

Environment, Conservation, and Parks

Excess Soil Webinar

Excess Soil Management for Low-Risk Sites

March 21st, 2023

DISCLAIMER

This presentation is intended to be a brief summary of some of the requirements of Ontario Regulation 406/19 On-Site and Excess Soil Management (the regulation) made under the Environmental Protection Act and the Rules for Soil Management and Excess Soil Quality Standards - a document incorporated by reference in the regulation. This is for information purposes only and should not be construed as legal advice or substitute for seeking independent legal advice on any issues related to the regulation. Any person seeking to fully understand how the regulation may apply to any of the activities they are engaged in must refer to the regulation. In the event of any inconsistency between the regulation and this presentation, the regulation will always take precedence.

Presentation Overview

- Overview of Regulatory Requirements
- Health Break
- Open Discussion, Additional Question and Answer Period
- Additional resources
- Appendices
 - Appendix A: Hauling record requirements
 - Appendix B: Flowchart for low-risk sites

Overview of the regulation

- Regulation titled [O. Reg. 406/19: On-Site and Excess Soil Management](#) (Excess Soil Regulation) under the *Environmental Protection Act* (EPA), was finalized in December 2019, supported by:
 - [Rules for Soil Management and Excess Soil Quality Standards](#) (Soil Rules)
 - [Beneficial Reuse Assessment Tool](#) (BRAT)

Phased Regulatory Implementation	Timing
<p>Reuse Rules and Waste Designation Clarification</p> <ul style="list-style-type: none"> - Rules for reusing excess soil at a reuse site, and excess soil reuse standards - Low-risk soil processing without an approval - Soil storage rules - Verbal hauling requirements 	January 1, 2021
<p>Excess Soil Reuse Planning Requirements</p> <ul style="list-style-type: none"> - For projects with greater risk of generating excess soil with contaminants (some exceptions may apply) <ul style="list-style-type: none"> - Assessment of past uses, and if required sampling and characterization - Destination assessment report - Tracking and registration <p>Larger reuse site registration and procedures</p> <p>Hard copy or electronic hauling record</p>	January 1, 2023
<p>Restriction on the deposit of clean soil at landfill sites</p>	January 1, 2025

What is excess soil and why is it regulated?

Excess soil is defined as **soil, crushed rock, or soil/crushed rock mixed with rock, that has been excavated as part of a project and removed from the project area**

- To ensure excess soil is not illegally dumped at properties
- To allow for greater local beneficial reuse of excess soil
- To ensure that excess soil is of appropriate quality when it is being reused and will not impact human health or the environment
- To ensure that excess soil has been relocated to proper reuse or disposal sites

What are low-risk sites?

- This term is being used to refer to properties that are generally considered to be at lower risk of having historic soil contamination.
- These low-risk properties are not required by the regulation to complete excess soil reuse planning requirements, such as registration, sampling and tracking
- These properties:
 - include properties that are or were last used for:
 - a **residential** use
 - a **parkland** use
 - an **institutional** use (such as a school),
 - an **agricultural or other** use, and
 - other types of properties (e.g., **commercial and community use**) if they are in a rural area (i.e., outside of a settlement area)
 - but NOT:
 - properties (excluding the ones listed above) within settlement areas that are **excavating 2000m³ of excess soil or more**
 - a property currently or formerly used for an **industrial use, a gas station or other bulk liquid storage site, a garage or for dry cleaning** (these are called enhanced investigation sites)
 - a **project that is remediating soil** with contaminants, including soil excavation to enable the filing of a record of site condition
- Property uses are as defined under [O. Reg. 153/04: Records of Site Condition](#)

Overview: options for management of excavated soil

Project leaders or operators of a project excavating soil may:

1. Reuse, store or process soil in their project area
2. Take excess soil to a reuse site to be used for a beneficial purpose
3. Utilize other sites they operate to temporarily store and process soil
4. Deposit excess soil at a storage or processing site at which the owner or operator of that site takes responsibility for the soil, if one is available
5. If other options are not available, dispose the excess soil at a landfill

Overview: application of the regulation

Soil excavated and stored, processed or reused within the project area

- Planning to maximize reuse of soil in a project is encouraged and the Excess Soil Regulation **does not restrict reuse of soil within a project area** (other regulations may apply, e.g., if managing hazardous waste)
- Soil reused in the project area is not considered “excess soil” and the **criteria for reusing excess soil do not apply** (e.g., meeting applicable quality standards)
- **Soil storage rules** apply to ensure that there is no adverse effect to the environment or other properties
- **Soil processing rules** apply (low-risk methods such as passive dewatering or size-based sorting are exempt from approvals, but subject to specified rules)
- **Observations of contamination on-site**, such as visual or olfactory (i.e., smell) signs, would trigger the proper management and disposal of excavated contaminated soil to prevent any potential adverse impacts

Overview: application of the regulation

Excavated soil leaving a low-risk project area (for storage/processing, reuse, or disposal)

- This soil is considered **excess soil**
- **Criteria for reuse of excess soil** apply when soil is taken to a reuse site, e.g., the need for a reuse site owner or operator to consent in writing to the deposit of the excess soil
- **Off-site temporary soil storage sites** operated by the project leader to manage their excess soil, may be used subject to some rules and limitations but are typically exempt from needing approvals
- **Soil processing sites, soil bank storage sites and landfills** may accept and take responsibility for excess soil from many projects and project leaders; these would usually be operated subject to an approval
- Haulers of excess soil are required to have a **hauling record**, including information obtained from the operator of the project area
- Additional **excess soil reuse planning requirements**, such as filing a notice in the [Excess Soil Registry](#) and sampling and analysis, do not apply.

Additional Details

Storing soil at a project area

- Ensure the on-site management and storage of soil does not cause an adverse effect (this would include controlling noise, dust, mud tracking, leaching, run-off and erosion and potential outdoor air impacts such as odour)
- Storage must be set back 30m from a water body (e.g., stream)
- Storage must be set back 10m from property lines unless: the volume is less than 500m³; the duration is less than one week; the storage location has a physical barrier (e.g., concrete wall) between the excess soil and the property boundary; or if the soil is stored in a road right of way
- Soil must be stored in a manner that prevents any contaminants from the soil from leaching into the ground water
- Unsampled soil must remain segregated from sampled soil, and soil of different qualities intended for different beneficial uses must also be segregated
- Dry soil must be stored in stockpiles
- Liquid soil must also be stored: in a location that is accessible for inspection; no more than 10,000 cubic metres of liquid at any one time; and in a leakproof container on an impermeable surface.

These can be found in Part I of the Soil Rules. Note that through a municipal fill permit or conservation authority permit, alternate storage rules may apply.

Processing soil at a project area

- Processing of soil excavated at the project area is permitted without a waste Environmental Compliance Approval (ECA) if it is one of the following processing types:
 - passive aeration
 - passive dewatering
 - mechanical dewatering
 - mixing, except to dilute contaminants
 - size-based sorting
 - sorting to remove debris
 - soil turning
 - mixing it with a substance or other material that is intended to dewater or solidify
- The Soil Rules include some rules applicable to certain types of processing, and a qualified person (QP) is required if soil is being mixed with a polymer additive for solidification
- Other types of soil processing may be undertaken with a waste ECA, and other types of approvals may apply to some forms of processing (e.g., for a sewage works)

Observations of contamination on-site

The project leader or the operator of a project area must ensure that a procedure is developed and applied if, during excavation, an observation is made that the soil being excavated has been affected by a contaminant (based on smell or visual clues, for example). Under this procedure:

- Work must stop and the project leader or operator must be notified of the observation
- Potentially contaminated soil that is already excavated must be segregated, and the portion of the project area to be excavated that is affected by the contaminant must be determined
- Excavated soil that may be contaminated must be disposed of in accordance with the regulation (e.g., at a waste disposal facility)
- If a qualified person has been involved in assessing and managing the excess soil, they must also update the assessments and management decisions to reflect this information.

Excess soil reuse, storage, processing and disposal sites

- Excavated soil or crushed rock becomes excess soil upon leaving a project area
- There are several options of sites at which excess soil may be deposited after it leaves a project area
- Other than on-site reuse, depositing soil at a reuse site is most preferred.
- Some other sites may be available that will take responsibility for the soil, to temporary store or process it before reuse or disposal; in general these require a waste Environmental Compliance Approval (ECA), but some exceptions are provided
- Landfilling is the least encouraged option for soil that could be reused
- A project leader or operator also has options to temporarily management their soil off-site before taking it for reuse or disposal

Type of site	Project leader typically operates the site and retains responsibility of the soil?	Waste ECA required?
Reuse Site	No	No
Soil storage bank or processing site (Class 1 soil management site)	No	Yes
Residential development soil depot	No	No
Retail landscaping soil depot	No	No
Off-site temporary storage before reuse (Class 2 soil management site)	Yes	No
Project leader's temporary management site (local waste transfer facility)	Yes	No
Landfill	No	Yes



Taking soil to a reuse site

- Reuse sites are sites at which excess soil is needed for a beneficial purpose, such as site grading or filling an excavation, in an undertaking
- Reuse of excess soil is encouraged. For excess soil leaving the project area and being deposited at a reuse site for use in an undertaking, criteria apply to determine that the deposit is appropriate and that the excess soil would not be considered a waste:
 - written consent has been obtained from the operator of the reuse site for the deposit of the excess soil
 - there is a beneficial use for the excess soil (i.e., it is not only being stockpiled)
 - the quality and quantity of the excess soil aligns with that required by the reuse site for their beneficial use (based on the Excess Soil Regulation or an applicable permit)
 - if the soil is liquid soil, a permit must allow its deposit

For more information on these requirements, refer to the fact sheet “[Bringing Soil to a Reuse Site](#)”.

Sites that will take responsibility for excess soil storage, processing or disposal

If a project leader is unable to find a reuse site or do not have their own site for storage or processing, some other types of sites may be available that can accept and take responsibility for excess soil.

- **Soil bank storage sites and soil processing sites**
 - Types of **Class 1 soil management sites** under the Excess Soil Regulation; a type of waste disposal site and typically must obtain an ECA to operate
 - Accepts, manages and processes excess soil on a temporary basis before the excess soil is taken to a reuse site or a landfill, if necessary
 - The conditions of the ECA would set out the permitted types of processing, storage rules, types of soil that could be accepted, etc.; a project leader should ensure their soil meets the conditions and can be accepted at a particular site

Sites that will take responsibility for excess soil storage, processing or disposal- *continued*

- **Residential development soil depots**
 - Exempt from obtaining an ECA if conditions are met
 - Intended for temporary management of soil that is appropriate for reuse at a residential property; from these sites soil can then be reused at a property of similar or less sensitivity (e.g., residential, parkland, commercial use)
 - Can accept up to 10,000 m³ of excess soil
- **Retail landscaping soil depots**
 - Exempt from obtaining an ECA if conditions are met
 - Are sites, such as a garden centre, that accept soil, such as topsoil, to make it available for retail sale as a landscaping product
 - Can only accept soil of appropriate quality for use at a residential property
 - Can accept up to 10,000 m³ of excess soil
- **Landfills** or another type of similar waste disposal site
 - may be the only option for disposing excess soil that is deemed unsuitable for reuse (e.g., due to contaminant levels)
 - Typically requires an ECA; project leaders should confirm that their soil is appropriate for a particular site

Project leader operated temporary sites

If necessary, a project leader can manage excess soil off-site (away from the project area) without a waste ECA, although subject to some rules

- **Off-site temporary storage before reuse (Class 2 soil management site)**
 - Intended for use to store soil from the project leader's projects in advance of a known reuse site being able to accept excess soil
 - Operated by the project leader and may be located on a property owned by a public body or by the project leader
 - Excess soil can be stored for two years, which can be extended by five years with Director's authorization
 - These sites may store up to 10,000 m³ of dry soil and low-risk processing may be undertaken at these sites, among other rules
- **Project leader's temporary management site (local waste transfer facility)**
 - Operated by a project leader, or another person on their behalf, to compile, assess and temporarily store excess soil from a project leader's projects (field operations); e.g., a municipal works yard
 - Excess soil is then appropriately managed from that site for reuse or disposal
 - Excess soil at these sites may be dry or liquid, and some low-risk processing may be undertaken at these sites

Reuse planning requirements

- As of January 1, 2023, some higher risk projects (such as a site that has been used for an industrial purpose or a gas station) are required to complete additional planning requirements.
- If triggered, the requirements include:
 - Filing a notice on the Excess Soil Registry
 - Completing an assessment of past uses and, if required, a sampling and analysis plan and soil characterization report
 - Completing an excess soil destination assessment report
 - Developing and implementing a tracking system
- As stated earlier, **these requirements do not apply to projects that are on low-risk properties**

Providing evidence of soil quality to reuse sites

- Reuse site owners may need some assurance that they are receiving excess soil that would not be considered waste (i.e., it's of appropriate quality)
- Project leaders for projects exempt from mandatory assessments may consider it prudent to plan for some evidence to be available indicating that the soil from that project is of appropriate quality for a reuse site; this may be information they already have
- Some reuse sites, especially larger ones, may also have procedures in place to assess soil before or upon receipt (e.g., review of available information, looking for visual and olfactory clues, random verification sampling), which should be considered
- Evidence may, for example, include:
 - For small projects, e.g., landscaping or pool projects, a simple description of the current use of the project area to verify it is low risk
 - Phase one environmental site assessments (ESAs) or property use assessments looking for potentially contaminating activities completed for other or verification purposes
 - Phase two ESAs or soil sampling and analysis completed for other or verification purposes
- Note that assessments completed for other purposes or verification, are not required to be completed to the same standard as an assessment required under the Excess Soil Regulation

Transporting and tracking excess soil

- A physical or electronic hauling record is required for all movements of excess soil. When excess soil is being transported, the person who is operating the vehicle (i.e., hauler) must ensure that the hauling record is available at all times during transportation.
- The hauler needs information from the project operator where excess soil originates before they can leave to relocate the soil, including:
 - The location where the excess soil was loaded for transportation
 - Contacts for the project, in the event there are inquiries on the load
 - The date and time the soil is loaded and the approximate quantity of soil
 - The destination site where the excess soil will be deposited

See Appendix A for full list of requirements

- Reuse sites may also seek assurance they are receiving soil from the same project they expected the soil to come from, which should be considered by the project leader
 - a hauling record may suffice and help confirm this for low-risk sites
 - some larger reuse sites receiving soil from large projects may prefer electronic tracking systems, of which the hauling record can be a part

Refer to the fact sheet "[Excess soil transportation](#)" for more information

Improper management of excess soil

- Where waste excess soil is illegally dumped, any person who caused, permitted, or arranged for the dumping of the excess soil can be ordered to remove the excess soil and ensure its proper disposal.
- It is important that each person involved in this chain do their part to ensure excess soil is appropriately managed.

Recordkeeping

- Records that are required to be created under the Excess Soil Regulation related to the regulatory requirements must be kept for seven years. Hauling records, however, are to be kept for two years.

Additional Resources

Additional Resources

For additional information, including a variety of guidance and tools developed by external partners:

- Ontario Government Excess Soil Page: [ontario.ca/page/handling-excess-soil](https://www.ontario.ca/page/handling-excess-soil)
- Excess Soil Fact Sheets: <https://www.ontario.ca/document/excess-soil-fact-sheets>
- Ontario Provincial Standard Specification (OPSS) 180 - General Specification for the Management of Excess Materials: currently being updated by MTO
- RPRA's Excess Soil Registry: [rpra.ca/excess-soil-registry](https://www.rpra.ca/excess-soil-registry)
- Ontario Environment Industry Association (ONEIA) - Best Practices and Templates:
 - Hauling Best Practices and Template: <https://www.oneia.ca/excess-soils/hauling-best-practices>
 - Temporary Sites Best Practices: <https://www.oneia.ca/Temporary-Sites-Best-Practices>
 - Qualified Persons Best Practices: <https://www.oneia.ca/qp-best-practices>
- Qualified Persons Community of Ontario (QPCO): <https://qpcoco.ca/>
- Ontario Society of Professional Engineers (OSPE) - Best Practices for Aggregate Pit and Quarry Rehabilitation: <https://ospe.on.ca/excess-soil-reports/>
- OSSGA document on Excess Soil Best Management Practices for Pits/Quarries: https://www.ossga.com/rehabilitation_and_excess_soil/
- Canadian Urban Institutes (CUI) - Excess Soil By-Law Language Tool: <https://canurb.org/initiatives/excess-soil-by-law-tool/>
- RSC Guide (*currently in draft and to be updated soon*): <https://ero.ontario.ca/notice/019-2551>

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THANK YOU!

Appendices

Appendix A: Hauling record requirements

As of January 1, 2023, the information required to be available from a hauler during transportation must be in the form of an electronic or physical hauling record to be carried by the hauler at all times during transportation. The hauler must not leave a project area with excess soil without this record

The hauling record must contain the following information:

- The location where the excess soil was loaded for transportation
- The date and time at which the excess soil was loaded for transportation
- The quantity of excess soil in the load
- The name of an individual who may be contacted regarding inquiries about the Load, including the excess soil quality
- The name of the corporation, partnership or firm transporting the excess soil
- The name of the driver of the vehicle and the number plates issued for the vehicle under the Highway Traffic Act
- The location of where the load is to be deposited

Appendix B: Flowchart for low-risk sites

