



**DILLON**  
CONSULTING

WASTE CONNECTIONS OF CANADA (WASTE  
CONNECTIONS)

# Ridge Landfill Agricultural Work Plan (Final)

Ridge Landfill Expansion EA

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## Project and Work Plan Overview

This Agricultural Assessment work plan has been prepared to support the environmental assessment (EA) for the Ridge Landfill expansion, and is based on the commitments made in the final amended Terms of Reference (ToR) for the EA that was approved by the Ministry of the Environment and Climate Change (MOECC) in May 2018.

Waste Connections of Canada (Waste Connections) is proposing an expansion of the Ridge Landfill in order to continue to provide long-term residual disposal capacity for the company's large IC&I customer base, and as a regional and inter-regional waste management facility to serve the projected increase in population and economic growth in southern and central Ontario.

The Ridge Landfill has been in operation since 1966, and was previously expanded in 1999. Waste Connections owns 340 hectares (ha) of land at the Ridge Landfill. The existing Landfill Site Area, which is permitted by an ECA from the MOECC for waste management, and environmental work purposes, is 262 ha. The area within which waste disposal is permitted, called the Waste Fill Area, is 131 ha or half of the Landfill Site Area. As of December 2017, it is estimated that the existing Waste Fill Area at the Ridge Landfill site will provide waste disposal capacity until approximately 2021 at the current fill rate.

The current approved capacity for the Ridge Landfill is 21 million cubic metres (m<sup>3</sup>). The site is approved to accept a maximum of 1,300,000 tonnes of waste per year (the MOECC approved annual waste disposal rate). The EA does not propose to increase the maximum annual fill rate (this would remain as-is); however, Waste Connections is seeking the EA to increase the life of the facility for a 20 year planning period, from 2022-2041.

The waste being landfilled is approximately 98% IC&I waste and 2% residential waste. As part of the EA approval, Waste Connections would agree to reduce their IC&I service area from all of Ontario to just southern and central Ontario, and their residential service area from Chatham-Kent and the neighbouring counties of Essex, Lambton, Middlesex and Elgin, to only the Municipality of Chatham-Kent.

This Agricultural Assessment work plan outlines the tasks to support the evaluation of alternative methods, and to undertake an impact assessment once the preferred alternative method is determined. The following paragraphs provide a brief summary of the scope of the Agricultural Assessment work, including protocols and/or standards to be adhered to while work is undertaken.

The Agricultural Assessment will seek to identify, and examine potential agricultural impacts related to the proposed landfill expansion. The objectives of the agricultural assessment are as follows:

- Establish the baseline conditions for agricultural resources within the on-site area including those lands that are designated Waste Management Area, Conservation, Agricultural/Buffer Area and Agricultural that have been identified in Schedule A4 of the Chatham/Kent Official Plan; Establish the

baseline conditions for agricultural resources within the Off-site area which is typically extends a distance of up to 1000 metres from the On-site boundary;

- Establish the baseline conditions for agricultural resources that are located along the designated haul route for the landfill;
- Carry out an assessment of potential impacts to agricultural resources within the on-site area for each of the proposed landfill expansion site development alternatives (i.e., alternative methods);
- Carry out an assessment of potential impacts to agricultural resources within the off-site area for each of the proposed landfill expansion site development alternatives (i.e. alternative methods) and
- Prepare an Agricultural resource management plan for the purpose of mitigating potential impacts.

The scope of the Agricultural Assessment will include a careful review of background information together with a comprehensive field investigation program as well as farm community input from the Social Discipline Survey. This will be, followed by an examination of potential impacts for the proposed landfill expansion alternatives (i.e., alternative methods).

The criteria and indicators that will be applied for the purpose of the assessment will include:

1. Loss of existing or potential agricultural land within the On-site area including those lands within the Waste Management Area, Conservation, Agricultural/Buffer Area and Agricultural that have been identified in Schedule A4 of the Chatham/Kent Official Plan
2. Potential Disturbance to the Agricultural Offsite area including those lands that have been identified as Agricultural in Schedule A4 of the Chatham/Kent Official Plan
3. Potential Disturbance along the Waste Management Truck Route by nuisance effects (i.e. litter and dust) to agricultural crops.

A comparative evaluation and ranking of the proposed landfill expansion alternatives will be undertaken based on the results of the impact assessment with the objective of predicting the potential net effects associated with each alternative.

Following the selection of the preferred landfill expansion alternative, an Agricultural Resources Management Plan will be developed with the goal of preserving existing and potential agricultural land On-site for as long as possible before it is required for the fill area.

This will include examining those lands that are currently designated Agricultural/Buffer, and how their removal may impact adjacent off-site agricultural operations.

The Agricultural Resources Management Plan will also summarize any nuisance impacts along the haul route.

## 2.0 Work Plan for Agriculture

The work plan for agriculture will follow the same procedure as conducted in 1997, as it will be conducted by the same agrologist who completed the Agricultural component of the Ridge Landfill Expansion EA in 1997. The Ridge Landfill is owned and operated by Waste Connections of Canada (Waste Connections).

### 2.1 Baseline Conditions

Baseline conditions for agriculture was first investigated through various background and field studies that were conducted in 1990, 1991, 1995, and 1996, with the results of these studies being presented in the Ridge Landfill Expansion Environmental Assessment document in 1997.

From conducting a wind shield analysis of agricultural activity within the Ridge landfill property in 2015, most fields have the same crop type (i.e. corn/soybean) that was encountered in 1997. It was also noted that the apple orchards are also located in the On-Site and Off -Site areas including one that is owned by PWS (located On-Site adjacent to the Southeast woodlot), and a second privately owned orchard and market garden farm in the Off-Site Area at Allison Line and Charing Cross Road (Thompson Orchards). However, further analysis of the agricultural activity is required. This would include walking each field within the On-Site Area to record the crop type, as well as determining if any field abandonment has occurred.

Windshield surveys and air photo analysis will also be required within the Off-Site Area as well as along the Haul route to determine if there are any landfill related nuisance impacts (i.e. Litter, noise and odour).

Special attention will be made to the privately owned orchard and market garden farm to determine potential negative effects. It should be noted that analysis of this farm will also be included in the Social and Air Quality disciplines.

### 2.2 Study Areas

For the purposes of the Agriculture Scope of Work, the study areas have been defined as follows:

- On-Site Study Area (“on-site”) – includes the property on which the current Ridge Landfill and proposed expansion is situated. This would include the existing Waste Management Area, Conservation and Agricultural/Buffer Areas as well as Agricultural areas within the proposed expansion area.
- Off-Site Study Area (“off-site”) – encompasses the area within one kilometre (1000 metres) from the edge of the On-site area. Note: Impacts from site operations are anticipated to be localized and within the subject property.

- Haul Route Study Area (“haul route”) – encompasses lands immediately adjacent to Communication Road, Drury Line and Erieau Road which are identified as the designated haul routes for the site.  
Note: Potential impacts from the haul route would be limited to litter that has fallen from passing waste trucks and the potential for traffic delays/safety issues due to interactions between traffic and farm vehicles.

### 2.3 Impact Assessment Criteria and Indicators

The table below summarizes the criteria and indicators to be used in the EA. These are consistent with the criteria and indicators used in the 1997 EA.

Assessment Criteria	Indicators	Rationale	Data Sources
Assess potential for loss of agricultural resource “On Site”	Soil capability	Under the Planning Act, Class 1 to 3 soils that are designated agricultural are considered Prime Agricultural lands and should be preserved for future agricultural usage	Field Investigations Soil Maps Soil Capability mapping Official Plan and policies.
	Presence of tile drainage/surface ditches.	Tiles and drainage ditches represent and investment in land improvements to improve soil productivity.	Field Investigations Soil Maps OMAFRA drainage mapping.
	Area of crop production	Identifies the amount of land in use for agricultural production (e.g. common field crops/orchards/fallow) that will be removed by the facility.	Field investigations Agency and key contacts
	Number and type of farm infrastructure	Identifies the number and condition of farm infrastructure which shows long term capital investment.	Field investigations Agency and key contacts
Assess potential for impact to agricultural resources “Off-Site”	Area of crop production within the off-site study area.	Nuisance impacts from the landfill can cause economic losses and frustration to Off-Site farmers. For example, litter can damage cultivation/seeding and harvest equipment thus causing delays in farming operations. Dust can affect growth and interfere with pest management controls	Field investigations Farm operator interviews

Assessment Criteria	Indicators	Rationale	Data Sources
	Number of livestock infrastructure within the off-site study area.	Identifies the number and condition of farm infrastructure. Such infrastructure which are used for animal housing are considered sensitive.	Field investigations Farm operator interviews
Assess potential for disruption of farm operations along the Haul route	Number of farm building complexes with direct access to Haul Route	Indicates the number of ingress/egress points to farm building complexes where interference is most likely for farm operations along the Haul route.	Roadside Survey
	Number of field entrances with direct access to haul route	Indicates the number of ingress/egress points to farm fields where conflict could occur between slow moving farm machinery and haul trucks.	Field investigations Farm operator interviews

### 3.0 Reporting and Review of Alternatives for Agriculture

The agricultural assessment will be documented, and will include the update of agricultural activity for the On-Site, Off-site and Haul route boundaries. Changes in cropping trends will be included if there appears to be a change in crops compared to what was found in 1997. The review of the three alternatives will include analysis of how agriculture will be impacted by landfill development.

Action - Reporting will summarize the efforts that have taken place to accurately describe the agricultural conditions that exist On-Site, and its significance. This section will include the results of the comparison of alternatives. Reporting will also occur for the Off-Site Area and Haul Route.

### 3.1 Mitigation for Agriculture

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Agricultural land (aka agricultural soils) is a finite, non-renewable resource which cannot be replaced.

Action - A proposed agricultural soils contingency plan would be developed to determine how existing agricultural soils can be used most effectively. This would include investigating the need for landfill cap material; using soils to amend surrounding fields in the offsite area or using stripped soils as part of a soil mix operation in the local area.

Assumptions for agriculture – It is assumed that some and possibly all agricultural activity will not be possible on the Ridge site once the site is converted to a landfill land use. However, it is assumed that existing Best Management Practices to control litter from leaving the landfill site will continue during the life cycle of this facility.