts

3. Regulatory Requirements

- 3.1 Environmental Bill of Rights (EBR) Requirements
- 3.2 Environmental Assessment Act (EAA) Requirements**

^{**} You may assume there are no EAA requirements associated with your application, unless specified otherwise by the Ministry of the Environment and Climate Change.

4. Site Information

- 4.1 Site Address or Storage Location
- 4.2 Site or Storage Location Information
- 4.3 Site Zoning and Classification
- 4.5 Source Protection/Drinking Water Threats
- 4.6 Receiver of Effluent Discharge

5. Facility Information***

5.3 Sewage Works

*** You should review all sections of Part 5 if you believe you have equipment, processes or activities that could involve the need for approvals in other areas, e.g., waste disposal. The ministry is of the understanding (for the purposes of this guidance) that the sole activity for which you require approval is the operation of a sewage works.

6. Supporting Documentation and Technical Requirements

- 6.1 General
- 6.4 Sewage

7. Payment Information

If you are uncertain about the appropriate response to any given question or field of the application form, please contact the following:

- Your District Office of the Ministry of the Environment and Climate Change or
- Call 1 (800) 461 6290 (Mon-Fri during business hours)