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**REPORT TO:** Mayor and Members of Council  
**DATE:** January 23, 2019  
**FROM:** Jill Bellchamber-Glazier, CAO-Clerk  
**SUBJECT:** Trillium Landfill 2018 Ministry Inspection

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## **RECOMMENDATION**

**THAT Council receive the Trillium Landfill 2018 Ministry Inspection report for information; and**

**THAT staff be directed to provide an update to the Ministry of the Environment, Conservation and Parks on the status of the application to amend ECA A041403 related to the establishment of a permanent transfer station at the Trillium Landfill.**

## **BACKGROUND:**

The Ministry of the Environment, Conservation, and Parks, provided a copy of its Solid Non-Hazardous Waste Inspection Report for the Trillium Landfill to Southwest Middlesex on January 15, 2019. The inspection report provides an update of the changes that have taken place at the Trillium Landfill since the ministry's October 2016 inspection.

The inspection report includes a review of ministry files, summarizes multiple ministry site visits, as well as discussions and meetings with municipal staff and consultants retained by the municipality.

The ministry requires that the municipality provide a written update by February 15, 2019, on the status of the application to amend the Trillium ECA to include the establishment of a permanent transfer station at the Trillium Landfill site.

## **ANALYSIS:**

Southwest Middlesex's Trillium and Limerick Landfill sites were 'red-flagged' by the ministry due to environmental and non-compliance concerns resulting in increased frequency of ministry inspections.

The municipality opted to close Limerick Landfill and mothball Trillium Landfill and engaged the engineering firm of Golder Associates Ltd to assist in the preparation of the plans required to be submitted to the ministry, and to assist in monitoring and reporting of environmental impacts at both sites.

Ministry staff are aware that the direction approved by council is for the development of a closure plan of the Trillium Landfill site, with the option of returning to landfilling operations at a future time, if the municipality deems it cost-effective.

Staff have communicated to the ministry that the municipality is committed to operating within the rules of the amended ECA for the site.

### Report

The ministry's report outlines the provincial legal framework related to solid waste management under the Environmental Protection Act (EPA), and the ministry's role in monitoring compliance through inspections at waste disposal sites.

The report captures information from ministry inspections undertaken on April 23, 2018 and December 13, 2018 at the landfill located at 3945 Trillium Drive.

The report notes that the rules for operation at the Trillium site were changed on January 11, 2018 when the ministry issued a new Environmental Compliance Approval (ECA) for the site.

The ministry's report notes that through previous inspections that it was determined that the ECA needed to be updated to include new requirements to ensure that the municipality was using up-to-date best practices for managing and operating the landfill. The ministry determined that there was a need for information and data about the impacts of the site, including surface and groundwater monitoring, to determine if there are adverse environmental impacts off-site from the landfill.

As a result, the local ministry office issued a "Field Alert" to the ministry's Environmental Approvals Branch requesting the updates to the ECA, including such items as a Design and Operations Report and a monitoring and reporting program.

Southwest Middlesex was notified of the ministry's concerns and the issuance of the "Field Alert" on January 26, 2017, when ministry staff met with the new public works manager at that time.

At that time, the ministry identified their ongoing concerns related to operations at the landfill, including exposed waste and the need for appropriately managing leachate. SWM staff were advised to prepare for the changes.

On December 11, 2017, a draft of the amended ECA were provided to SWM by the ministry for review and comment. The ECA was amended January 11, 2018.

The amended ECA includes many conditions, including:

- General operations provisions;
- Landfill site operations;
- Training requirements;
- Inspection and record keeping requirements;
- Monitoring requirements;
- Establishment of complaints procedures;
- Establishment of emergency situations and response;
- Annual reporting; and
- Site closure plan.

The report notes that in February 2018, SWM decided to temporarily close the landfill to review costs associated with operations of the Trillium Landfill within the context of the amended ECA and its associated requirements.

A high-level cost analysis was undertaken, and upon review the municipality opted to cease landfilling operations at Trillium. The report notes the ongoing service to residents with residential roadside garbage and recycling pick-up and the establishment of the temporary transfer station, which is subject to ministry approval.

The report indicates that the "ministry is encouraged with the municipality's response and actions, to date, to address the ongoing issues identified during previous inspections".

The municipality is required to respond to the requirement to provide written communication to the ministry related to the establishment of a permanent transfer station.

**FINANCIAL IMPLICATIONS:**

No financial impacts of this report.

**LEGAL IMPLICATIONS:**

The municipality is required to follow the Environmental Protection Act and the Environmental Compliance Approval with respect to the Trillium Landfill.

**OPERATIONAL IMPLICATIONS:**

The Trillium Landfill site is temporarily closed. Household garbage collection is being taken to Waste Management’s Twin Creeks facility by Emterra.

**ENVIRONMENTAL/CLIMATE CHANGE IMPLICATIONS:**

Monitoring wells have been installed at both the Trillium and Limerick Landfill site locations. Data collection will begin in 2019 and will inform the municipality and the ministry of the potential for adverse off-site implications. Remediation may be required if data informs the municipality of negative impacts.

**RELATIONSHIP TO STRATEGIC PLAN:**

Neutral issues (does not support negatively or positively)

**ATTACHMENT(S):**

- January 15, 2019 Ministry of Environment Trillium Landfill Inspection Report



## Solid Non-Hazardous Waste Disposal Site Inspection Report

<b>Client:</b>	The Corporation of the Municipality of Southwest Middlesex Mailing Address: 153 McKellar St, Post Office Box, 218, Glencoe, Ontario, Canada, N0L 1M0 Physical Address: 153 McKellar St, Southwest Middlesex, Municipality, County of Middlesex, Ontario, Canada, N0L 1M0 Telephone: (519)287-2015, Extension: 119, FAX: (519)287-2359, email: tclayton@southwestmiddlesex.ca Client #: 2308-4XUQEP, Client Type: Municipal Government, NAICS: 913910		
<b>Inspection Site Address:</b>	Trillium Drive Landfill Site (Ekfrid Landfill) Address: 3945 Trillium Dr, Southwest Middlesex, Municipality, County of Middlesex, N0L 1M0 District Office: London - District LIO GeoReference: Zone: 17, UTM Easting: 445036.6, UTM Northing: 4731827.0, Latitude: 42.736988, Longitude: -81.67147 Site #: 7217-67MJFL		
<b>Contact Name:</b>	Jill Bellchamber-Glazier	<b>Title:</b>	Chief Administrative Officer - Clerk
<b>Contact Telephone:</b>	(519)287-2015 ext109	<b>Contact Fax:</b>	
<b>Last Inspection Date:</b>	2016/10/18		
<b>Inspection Start Date:</b>	2018/04/23	<b>Inspection Finish Date:</b>	2018/12/13
<b>Region:</b>	Southwestern		

### 1.0 INTRODUCTION

Ontario has a comprehensive legislative and regulatory framework to ensure that wastes are managed in an environmentally safe manner. Through the Environmental Protection Act (EPA) and accompanying regulations, the Ministry of the Environment, Conservation and Parks (MECP) has established a cradle to grave approach which includes the systematic control of collection, storage, transportation, treatment, recovery and disposal of waste.

The Ministry's Environmental Approvals Access and Service Integration Branch (EAASIB) issues Environmental Compliance Approvals (ECAs) under Part V of the Environmental Protection Act (EPA) for solid non-hazardous waste sites. The approval must be obtained prior to the site being established, used, or operated.

To confirm whether the regulated community is complying with the requirements related to waste disposal the Province is committed to conducting proactive inspections of landfill sites. As part of this commitment Ministry staff conducted a planned inspection of the Trillium landfill as part of the London District 2018/19 inspection program. The site is located at 3945 Trillium Dr, Southwest Middlesex, Municipality, County of Middlesex.

The inspection of the site was carried out on April 23, 2018 and December 13, 2018 by Provincial Officer John McGlynn. The inspection consisted of a review of available Ministry files and information, as well as a site visit to assess the operation's compliance with the terms and conditions of Environmental Compliance Approval (ECA)# A041403. The findings are documented below.

Up until January 11, 2018, the landfill operated under the original Certificate of Approval issued in

1971 and renewed each year until 1980. The original ECA did not require the municipality to prepare and implement a design and operations report, or conduct surface and groundwater sampling.

It was determined during the previous inspection that the existing ECA needed to be updated. An updated ECA would include additional requirements to ensure the municipality is utilizing current best management practices when operating the landfill. The need for a surface/groundwater monitoring program is necessary to provide analytical data that will assist in determining if current/future operations at the landfill are contributing to adverse impacts off-site. As a result, the London District Office issued a 'Field Alert' to the MOECC Environmental Approvals Branch (EAB) requesting the current ECA be updated and amended to include, but not limited to, requirements for a Design & Operations Report and establishment of a monitoring/reporting program.

On January 26, 2017 Provincial Officer McGlynn met with the new Southwest Middlesex Public Works Manager, Tara Clayton, to discuss the ongoing concerns with the operations at the landfill, specifically, the issues surrounding exposed waste and leachate management at the site. It was communicated at that time that the London District Office would be issuing a 'Field Alert' requesting the current ECA be updated and amended, and suggested the municipality consider making preparations for the upcoming changes.

On December 11, 2017 the MECP Client Services and Permissions Branch provided a draft copy of the amended ECA to the Municipality of Southwest Middlesex for review and comment.

A notice of amendment was issued on January 11, 2018 to incorporate general ECA conditions. The amended ECA includes updates to the general operations provisions, landfill site operations, training, inspections and record keeping, monitoring, complaint procedure, emergency situations, annual reporting, and site closure.

In February 2018, the municipality made the decision to temporarily close the landfill in order to investigate the costs of continuing to operate Trillium Landfill in compliance with the Environmental Compliance Approval.

In June 2018 the municipality made the decision to cease landfilling operations at the landfill. As a result, the municipality took actions to ensure the landfill was adequately covered with intermediate cover to allow for temporary discontinued operations. The municipality continues to provide residential roadside garbage and recycling pickup and has established a temporary transfer site at the Trillium landfill for large household items. The curbside waste is being taken to the Twin Creeks Landfill in Watford, Ontario. The municipality has retained the services of a consultant to assist in developing a plan to establish a permanent transfer station at the site.

The ministry is encouraged with the municipality's response and actions, to date, to address the ongoing issues identified during previous inspections. The Ministry will continue working with the municipality to ensure that the landfills meet the standards as set out in their respective Environmental Compliance Approvals.

The Ministry is currently working with the municipality and its consultants on a closure plan and to help with the required amendments to establish a permanent transfer station at the site.

## 2.0 INSPECTION OBSERVATIONS

### **Certificate of Approval Number(s):**

A041403

Certificate of Approval number A041403 was issued on July 3, 1980 and approved a 20.2 hectare (50 acre) waste disposal site in accordance with the application and supporting information forms. The approval was issued originally in 1971 and renewed each year until 1980.

On January 11, 2018 Amended ECA # A041403 Notice No. 1 was issued.

The site is approved to receive domestic, commercial and non-hazardous solid industrial waste and that the approval be a register instrument on title.

**2.1 FINANCIAL ASSURANCE:**

**Specifics:**

The site is owned by the municipality, financial assurance requirements do not apply.

**2.2 APPROVED AREA OF THE SITE:**

**Specifics:**

Trillium Drive Landfill is a 20.2 hectare (50 acre) site surrounded by agricultural and natural areas. The landfill footprint is not defined in the approval and is difficult to determine where filling has taken place. The closest residential dwelling was observed to be approximately 250 metres north-east of the landfill. Newbiggen Creek borders the property from the north-east corner to the southeast corner, with drainage from the site being generally directed towards the creek.

**2.3 APPROVED CAPACITY:**

**Specifics:**

Condition 3.4 of ECA# A041403 Notice No. 1 required the following:

By no later than May 31, 2018, the Owner shall submit to the Director for approval, and to the District Manager, a determination of the theoretical maximum approved capacity of the landfill site in accordance with the Ministry document titled "Landfill Capacity Determination, Final Version - December, 1993" and a determination of the volume and weight of waste and daily/interim cover landfilled to date.

As required by condition 3.4, on May 4, 2018 the municipality submitted a submission of the theoretical Maximum Approved Capacity for the Trillium landfill.

On November 1, 2018 ECA #A041403 Notice No. 2 was issued and revoked and replace condition 3.4 with the following:

The approved maximum theoretical capacity of the Site including waste and daily cover is 615,696 cubic metres.

**2.4 ACCESS CONTROL:**

**Specifics:**

At the time of the inspection the landfill was observed to have a secure entrance. There are signs posted at the entrance which includes hours of operation, approved wastes, unapproved wastes, and tipping fees.

**2.5 COVER MATERIAL:**

**Specifics:**

During the previous inspection I observed a large area of exposed waste, considerable in height, with no soil coverage. In addition, a large pond of leachate was observed at the base of the exposed waste. Since the previous inspection, the municipality has taken the corrective actions to ensure that all previously observed exposed waste has been adequately covered, thereby, reducing the accumulation of leachate on the site.

**2.6 WASTE BURNING:**

**Specifics:**

At the time of the inspection there was a burn area observed on the south-east side of the landfill. The burn area was observed to only contain brush and clean wood.

**2.7 GROUNDWATER/SURFACEWATER IMPACT:**

**Specifics:**

During the previous inspection evidence of surface water flowing from the active tipping area to the creek was apparent by the number of water flow paths observed carved in the soil. Leachate impacts to surface water was a concern due to the waste management practises and excessive amount of leachate observed pooling at the base of the active tipping area. As a result of the ongoing identified concerns, the municipality retained a consultant to assist with surface water monitoring of the creek, and prepared a leachate management plan for the site.

ECA# A041403 Notice No. 1 condition 3.2 states that by no later than **November 31, 2019**, the *Owner* shall submit to the *Director* for approval, with copies to the *District Manager*, a Design and Operations report pertaining to current and future operational procedures for landfilling at the *Site*. The report shall include but not be limited to the following :

- a. a plan(s) showing the *Site* location, *Site* plan, geological and hydrogeological *Site* conditions, landfilling staging plan and approved limits of wastes;
- b. a description of the landfill design and solid waste management related features such as but not limited to : landfill containment features (engineered or natural attenuation, contaminant attenuation zone), leachate and landfill gas management system (if present), mini-transfer area, surface water bodies, drainage structures or features;
- c. a discussion on the landfill service area, the type and expected annual of waste accepted, waste inspection procedures, theoretical site capacity, the proposed volume of waste to be landfilled (under this plan compared to theoretical volume), the current volume of waste landfilled and the expected remaining life expectancy;
- d. *Site* operation and maintenance procedures. These items shall include but not be limited to the following :
  - i. hours of operation;
  - ii. security/access;
  - iii. signage;
  - iv. receiving, screening and rejection of waste;
  - v. unloading, handling and storage of waste;
  - vi. mini-transfer area;
  - vii. daily/interim cover material;
  - viii. equipment and buildings;
  - ix. litter control;
  - x. dust and noise control;
  - xi. animal/vector control;
  - xii. complaints;
  - xiii. *Site* inspection, spill, fire and leakage recording; and
  - xiv. training;
- e. schedule for inspections at the *Site* ;
- f. description of leachate management plan for the site and a contingency plan to address leachate outbreaks or migration off-site;
- g. description of the site monitoring programs for groundwater, surface water and landfill gas;
- h. description of the steps to be taken to address complaints at the site such as odours, dust, noise, vectors, vermin, rodents;
- i. description of stormwater management at the *Site* ; and
- j. conceptual closure plans for the landfill including but not limited to the following :
  - i. description of the end use of the site;
  - ii. drawings showing the final contours;
  - iii. the final waste volume;
  - iv. the thicknesss of the final cover; and
  - v. the material to be used for the final cover.

Compliance with condition 3.2 will assist in providing the information needed to ensure the site is operating in a manner that meets the current standards for landfills .

## 2.8 LEACHATE CONTROL SYSTEM:

### Specifics:

The site does not have a leachate collection system . During the previous inspection a large quantity of exposed leachate was observed pooling at the base of the active tipping area .The municipality has taken corrective actions to ensure that all previously observed exposed waste has been adequately covered , thereby, reducing the accumulation of leachate on the site. However, it is anticipated that small quantities of leachate may continue to accumulate near the previous active tipping area . The municipality shall continue to implement their current leachate management plan to ensure no off-site impacts results from leachate accumulation .

## 2.9 METHANE GAS CONTROL SYSTEM:

### Specifics:

There are no methane gas control requirements for the Trillium Drive Landfill .

## 2.10 OTHER WASTES:

### Specifics:

No evidence was observed of subject or treated characteristic waste being disposed of at the site .

## 3.0 REVIEW OF PREVIOUS NON-COMPLIANCE ISSUES

As a result of the findings from the inspection completed by the MOECC in October 2016 the following actions were required:

- 1) By March 3, 2017 provide the undersigned Provincial Officer with a written action plan to address the identified ongoing concerns with leachate management on the site .

The municipality submitted a leachate management plan to address identified concerns - compliance attained .

#### 4.0 SUMMARY OF INSPECTION FINDINGS (HEALTH/ENVIRONMENTAL IMPACT)

**Was there any indication of a known or anticipated human health impact during the inspection and /or review of relevant material, related to this Ministry's mandate ?**

No

**Specifics:**

**Was there any indication of a known or anticipated environmental impact during the inspection and /or review of relevant material ?**

No

**Specifics:**

**Was there any indication of a known or suspected violation of a legal requirement during the inspection and/or review of relevant material which could cause a human health impact or environmental impairment ?**

No

**Specifics:**

**Was there any indication of a potential for environmental impairment during the inspection and /or the review of relevant material ?**

No

**Specifics:**

**Was there any indication of minor administrative non-compliance?**

Yes

**Specifics:**

Amend ECA to reflect transfer station .

#### 5.0 ACTION(S) REQUIRED

1. By February 15, 2019 provide the undersigned Provincial Officer with a written update on the status of the application to amend ECA A041403 Notice No.1 to include the establishment of a permanent transfer station at the Trillium landfill site.

#### 6.0 OTHER INSPECTION FINDINGS

#### 7.0 INCIDENT REPORT

Applicable  
0660-B87MPW 

## 8.0 ATTACHMENTS

**PREPARED BY:**

**Environmental Officer:**

**Name:**

John McGlynn

**District Office:**

London District Office

**Date:**

2019/01/07

**Signature**



**REVIEWED BY:**

**District Supervisor:**

**Name:**

Dan Crompt

**District Office:**

London District Office

**Date:**

2019/01/08

**Signature:**



**File Storage Number:** -

**Note:**

"This inspection report does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they may apply to this facility. It is, and remains, the responsibility of the owner and/or the operating authority to ensure compliance with all applicable legislative and regulatory requirements"