Importation of Soil onto Agricultural Land

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DISCLAIMER
This factsheet is provided for informational purposes only and does not provide legal advice. It is not a comprehensive statement of the legal obligations when importing soil onto agricultural lands. In order to determine the legal obligations or potential legal consequences, seek legal advice from a lawyer. Also, this factsheet is not a comprehensive exploration of non-legal considerations when importing soil. Get advice from qualified persons before importing soil.

While efforts have been made to make this factsheet as accurate as possible, it is not authoritative and in the event of a conflict, inconsistency or error, the requirements set out in any applicable legislation take precedence. Relevant Ontario legislation and regulations are found at ontario.ca/laws.

Note that it is a best practice to use updated information respecting soil management. Regulatory requirements, best management practices and guidance described in this factsheet may change from time to time.

INTRODUCTION
Importing soil onto agricultural land can benefit an agricultural operation, provided the legal requirements, environmental impacts, risks and liabilities involved are well understood by those who are managing it. This factsheet provides a brief overview of some of the considerations surrounding accepting soil including regulatory requirements, best management practices and guidance for farmers to limit impacts to farmland.

Excavation for road, highway and bridge construction, other infrastructure projects, and land development projects (e.g., building construction in cities and towns) often generate large amounts of excess soil. Some agricultural operations are looking for quantities of this soil for various purposes (e.g., soil amendment, re-establish vegetation) and others are being approached to become a destination site for large quantities. There may be opportunities for the beneficial reuse of this material. However, it needs to be managed in an environmentally sustainable way, to protect agricultural lands, water resources and natural features. It is important to ensure there are no adverse effects on human health and the environment. Responsible soil management practices on soil importation projects will help to avoid regulatory compliance issues, as well as the potential for conflict with nearby landowners and any municipal requirements.

TIPS AND BEST PRACTICES
• Contact the local municipality to identify applicable fill or site alteration by-laws for the area — understand the costs and rules that apply in the community.
• Retain the services of a professional with expertise in soil analysis, characterization, and management when planning the project — good planning can help reduce risks and unanticipated costs.
• It is important to know the quality of existing soil and soil proposed for importation — be vigilant about the quality of soil brought onto the land and keep good records of where the imported soil is coming from.
• Comply with all regulatory requirements that relate to the soil importation project and take whatever steps are necessary to ascertain and comply with them — pre-consultation with applicable agencies before initiating the project is essential to its success.
• Follow best management practices for soil importation (as outlined in this factsheet) — a best management practices approach will limit impacts and protect soil and water resources for future generations.
DEFINITIONS
This factsheet focuses on the importation of any soil which might be brought onto an agricultural property. The regulatory requirements and approvals related to this topic use a variety of terminology which covers a wide range of potential materials (e.g., soil, topsoil, excess soil and fill) and all of these materials can include soil.

The term soil and related terms such as topsoil, excess soil and fill have many meanings depending on the circumstances. Whether a reference to these terms and related terms in this document apply to your materials will depend upon the facts of the situation. Always refer to applicable definitions when dealing with regulatory requirements.

Source Site — the location where the imported soil is being excavated or coming from (e.g., construction site)

Receiving Site — the location where the imported soil is being reused (e.g., a farm)

BENEFICIAL REUSES OF IMPORTED SOIL ON AGRICULTURAL LANDS
Topsoil (Figure 1) can be used for multiple purposes such as a soil amendment to improve soil health and crop yield or as a bedding material to re-establish vegetation in areas that have been disturbed (e.g., by construction activities). Subsoil can be used for other purposes, such as:

- increasing the amount of usable farmland by altering/improving the contours of the land
- undertaking grade alterations to improve the safe and efficient operation of farm equipment
- fixing drainage or soil erosion problems
- rehabilitating existing pits, ponds or excavations
- facilitating on-farm site development or construction activities (e.g., new farm buildings, improvements to laneways used for farm equipment and/or livestock, etc.)

POTENTIAL ISSUES WITH IMPORTED SOIL
The following are some potential issues with using imported soil. Limiting any potential negative impacts associated with soil importation is critical.

Environmental Impacts
It is important to know the quality of the existing soil and to properly evaluate the potential benefits and risks of the soil proposed for importation given its quality, quantity and proposed placement on the property. Soil from the types of off-farm construction projects noted in the Introduction or other material included in some municipal by-law definitions of fill may cause environmental or human health damage and/or impacts on crop production from its reuse if not managed effectively (Figure 2). Some soil chemical properties in the imported soil such as excess salinity (i.e., soils are too salty) and pH extremes (i.e., soils are too acidic or too basic) may result in problems like reduced crop yields. Chemical contaminants such as organic compounds or heavy metals may jeopardize food safety, lead to adverse impacts on human health and/or the natural environment (e.g., contamination of ground and surface water), decrease property values and cause other problems. Owners of agricultural land should be observant about the quality of the soil being brought onto their properties and take steps to ensure those who rent their land are also vigilant.

Municipal Considerations
Increased truck traffic resulting in noise, dust, mud-tracking and the potential for damaging roads can result in municipal involvement if these activities violate local by-laws or the specified conditions on municipal permits or approvals issued for the soil importation project — see the Municipal Legislation and By-laws section.

Insurance Coverage
Consider speaking to a farm insurance agent, before importing soil onto the farm, about coverage and exclusions, limitations and conditions on any coverage.

Legal Considerations
Fill, grading and site alteration activities usually involve many regulatory requirements including requirements for approval. It is important to work closely with all applicable agencies to ensure that all required approvals are in place before starting work and to follow all of the requirements of each permit issued.

REGULATORY REQUIREMENTS AND APPROVALS
There are legal requirements (e.g., provincial statutes and municipal by-laws) that may apply to the importation of soil onto agricultural land. It is important to understand how they affect the project. Make sure to meet all requirements including provincial and municipal requirements before starting the soil importation project.

The following legislation, regulations and by-laws may apply to a soil importation project:

Municipal Legislation and By-laws
Soil importation projects may involve municipal requirements. Section 142 of the Municipal Act, 2001, gives municipalities the specific authority to regulate certain fill activities including requiring permits and setting permit conditions, subject to certain limits. An exception set out in the act for agriculture relates to the incidental removal of topsoil as part of a normal agricultural practice such as sod-farming, greenhouse operations and nurseries for horticultural products. Many municipalities also exempt the replacement of topsoil for these activities through by-law; however, some municipalities have placed limitations on the amount of soil that can be stored on-site.

Stockpile Run-off/Dust
Soil is often stockpiled at the receiving site, particularly if it cannot be used immediately for its intended purpose. Put measures in place prior to stockpiling to ensure that any stormwater run-off or dust from stockpiled soil does not move off-site and to minimize environmental impacts. Avoid prolonged storage of topsoil as it can be detrimental to soil health — see the Best Management Practices (BMPs) section.

Impacts on Neighbouring Properties
In addition to the potential impacts on neighbouring properties caused by altering drainage pathways or the possible movement of contaminants from your property to the neighbours, the activity of importing large quantities of soil (e.g., trucking, soil handling, etc.) has the potential to generate noise, dust, light and vibration disturbances which may also affect nearby landowners. The Farming and Food Production Protection Act, 1998, (FFPPA) provides some protection for normal farm practices, but whether something is a normal farm practice is determined on a case-by-case basis. These protections are not absolute and other limitations including the FFPPA being subject to the Environmental Protection Act, 1990,

Drainage Alteration
Placement or removal of soil, grading or site alteration activities can change natural or engineered drainage pathways resulting in flooding or ponding on neighbouring properties or changes to the normal flow of water to down gradient properties. Assess drainage considerations and resolve them before the soil importation project begins to ensure that these negative impacts do not occur. Additional information about drainage and a listing of licensed drainage contractors can be viewed at ontario.ca/drainage.

Figure 2. Excavated soil from urban construction projects can be highly variable in terms of its quality.
Fill or site alteration by-laws prohibit or regulate the removal of topsoil, the placing or dumping of fill, and the alteration of the grade of land. In addition to these agriculture exceptions, many of these by-laws reference exemptions for the construction of public facilities such as transportation, infrastructure or utilities, activities or works under the Aggregate Resources Act, 1990, and site alteration activities undertaken as an incidental part of drain construction under the Drainage Act, 1990 or the Tile Drainage Act, 1990.

The content of these municipal by-laws varies across municipalities. A number of fill or site alteration by-laws set out different requirements based on the amount of fill involved.

**Small fill projects** (i.e., minor site alteration) such as lawn dressing, small landscaping projects, fence, pool or accessory building construction may be exempt from the requirement for permits or approvals provided they meet specified criteria and do not change the volume, direction or intensity of storm water run-off to adjacent properties.

**Large fill projects** (i.e., major site alteration) involving hundreds or perhaps thousands of truckloads of imported soil are more likely to require permits or approvals. In some cases, a written agreement between the landowner and the municipality, which specifies in detail requirements, conditions, indemnifications, etc., may be required. Some municipalities may separate major site alterations into two distinct categories based on the volume of fill involved and others may have only one category.

Conditions placed on permits or approvals are intended to help prevent adverse environmental impacts, legal problems and disagreements with neighbours. Conditions vary by municipality and generally increase in number with the size of the project. Specific haul routes have been designated and limitations have been placed on the number of trucks per day, the time of day or the days per week. Start and completion dates have been specified as well as other conditions relating to noise reduction, dust control measures, erosion control measures and tree protection.

Municipalities may require supporting information submitted with the permit application under the fill or site alteration by-law such as:

- site survey information detailing the existing and proposed final elevations and grades
- site survey information detailing the existing and final drainage pathways
- estimated volume of soil to be imported
- details of the source and quality of the imported soil
- soil sampling and analysis measures
- haul routes and traffic/transportation details
- dust and noise control measures
- erosion and sediment control measures
- stormwater management controls
- tree protection measures
- Fill Management Plans — refer to the BMPs in Project Planning section

Non-refundable application processing fees, permit fees based on the volume of fill, and fees related to the municipality’s use of consultants and other professionals may be charged in some municipalities. Penalties have been imposed in instances where the project begins prior to obtaining a permit or approval. Some municipalities require a refundable security deposit which allows them to take action on work not completed to their satisfaction or for the maintenance or repair of roads that may have been affected by truck traffic related to the project. Amounts levied for fees and security deposits vary by municipality; however, they can be quite significant and may add a substantial cost to the project.

Permits or approvals generally have an expiry date and can be revoked by the municipality for a variety of specified reasons. Some municipalities have a process for granting extensions; however, additional fees may apply.

It is important to review the applicable fill or site alteration by-laws for the area with the municipality to confirm any permitting requirements and special conditions that may apply.

**Farming and Food Production Protection Act, 1998**

The Farming and Food Production Protection Act, 1998, (FFPPA) includes protection for farmers against municipal by-laws that restrict a normal farm practice carried on as part of an agricultural operation, as well as nuisance complaints made by neighbours provided the situation involves normal farm practices.
The act defines a normal farm practice as one which:

“(a) is conducted in a manner consistent with proper and acceptable customs and standards, as established and followed by similar agricultural operations under similar circumstances, or

(b) makes use of innovative technology in a manner consistent with proper advanced farm management practices.”

The Normal Farm Practices Protection Board (Board) is the authority established by the legislation to determine what is or is not a normal farm practice. In arriving at a decision in each case, the Board takes several factors into consideration as it seeks to balance the needs of the agricultural community with provincial health, safety and environmental concerns.

In a by-law case, the Board will consider the following factors in determining whether a practice is a normal farm practice:

1. The purpose of the by-law that has the effect of restricting the farm practice.
2. The effect of the farm practice on abutting lands and neighbours.
3. Whether the by-law reflects a provincial interest as established under any other piece of legislation or policy statement.
4. The specific circumstances pertaining to the site.

After conducting a hearing, the Board will determine two key issues in subsequent order before making a decision. First, the Board will decide if the farm practice in question is carried on as part of an agricultural operation and is either:

i. A normal farm practice
ii. Not a normal farm practice; or
iii. A normal farm practice, if the farmer modifies the practice as specified by the Board.

Second, the Board must determine if the by-law in question is either:

i. Restricting the farm practice in question; or
ii. Not restricting the farm practice in question.

There is no definitive list of normal farm practices. A practice may be ruled as a normal farm practice at a particular location under a particular set of circumstances; the same practice could be ruled as not a normal farm practice at a different location under a different set of circumstances.

Information on the Board is found at ontario.ca/omafra and full decisions can be viewed at www.canlii.org.

Conservation Authorities Act, 1990
Some soil importation may involve areas which are regulated by conservation authorities under Section 28 regulations of the Conservation Authorities Act, 1990. These regulations, approved by the Minister of Natural Resources and Forestry, require conservation authorities, through a permitting process, to regulate development in areas prone to natural hazards including in or adjacent to river or stream valleys, Great Lakes and inland lakes shorelines, watercourses, hazard lands (e.g., flood plains) wetlands and areas around wetlands. The definition of ‘development’ under the Conservation Authorities Act, 1990, includes site grading and the placing or removal of any material originating on the site or elsewhere. A conservation authority permit decision is based on the effect the development may have on the control of flooding, erosion, dynamic beaches, pollution or the ‘conservation of land’. A conservation authority permit is required for altering or interfering with the existing channel of a watercourse or interfering in any way with a wetland. Some conservation authorities have best management practices or protocols established for their regulating of material or soil importation.

For more information about conservation authorities and the Conservation Authorities Act, 1990, see ontario.ca/page/conservation-authorities. To contact a local conservation authority to find out if the property is located in a regulated area or if a permit is required check www.conservationontario.ca.

Oak Ridges Moraine Legislation and Plan
The Oak Ridges Moraine (ORM) is an environmentally sensitive geological landform in south central Ontario. The ORM stretches 160 km from the Trent River in the east to the Niagara Escarpment in the west (Figure 3). The Oak Ridges Moraine Conservation Plan, established under the Oak Ridges Moraine Conservation Act, 2001, provides land use policies and resource management planning direction to municipalities to protect the ORMs ecological and
hydrological features and functions. Municipalities must incorporate these requirements into their official plan policies and zoning by-law provisions. Some fill or site alteration by-laws may restrict certain fill, grading or site alteration activities around key natural heritage features, hydrologically sensitive features and areas with significant landscape character (called landform conservation areas).

The Oak Ridges Moraine Conservation Plan is implemented at the municipal level through the official plan and zoning by-laws. A detailed map showing the Oak Ridges Moraine Conservation Plan area can be viewed at ontario.ca/cyn5. Contact your local municipality to find out if your property is located in the Oak Ridges Moraine. They can also advise you of any special requirements or restrictions.
Niagara Escarpment Planning and Development Act, 1990, and the Niagara Escarpment Plan

The Niagara Escarpment is a protected natural corridor in south central Ontario, stretching 725 km from Queenston near Niagara Falls to Tobermory at the tip of the Bruce Peninsula (Figure 4). The Niagara Escarpment Plan, established under the *Niagara Escarpment Planning and Development Act, 1990*, outlines land use designations, land use policies, development criteria and permitted uses to ensure that the escarpment is maintained as a substantially continuous natural environment and that development is compatible with the natural environment. Within most of the Niagara Escarpment Plan area, the Niagara Escarpment Commission (NEC) is the primary land use planning authority, and in those areas, municipal zoning provisions do not apply. Certain types of development, including changing the grade or topography of a site or importing fill, may not be permitted within the Niagara Escarpment Plan area. Most forms of development require a Development Permit from the NEC.

Detailed maps showing the Niagara Escarpment Plan area can be viewed at www.escarpment.org. Contact the NEC to determine if the land is regulated under the Niagara Escarpment Plan, and if a development permit is required.

Figure 4. Niagara Escarpment Plan Area.
**Greenbelt Act, 2005, and Plan**

The Greenbelt Plan, which is established under the *Greenbelt Act, 2005*, protects an area of environmentally sensitive and agricultural lands in the Greater Golden Horseshoe (called the protected countryside) from urban expansions. The greenbelt also includes the lands covered by the Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Plan (Figure 5). The Greenbelt Plan provides land use planning direction for municipalities to incorporate into their official plan policies and zoning by-law provisions. Some fill or site alteration by-laws may restrict certain fill, grading or site alteration activities around key natural heritage and key hydrologic features and any associated buffer areas (called vegetation protection zones).

The Greenbelt Plan is implemented at the municipal level through the official plan and zoning by-laws. A detailed map showing the Greenbelt Plan area can be viewed at ontario.ca/cyn6. Contact the municipality to find out if the property is located in the greenbelt. They can also advise of any special requirements or restrictions.

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**Figure 5.** Greenbelt Plan Area.
Lake Simcoe Protection Act, 2008, and Plan

The Lake Simcoe Protection Plan was established under the *Lake Simcoe Protection Act, 2008*, with the purpose to protect and restore the ecological health of the Lake Simcoe watershed. The Lake Simcoe Protection Plan is implemented, in part, at the municipal level through official plans and associated by-laws. Relevant official plans and zoning by-laws are required to conform to designated policies in the Lake Simcoe Protection Plan.

The *Lake Simcoe Protection Act, 2008*, defines the Lake Simcoe watershed as “Lake Simcoe and the part of Ontario, the water of which drains into Lake Simcoe” (Figure 6). The Lake Simcoe Region Conservation Authority and the local municipality can advise of any special requirements or restrictions.

![Figure 6. Lake Simcoe Protection Plan Area.](image)

Environmental Protection Act, 1990

Under the *Environmental Protection Act, 1990*, the Ministry of the Environment and Climate Change (MOECC) can issue orders to address contamination concerns, including where a discharge of a contaminant into the natural environment causes or is likely to cause an adverse effect. Adverse effect is defined to include such impacts as impairment of the quality of the natural environment and adverse effects on the health of any person. It is important for anyone involved in the management of excess soil to know the quality of the excess soil coming from a source site, and the quality of the soil at the receiving site, in order to understand whether the placement of soil may cause an adverse effect or a degradation of the pre-existing condition of the receiving site.

MOECC has developed *Management of Excess Soil – A Guide for Best Management Practices*, which outlines the MOECC’s guidance for the beneficial management of excess soil in a manner that promotes sustainability and protects the natural environment (ontario.ca/moecc).

Contact the local MOECC office for information about managing excess soil (ontario.ca/moecc and search for regional and district offices).

Ministry of Natural Resources and Forestry Legislation

As noted in the *Municipal Legislation and By-laws* section, activities or works under the *Aggregate Resources Act, 1990*, are often referenced as an exemption under fill or site alteration by-laws. The Ministry of Natural Resources and Forestry (MNRF) is the provincial regulator of aggregate sites through the *Aggregate Resources Act, 1990*, including their progressive and final rehabilitation.

Contact the local MNRF office if the project involves activities related to a current or former aggregate operation (ontario.ca/mnrf and search for regional and district offices).

BEST MANAGEMENT PRACTICES (BMPS)

The following soil importation BMPs will support the beneficial reuse of soil. The adoption of best practices supports the principles of sustainable agricultural production and facilitates the efficient progress of the project. Ensure compliance with all relevant legislation.
BMPs in Project Planning

Transparent communication with applicable agencies is essential. Pre-consultation before starting the project can highlight requirements and additional legislation that must be followed and help to avoid issues later on. Also, early pre-consultation with nearby landowners may help to reduce the potential for conflict.

Retaining the services of a professional with expertise in soil testing, analysis, characterization, stockpiling and other soil management related activities is key to avoid encountering environmental issues with the project. Physical and chemical characteristics (e.g., quality) as well as the soil type and its geotechnical suitability are important considerations for determining if the soil to be imported is appropriate for the intended use. Professional expertise and judgement are needed to confirm the acceptability of the imported soil. The soil professional should use a risk-based approach and take into consideration the effects of loading associated with the concentrations of individual contaminants in the imported soil and the impacts on the pre-existing, ambient conditions at the site (i.e., receiving site).

Documentation and record keeping support the soil professional's assessment. Obtain copies of all soil test results and assessment work before any imported soil is accepted, received and managed. It is very important to keep good records of where the imported soil is coming from and who hauled the soil. This information may be useful in the future if problems with the soil are found and action is required.

The MOECC document, Management of Excess Soil – A Guide for Best Management Practices is a best practices document that provides guidance on how to handle excess soil generated from large-scale projects. It contains helpful information for soil receiving sites including the recommended contents of a Fill Management Plan which is intended to document the overall operating conditions for a receiving site. A Fill Management Plan prepared by the owner, a soil professional or a consultant or contractor will be very helpful at the fill or site-alteration by-law permit application stage. It will also help to facilitate the project's implementation.


If hiring consultants and contractors to work on the project, consider obtaining written estimates, references for similar work that has been completed and contract documents.

BMPs in Soil Importation – Quality and Quantity

Healthy soil is a key component of sustainable agriculture and food systems. Sustainable soil management is needed to achieve long term economic benefits for the farm (e.g., maintain or improve crop yield and revenues, reduce operating costs), protect human and ecological health (e.g., mitigate risks) and reflect the public interest. A healthy soil has a greater resilience to both droughts and to excessive wet conditions. Also, healthy soil, because it has sufficient soil organic matter and good soil structure, tends to have lower erosion potential, less compaction, better water infiltration and better water holding capacity.

Soil texture refers to the relative proportion of sand, silt and clay in a soil and has a significant influence on the chemical and physical properties of a soil. Understanding how the soil responds to various climatic conditions will help to avoid crop productivity issues.

If considering importing soil onto the farm property, maintaining or enhancing the soil resource on the agricultural land may be achieved by:

- Importing topsoil which contains organic matter or deposits of partially decomposed organic matter such as peat.
- Importing soil of equal or better chemical and physical quality than what already exists on the property (i.e., no degradation of on-farm soil quality). Note that some of the physical soil structure parameters such as structural form, stability and strength; porosity; and bulk density may be negatively altered by material storage and handling activities — refer to the BMPs in Soil Management – Storage, Grading and Incorporation section.
• Avoiding soil that contains concrete, asphalt, demolition debris, rubbish, garbage or other materials such as rubber, plastics, metals or glass.
• Working closely with the soil professional to ensure that the imported soil is of suitable quality for the intended reuse, and developing/adopting protective, risk-based approaches for management of the imported soil on the farm.
• Consulting with a Certified Crop Advisor (CCA), Professional Agrologist (P. Ag.) or an agronomist for crop related questions or other agronomic considerations.
• Being vigilant about following the protocols for incoming soil identified in the Fill Management Plan – refer to the BMPs in Project Planning section.

The quantity of soil for importation must be assessed on a site-specific, case-by-case basis. The purpose of the intended reuse combined with the long-term plans for the property and other agricultural considerations such as type of crops, cropping practices, equipment and topography will have an influence on how much soil may be required.

Limiting the potential negative impacts associated with soil importation (refer to Potential Issues with Imported Soil section) can be facilitated by working closely with the soil professional to ensure that the quantity of soil imported is limited to that necessary for the intended reuse of the soil.

BMPs in Soil Management – Storage, Grading and Incorporation

Soil degradation may occur due to soil compaction, soil erosion and improper soil handling and storage. Soil characteristics such as texture, structure, porosity, permeability and compaction all affect internal drainage.

Soil structure refers to how the sand, silt and clay particles are arranged into clumps or aggregates. Structure is a measure of stability and strength and influences permeability/infiltration (i.e., water movement), heat transfer and root penetration. The structural integrity of a soil is weakened during handling. Minimize equipment operations where possible. Soil structure is also damaged by compaction which is the result of the pressing together of soil particles. Soil is particularly vulnerable to compaction when it is saturated. Carry out soil handling activities during dry conditions (i.e., avoid working the soil under wet conditions). The use of wide track equipment or other equipment designed to distribute the vehicle weight more evenly across the soil will help to limit compaction. The pressure exerted by tracked vehicles is often less than the pressure exerted by rubber tired vehicles.

Material handling requirements will vary from one soil importation project to another. For projects such as grade alterations, the soil is typically placed directly where it is to be used. For other projects such as on-farm site development or construction activities, it may be necessary to stockpile the soil for later use. Direct placement of imported soil is the least expensive and most efficient approach as it reduces material handling and the associated equipment costs.

Avoid stockpiling soil for lengthy storage periods, especially if the imported soil is topsoil and is to be used as a soil health amendment to improve crop yield or as a bedding material to re-establish vegetation in an area that has been disturbed (e.g., by construction activities).

Prolonged storage is detrimental to soil health due to:

• breakdown of organic matter
• leaching of nutrients
• sterilization by solar radiation
• disturbance to microscopic organisms and
• soil compaction

If the imported soil is subsoil and is being used for grade alterations or on-farm site development or construction activities, storage periods are generally less of an issue provided measures are in place to ensure that any stormwater run-off or dust from stockpiled soil does not move off-site.

Grading plans with steep slopes have the potential to create significant soil erosion problems during fill, grading or site alteration activities and the vulnerability continues until vegetated cover in the disturbed area is established. Field slopes in the range of 0%-2% up to 150 m long can normally be controlled with conservation cropping and tillage practices. Field slopes steeper than 2% and longer than 150 m may require additional considerations as might the lesser field slopes in some cases. Consider erosion protection measures in the form of vegetative cover (e.g., cover crops), silt fencing and mulch during the restoration period. Information related to soil erosion and a listing of soil erosion control contractors certificate holders...
Integration of imported soil into the existing soil profile is an important consideration. Depending on the quality of the imported soil and the nature of the project, it may be advisable to strip off and stockpile the existing topsoil, sod and turf materials and reuse them as final cover once the imported soil has been added to the subsoil layer. Topsoil if added in a 100–150 mm layer can be incorporated into the existing soil through light tillage and the natural action of the soil biology.

The addition of organic amendments such as manure will help to build organic matter and improve soil structure, strength, fertility and water holding capacity. Ontario Regulation (O. Reg.) 267/03 under the Nutrient Management Act, 2002 and the Nutrient Management Protocol provides information on land application practices and agronomic rates for the addition of nutrients to promote crop growth.

More information on these and other best management practices related to the management of soil, excess soil and soil erosion can be found in the OMAFRA and MOECC publications listed in the Resources section. Ministry of Municipal Affairs information pertaining to provincial land use planning is also referenced.