Future Development of the Eastern Ontario Waste Handling Facility

GFL GREEN FOR LIFE environmental

Public Open House 1
on the
Environmental Assessment

October 7, 2021

Welcome

Welcome to **Public Open House 1**
on the Future Development of the Eastern Ontario Waste Handling Facility (EOWHF) Environmental Assessment

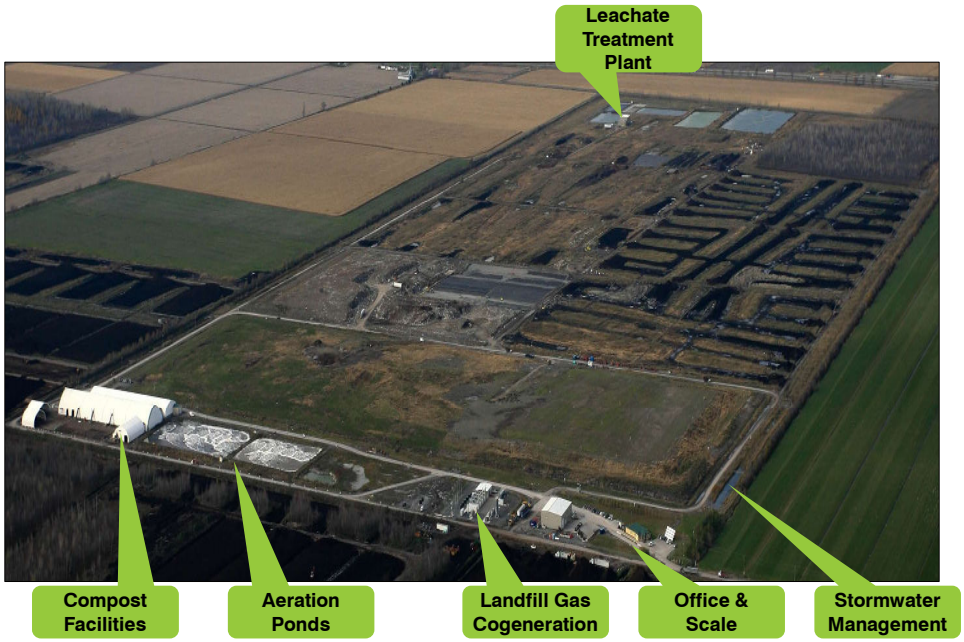
This **Public Open House** is being held to:

- Introduce the project
- Present the alternatives being considered
- Provide an overview of the Environmental Assessment (EA) process and the consultation process that will be followed during the EA
- Provide a summary of existing environmental conditions
- Obtain your input

Please take a few moments to browse the display materials. GFL staff and consultants are available to answer any questions you may have.

Role of the EOWHF

The EOWHF is located within the Township of North Stormont, approximately 5 km north-northwest of the village of Moose Creek, Ontario, and 5 km east of the village of Casselman, Ontario.



- Critical component of the Provincial waste management infrastructure
- Proudly serving Eastern Ontario municipalities, communities, residents and businesses since 2000
- Villages/towns/cities across Eastern Ontario plus Indigenous communities served, providing broad regional service
- Services include organics composting, tire collection, plus residential drop off, in addition to landfill
- Over 45 full-time employees
- Millions of dollars invested through purchase of goods and services in the local area for the past 20 years
- Significant secondary contracted services and employment used by GFL in all of the operations and support
- Education and research centre for various interest groups and schools

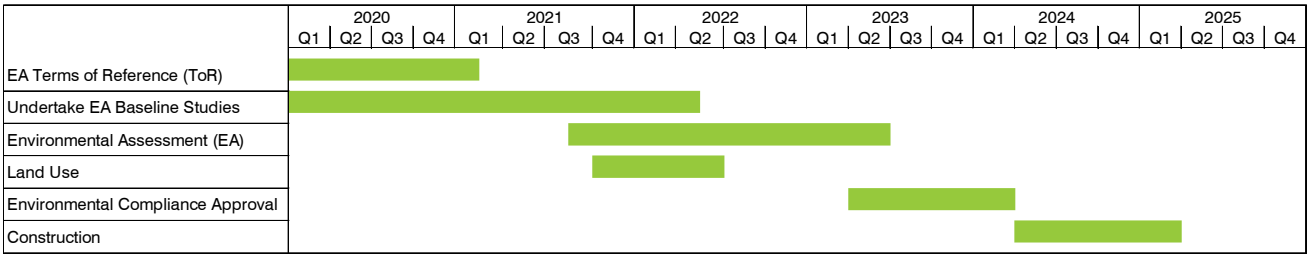
The Proposed Project

The proposed future development of the EOWHF would consist of the on-going development and operation of the landfill to the east of the existing EOHWF on lands owned by GFL.

The purpose of the undertaking is to provide an additional 15.1 million m^3 of landfill disposal capacity over approximately 20 years of operation at the maximum annual fill rate of 755,000 tonnes per year.

No changes to the approved annual fill rate or site access route are proposed

Depending on the approvals process, construction is estimated to begin in 2024.



Proposed Future Development Area

The lands being considered for the future development include lands within the existing EOWHF and the eastern half of Lot 16, Lots 14 and 15, and part of Lot 13 of Concession 10 east of the EOWHF, which has an area of approximately 233 hectares.

Alternative 1

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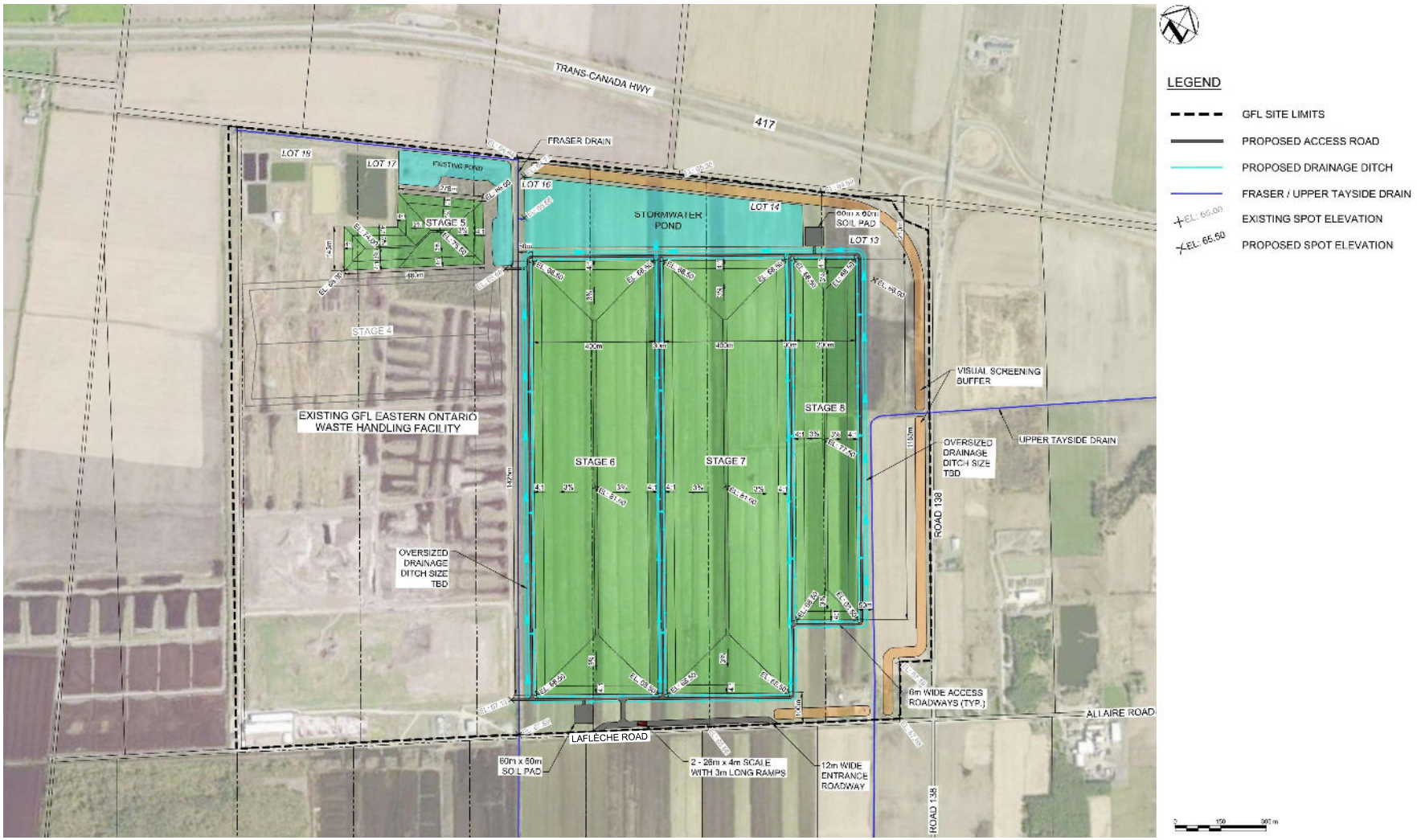
Alternative 2



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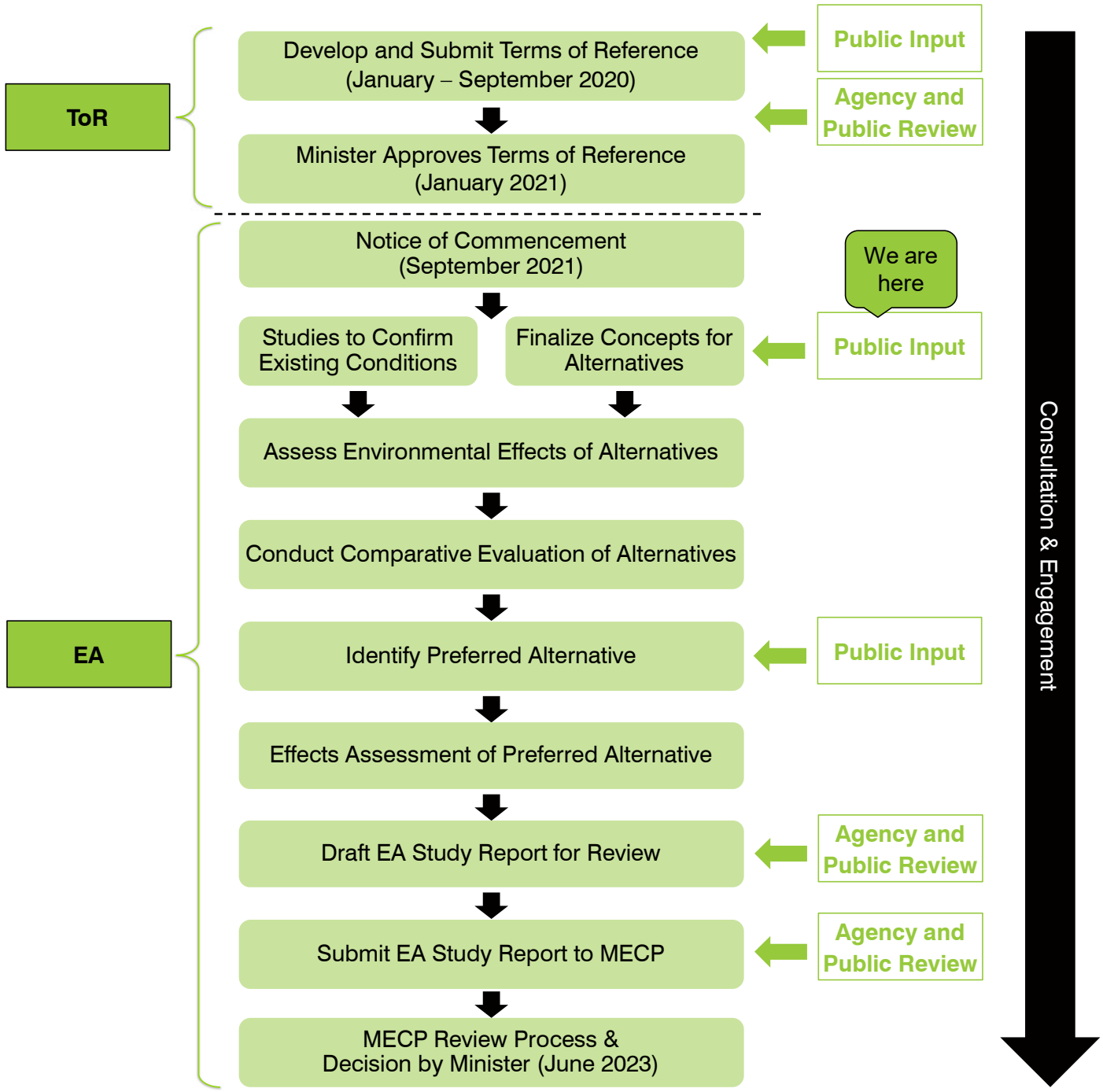
Environmental Assessment Process Overview



Evaluation Process

The evaluation process for the EA will include:

- Describing the environment potentially affected (existing conditions) based on evaluation criteria
- Describing the alternatives including mitigation measures built into the conceptual design
- Predicting the environmental effects from each alternative based on evaluation criteria
- Refining mitigation measures and predicting the net effects on the environment
- Comparatively evaluating the alternatives based on evaluation criteria
- Identifying the preferred alternative
- Conducting an effects assessment of the preferred alternative

Evaluation Criteria

The evaluation criteria consider the environments outlined by the MECP including Natural Environment, Socio-Economic Environment, Cultural Environment and Built Environment.

Evaluation Criteria	Rationale	Indicators
Natural Environment		
Atmospheric Environment		
Air Quality	Waste disposal site and associated operations can emit contaminants that can degrade air quality. Construction and operation activities at a waste disposal site can also lead to increased levels of particulates (dust) in the air.	• Predicted off-site point of impingement air concentrations of emitted contaminants of concern • Frequency of any exceedance of applicable standards or limits • Number of off-site receptors potentially affected (residential properties, public facilities, businesses/farms, institutions)
Noise	Activities related to operation of the landfill can result in an increase in noise levels associated with the waste disposal facility.	• Predicted site-related noise levels (measured in dBA or dBAI) • Number of off-site receptors potentially affected (residential properties, public facilities, businesses/farms, institutions)
Odour	Waste disposal site and associated operations can emit contaminants that generate odorous emissions.	• Predicted off-site odour concentrations ($\mu g/m^3$ and odour units) • Frequency of any exceedance of applicable standards or limits • Number of off-site receptors potentially affected (residential properties, public facilities, businesses/farms, institutions)
Geology and Hydrogeology		
Groundwater Quality	Contaminants associated with waste disposal sites have the potential to enter the groundwater and impact off-site groundwater.	• Predicted effects to groundwater quality at property boundaries and off-site
Groundwater Quantity	Physical works may disrupt natural groundwater flows.	• Predicted groundwater flow characteristics
Surface Water Environment		
Surface Water Quality	Effluent from the waste disposal site has the potential to run off into surface water through stormwater discharge or from the leachate collection and treatment system.	• Predicted effects on surface water quality onsite and off-site
Surface Water Quantity	Construction of physical works may disrupt natural surface drainage patterns and may alter runoff and peak flows. The presence of the expanded landfill may also affect base flow to surface water.	• Change in drainage areas • Predicted occurrence and degree of off-site impacts
Ecological Environment		
Terrestrial Ecosystems	Continued or expanded operation of the waste disposal facility may disturb the functioning of natural terrestrial habitats and vegetation, including rare, threatened or endangered species.	• Predicted impact on vegetation communities • Predicted impact on wildlife habitat • Predicted impact on vegetation and wildlife including rare, threatened or endangered species
Aquatic Ecosystems	Continued or expanded operation of the waste disposal facility may disturb the functioning of natural aquatic habitats and species, including rare, threatened or endangered species.	• Predicted changes in water quality • Predicted impact on aquatic habitat including fish habitat • Predicted impact on aquatic biota including rare, threatened or endangered species

Evaluation Criteria

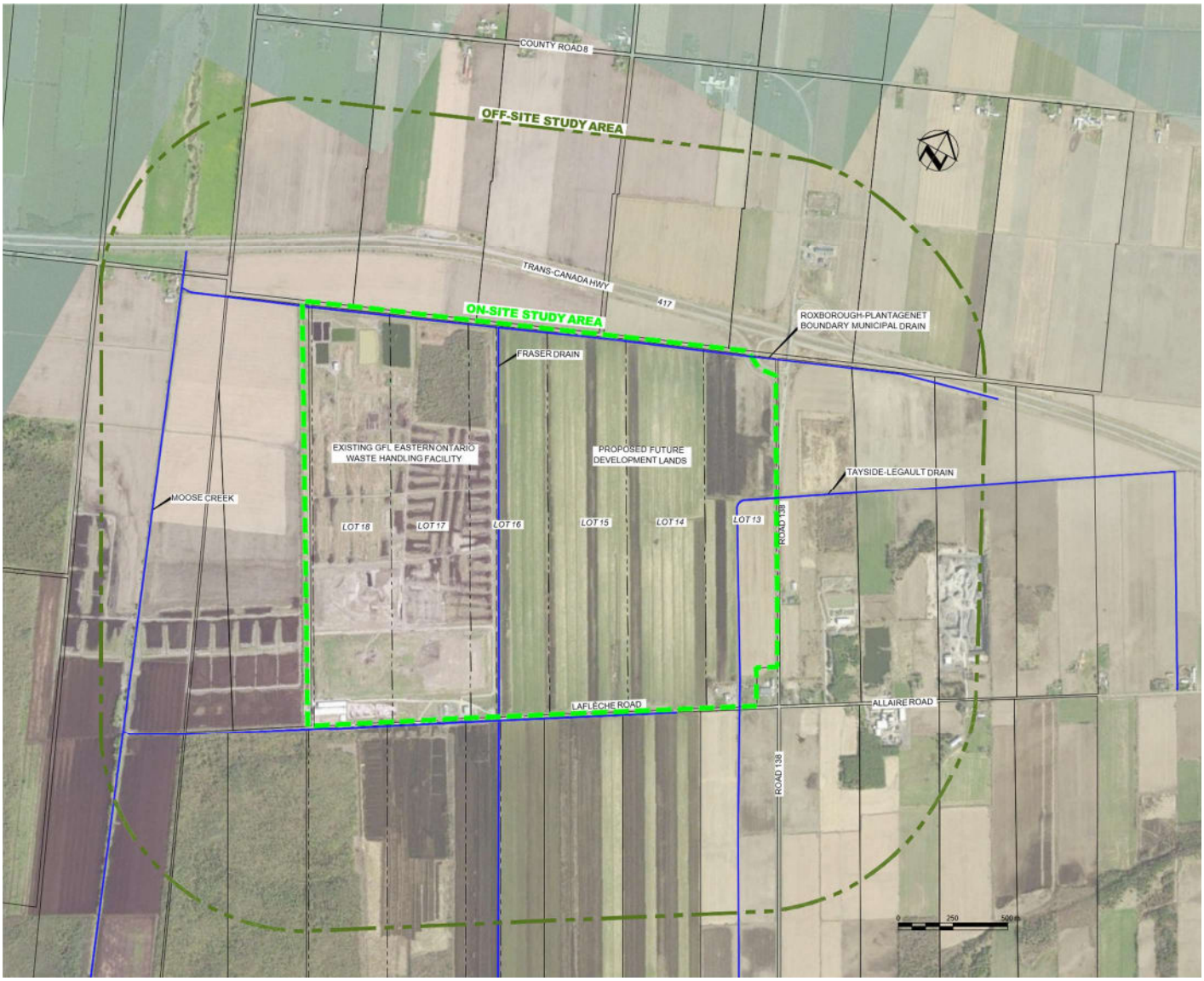
Evaluation Criteria	Rationale	Indicators
Socio-Economic Environment		
Economic		
Economic Effects on/Benefits to Local Community	The continued operation of the landfill could have economic effects on and/or provide economic benefits to the local community, which may include an increase or decrease in employment.	• Employment at site (number and duration) • Local business employment • Displacement of business activities • Opportunities for the provision and procurement of products and/or services
Social		
Effects on Local Community	Waste disposal facilities can potentially affect local residents and businesses in the vicinity of the site.	• Number of residents • Number and type of local businesses • Predicted changes to use of property
Visual Impact of Facility	The contours of the waste disposal facility may affect the visual appeal of a landscape.	• Predicted changes in perceptions of landscapes and views
Cultural Environment		
Cultural Heritage Resources	Activities related to construction and operation of the landfill may result in direct or indirect impacts to identified cultural heritage resources.	• Proximity of known or potential cultural heritage resources to the landfill (known/potential cultural heritage resources will be assessed for potential direct or indirect impacts)
Archaeological Resources	Archaeological resources are non-renewable cultural resources that can be destroyed by the construction and operation of a waste disposal facility.	• Archaeological resources on-site and in vicinity and predicted impacts on them
Built Environment		
Transportation		
Effects from Truck Transportation along Access Roads	Truck traffic associated with continued operations of the landfill may adversely affect residents, businesses, institutions and movement of farm vehicles in the site vicinity.	• Disturbance to traffic operations
Current and Planned Future Land Use		
Effects on Current and Future Land Uses	The continued operation of the landfill may not be fully compatible with certain current and/or planned future land uses in the off-site study area. Waste disposal facilities can potentially affect the use and enjoyment of recreational resources in the vicinity of the site.	• Current land use • Planned land use • Type(s) and proximity of off-site recreational resources within 1 km of a landfill footprint potentially affected • Type(s) and proximity of off-site sensitive land uses (e.g., dwellings, churches, parks) within 1 km of a landfill footprint potentially affected
Aggregate Extraction and Agricultural		
Aggregate Resources	Aggregate resources may be present in the area of the expanded landfill.	• Presence of known or identified aggregate resources and the predicted impact of impairment of their use due to the proposed footprint, construction and operation on-site
Effects on Agricultural Land	Agricultural land may be affected by the development of the facility.	• Predicted loss of agricultural land use • Predicted impacts on surrounding agricultural operations • Type(s) and proximity of agricultural operations (e.g., organic, cash crop, livestock)

Study Areas

Potential effects will be considered in terms of the following study areas:

On-site study area – the existing EOWHF, and the future development area comprising the eastern half of Lot 16, Lots 14 and 15, and part of Lot 13 of Concession 10 east of the EOWHF

Off-site study area – the lands in the vicinity of the future development extending approximately 1 km from the on-site study area



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Environmental Assessment

Summary of Existing Conditions

Discipline-specific studies were carried out to characterize the existing environmental conditions in the study areas.

Natural Environment
Atmospheric Environment
Air Quality
The area surrounding the EOWHF comprises mostly agricultural lands as well as portions of the Trans-Canada Highway, Highway 138, and several businesses. Sources of air emissions include on-site operations and activities from the surrounding agricultural operations, as well as highway traffic. Considering background air quality in the region and over 180 contaminants, air quality in the study area meets provincial standards and federal objectives for all contaminants of concern except for nitrogen dioxide, total suspended particulate matter, fine particulate matter (PM_{10} and $PM_{2.5}$), and benzene. All exceedances occur very close to the EOWHF property line and concentrations are below all standards and objectives at sensitive receptors (residences) except for benzene. For benzene, the regional background concentration exceeded the AAQC resulting in the exceedances at the property line and sensitive receptors. The concentration of benzene resulting from EOWHF operations does not exceed the provincial air standard.
Noise
The EOWHF and surrounding areas are within a high noise environment dominated by Highway 417 linking the Ottawa Region to Montreal and a commercial peat harvesting operation. Acoustic assessment criteria were established in accordance with the guidelines of the Ontario Ministry of the Environment, Conservation and Parks (MECP). Existing offsite sound levels from operations at the EOWHF are well within the applicable MECP limits and are less than the characteristic background sound levels in the vicinity. There have been no noise complaints at the EOWHF since operations began in 1999.
Odour
There are several odorous compounds emitted from the EOWHF that have odour-based air standards or guidelines. Concentrations of these contaminants do not exceed the air standards or guidelines at any location. There is no air standard or formal guideline for odour itself; however, a guideline of 1 odour unit per cubic metre is often used in Ontario. Modelling of the landfill at capacity predicts that this guideline would be exceeded approximately 1% of the time at a sensitive receptor; consequently, the EOWHF would meet the relevant guideline 99% of the time.
Geology and Hydrogeology
Groundwater Quality
The bedrock aquifer groundwater within the region is of high quality. Overburden aquifer groundwater quality in the region is also of relatively high quality. The current groundwater quality at the existing landfill, based on historical and recent groundwater monitoring data, suggests that landfill leachate generation at the EOWHF has been well managed. Groundwater quality, as determined through monitoring the site perimeter wells, demonstrates limited impact from landfilling.
Groundwater Quantity
Groundwater levels naturally fluctuate in response to seasons, annual variations, and major storm events. The existing EOWHF site is not within a source water protection zone. No issues have arisen with respect to ground water use since the site commenced operations. The water table depth is relatively shallow in the future development lands area. This area is underlain by a silty clay layer which is generally incapable of serving as an aquifer due to its low hydraulic conductivity.
Surface Water Environment
Surface Water Quality
The main surface watercourses providing drainage to and from the EOWHF site are the Fraser Drain and Moose Creek. A segment of the Tayside-Legault Drain flows through the eastern part of Lot 13 within the future development lands and then crosses Highway 138, eventually draining to the Scotch River after crossing Highway 417. The surrounding properties used for cash cropping, sod farming, and peat extraction, are drained by agricultural drains or peat drains which discharge to the Fraser Drain or Moose Creek at points between the EOWHF monitoring programs' upstream and downstream sampling stations. The surface water quality off-site in the Fraser Drain and Moose Creek downstream of the EOWHF has historically been affected by the discharge of treated leachate effluent from the site. Operational practices have been adjusted to limit effluent discharge based on the flow rate in Moose Creek. Toxicity sampling and biological monitoring now indicate that no adverse affects are occurring in Moose Creek from treated effluent discharge from the EOWHF.
Surface Water Quantity
The on-site and off-site study areas are located within the Moose Creek and Scotch River subwatersheds, both of which are part of the Lower South Nation River watershed. The surface water features around the site include the Fraser Drain along the eastern and northern sides of the EOWHF which drains into Moose Creek located to the west, and the Albert Fahey Award Drain located along the south side of the site, which also drains into Moose Creek. The future development lands contain agricultural tile drains, which drain most of the area west toward the Fraser Drain. The eastern portion of the area drains east toward the Tayside-Legault Drain. The existing EOWHF stormwater management system is approved under an existing environmental compliance approval and includes five surface water management ponds, perimeter channels, and an outlet control structure located at the northwest corner of the site, which begins at the downstream end of two of the ponds and extends to the outlet structure at the northwest corner of the site where flows are controlled to not increase peak flows downstream.

Summary of Existing Conditions

Ecological Environment
Terrestrial Ecosystems
Three Species At Risk were observed in the study area during field surveys: Bank Swallow, Barn Swallow, and Little Brown Myotis. Habitats used by the former two species fall within the future development lands and are protected under the *Endangered Species Act*. Western Chorus Frog (Threatened under the *Species At Risk Act*) was observed on the future development lands and along the northern border of the EOWHF. Snapping Turtle (Special Concern under both Acts) was observed on the future development lands.
Aquatic Ecosystems
No regionally, provincially and/or nationally listed fish species (Species At Risk) were observed in the study area during 2021 field studies, and no critical habitat sensitive spawning habitat was identified.
Socio-Economic Environment
Economic
The EOWHF is the largest employer in the Township of North Stormont, providing stable, long-term jobs for residents in the area. The EOWHF provides significant financial contributions to the local economy, through donations to support the local community, the host community agreement and municipal taxes. The EOWHF also supports a number of local vendors providing goods and services, spending approximately $15 million annually in the local community. The EOWHF has 39 employees; 69% reside in the United Counties of Stormont, Dundas and Glengarry. A quarter of the employees at the EOWHF have been employed for more than 7 years.
Social
Local Community
The Township of North Stormont has a population of 6,873 (2016) and is experiencing minimal population growth. There are eight existing residences within the off-site study area. The closest residence is within 50 metres of the eastern border of the on-site study area. There are a total of 11 businesses within the study areas. There are no recreational resources located in the vicinity of the EOWHF (e.g., parks, walking trails). There is a water access point for fire emergencies approximately 500 metres from the eastern border. There are no schools, churches or other community resources in the vicinity of the EOWHF. GFL employs a variety of proactive measures to minimize nuisance effects related to noise, dust, odour, litter and vermin to the surrounding environment.
Visual
Despite the relatively flat topography, the operational landfill itself is not obtrusive and is barely visible from the roads surrounding the facility. The buildings and structures (e.g., the wastewater treatment facility and compost screening facility) on the north side of the facility are more visible from the north. The view of the future development area is unobstructed from along Concession Road 7, Highway 138, and Laflèche Road. There is no natural cover (such as trees or berms) to mask the view of the future development lands from the closest residence to the east.
Cultural Environment
Cultural Heritage Resources
A total of three potential cultural heritage resources were identified within the study area comprising two farmscapes and one residence (former farmscape). These cultural heritage resources are historically and contextually associated with land use patterns in the Township of North Stormont and are representative of the early settlement of the community.
Archaeological Resources
The Stage 1 Archaeological Assessment determined that there are no previously registered archaeological sites located within the off-site study area, and that it is within a historical peat bog which was drained for agricultural use in the twentieth century. The property inspection confirmed that the on-site study area does not exhibit archaeological potential.
Built Environment
Transportation
Under existing and future conditions, there is and will continue to be capacity in the road network, even if the maximum daily tonnage is received. No road network improvements are required to accommodate the extension of the facility's operating life.
Land Use
The existing EOWHF site is a heavy industrial land use. The EOWHF site is zoned Waste Disposal (WD), Waste Disposal Exception Zone (WD-2), Rural, and ANSI. A waste management site is a permitted use in WD and WD-2. There are four sensitive land uses within 500 m of the on-site study area boundary (the distance within which the MECP identifies the greatest potential for adverse effects from a landfill). These uses include two residences and two commercial uses. The future development lands to the east of the EOWHF site are zoned Agriculture (AG) with a small land area along Highway 138 zoned Highway Commercial Exception Zone (CH-7). A zoning by-law amendment would be required to permit a waste disposal facility on the future development lands. The future development lands feature two types of existing land uses: agricultural (crops/products); and commercial uses, and do not have a land use designation in the County Official Plan that permits a waste management facility. An amendment to the Official Plan would be required for the future development.
Aggregate Extraction and Agricultural
Aggregate Resources
A small portion of the lands in the easternmost portion of the off-site study area are designated Extractive Resource Lands (Licensed Pit & Quarry). Extractive Resource land uses (aggregate/peat) comprise 15% of the total land area within the off-site study area.
Agricultural Land
Lands in the southeast of the off-site study area and small portions in the east and west portions are Agricultural Resource Lands. The predominant existing land use within the off-site study area properties is agricultural for the purpose of crops and products, representing 74% of the total land area, while agricultural land use for the purposes of livestock comprises 1%.

Consultation and Engagement

Public consultation and engagement throughout the EA process will involve the local community, applicable agencies, Indigenous communities, and other interested and/or affected stakeholders.

Consultation and engagement will include:

- Notification through **local newspapers, by mail, or by email**
- **Public Open Houses** (in person or online)
- Posting of materials on the company project website **https://gflenv.com/moose-creek-landfill-expansion/**

GFL will receive and respond to **comments by telephone, email, and in writing**.

If you wish to have a meeting with GFL or members of the project study team, please let us know.

Next Steps

- **Input received** through this Public Open House and other comments received will be considered for the EA.
- A **second Open House** on the EA will be held on the preliminary results of the assessment of alternatives and identification of the preferred alternative.
- GFL will circulate the **draft EA** for review and comment. Members of the public, agencies, Indigenous communities, and other key stakeholders can review and submit comments on the Draft EA during this review period.
- The EA will be finalized based on comments received on the draft and formally submitted to the MECP for review and Minister's decision.
- Notification of the draft and final EA submissions will be provided in the local newspapers, by letter/email and on our website https://gflenv.com/moose-creek-landfill-expansion/.

Thank you

If you would like to be added to the project mailing list or have project-related questions, please contact:

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GFL and the Project Team thank you for your attendance and comments on the project