

**AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER 0211-BJDJ65  
Issue Date: January 22, 2020

Twin Creeks Greenhouse Inc.  
8117 Zion Line  
Warwick, Ontario  
N0M 2S0

Site Location: 8117 Zion Line  
Lot 21, Concession 3 S.E.R.  
Township of Warwick, County of Lambton, Ontario

*You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:*

Stormwater Management Facilities serving a vegetable greenhouse development with a total catchment area of approximately 33.11 hectares including Phases 1 to 4 greenhouses (each phase with a 4 hectare greenhouse), as well as a shop, a loading ramp, a parking area, access laneways and an improved entrance from Zion Line, located at 8119 Zion Line, Township of Warwick, to attenuate post-development peak flows to the 2 year pre-development level for all storm events up to and including the 100 year return storm, consisting of the following:

- Stormwater conveyance system includes roof drainage pipes and swales, discharging into a Stormwater Detention Pond as described below;
- one (1) Stormwater Detention Pond (wet pond) with a permanent storage of 27,020 cubic meters at 99.45 metres water level, an active storage of 19,051 cubic metres at maximum 100.75 metres water level, also functioning as irrigation water storage pond via an outlet for recirculating stormwater for irrigating purpose, complete with an emergency spillway and one (1) outlet structure (to replace existing interim Phase 1 structure) equipped with an outlet with a 225 millimetre diameter orifice to restrict the flow to maximum 173 litres per second for Phases 1 to 4 development, discharges via a 600 millimetre tile drain into an existing municipal drain called Kersey drain;

including erosion/sedimentation control measures during construction and all other controls and appurtenances essential for the proper operation of the aforementioned Works;

all in accordance with the supporting documents set out in **Schedule A** attached to this Approval.

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

1. "Approval" means this entire document and any schedules attached to it, and the application;
2. "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;
3. "District Manager" means the District Manager of the Sarnia District Office;
4. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended;
5. "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;
6. "Owner" means Twin Creeks Greenhouse Inc., and includes its successors and assignees;
7. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;
8. "Works" means the sewage works described in the Owner's application, and this Approval.

*You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:*

## TERMS AND CONDITIONS

### 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 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. Where there is a conflict between the documents listed in the Schedule, and the application, the application shall take precedence unless it is clear that the purpose of the document in the schedule was to amend the application.

5. 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 thereby.
6. 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 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**

1. The authorization provided by this Approval will cease to apply to those parts of the Works which have not been constructed within ten (10) years of the date of this Approval.
2. In circumstances when Phase 2 to 4 greenhouses are not developed as currently planned and the changes will trigger modifications to the approved stormwater management works, the Owner may need to apply for an amendment to 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 *Business Names Act*, 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 *Corporations Information Act*, 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 in Effluent Limit Table (Table 1) in "**Schedule B**" as effluent parameters are not exceeded in the effluent from the Works.
2. Notwithstanding any other conditions of this Approval, the Owner shall ensure 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 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**

1. The Owner shall, upon commencement of operation of the Works, carry out a scheduled monitoring program of collecting samples at the required sampling points, at the frequency specified or higher, by means of the specified sample type and analyzed for each parameter listed in the Table 2 - Effluent Monitoring (Stormwater Detention Pond), as outlined in "**Schedule C**", and record all results, as follows:
  - a. all samples and measurements are to be taken at a time and in a location characteristic of the quality and quantity of the sewage stream over the time period being monitored.
  - b. definitions and preparation requirements for each sample type are included in the document referenced in Paragraph 2.b.
  - c. definitions for frequency:
    - i. Monthly means once every month;
2. The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following documents and all analysis shall be conducted by a laboratory accredited to the ISO/IEC:17025 standard or as directed by the District Manager:
  - a. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended from time to time by more recently published editions;
  - b. the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as

amended from time to time by more recently published editions; and

- c. an approved method that meets the same data quality objectives specified in either of the above documents.
3. The sampling frequencies and parameters specified in subsection (1) 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.
4. In the event of an exceedance of the four (4) month rolling average concentration values of the trigger parameters listed in Table 3 - Trigger Concentration Values for Monitoring, as outlined in "**Schedule D**", during the prescribed monitoring events listed in Table 2, as outlined in "**Schedule C**", 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 submit the plan to the District Manager for review and approval.
5. Once accepted by the District Manager, the Owner shall implement the contingency plan within three (3) months of receiving approval.

## **7. REPORTING**

1. In addition to the obligations under Part X of the EPA, the Owner shall, within ten (10) working days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, 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 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 the 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 report 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 Condition 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 wastewater from irrigation of the plants, the wastewater from the washing of floors/vegetable (if any), floor drain wastewater, or boiler blow downs or condensate) from the site be discharged into the Stormwater Management Facilities.

## **Schedule A**

1. Application for Environmental Compliance Approval (ECA) dated May 21, 2019 and received on May 31, 2019 and submitted by Twin Creeks Greenhouse Inc., to amend the ECA No. 9251-AJFSLG for the proposed stormwater management facility serving the greenhouse development, including design brief, final plans and other supporting information.

## "Schedule B"

**Table 1 - Effluent Limits (Stormwater Detention Pond)**

Effluent Parameter	Concentration Limit Four (4) month Rolling Average (Note 1 see below) (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 2 see below)

Note 1: For an example of rolling average, see "Understanding Rolling Average" below.

Note 2: pH would be individual event discreet sample, not a four (4) month rolling average.

### 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.

Sampling Period	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  $(0.20+0.30+0.25+0.15)/4=0.22$



## "Schedule C"

**Table 2 - Effluent Monitoring (Stormwater Detention Pond)**

<b>Sampling Station</b>	Effluent from the stormwater detention pond, or in the stagnant pond in the vicinity of the outlet when no discharge occurring and which is representative of the volume of stormwater as a whole.
<b>Sampling Type</b>	Grab
<b>Sample Frequency</b>	Monthly (year-round)
<b>Sampling Parameters</b>	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

## "Schedule D"

**Table 3 - Trigger Concentration Values for Monitoring**

<b>Trigger Parameter</b>	<b>Concentration - four (4) monthly rolling average (milligrams per litre)</b>
Nitrate Nitrogen	15
Total Phosphorus	0.3
Potassium	20
Total Suspended Solid	30

*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.
4. Condition 4 is imposed to ensure that the effluent discharged from the Works to the receiver meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver.
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 which is consistent with the design objectives specified in the Approval.
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.

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 9251-AJFSLG issued on February 23, 2017.**

*In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:*

- a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;

b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.*

*The Notice should also include:*

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

*And the Notice should be signed and dated by the appellant.*

*This Notice must be served upon:*

The Secretary\*  
Environmental Review Tribunal  
655 Bay Street, Suite 1500  
Toronto, Ontario  
M5G 1E5

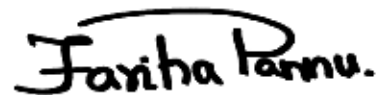
AND

The Director appointed for the purposes of Part II.1 of  
the Environmental Protection Act  
Ministry of the Environment, Conservation and Parks  
135 St. Clair Avenue West, 1st Floor  
Toronto, Ontario  
M4V 1P5

**\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)**

*The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.*

DATED AT TORONTO this 22nd day of January, 2020



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Fariha Pannu, P.Eng.

Director

appointed for the purposes of Part II.1 of the  
*Environmental Protection Act*

NH/

c: District Manager, MECP Sarnia District Office  
Ken Graham, R. Dobbin Engineering Inc.