Excess Soil Webinar

Reuse Site Requirements

Date and Time: December 7, 2022

9:30am to 11:30am



Presentation Overview

- Overview of Regulatory Requirements
- Best Practices
- Frequently Asked Questions and Answers
- Health Break
- Open Discussion, Additional Question and Answer Period
- Additional Resources and Opportunities



Overview of Regulatory Requirements Relevant to Reuse Sites



Toronto waterfront, Don River project filling - MECP, Jan. 2019

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 by 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.



Overview of Regulatory Requirements

- Regulation titled <u>O. Reg. 406/19: On-Site and Excess Soil Management</u> (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
 - Beneficial Reuse Assessment Tool (BRAT)
 - Complementary provisions in <u>O. Reg. 153/04</u> (Brownfields Remediation Regulation), <u>Reg. 347</u> and <u>O. Reg. 351/12</u> (Waste Management Regulations)

Phased Regulatory Implementation	Timing
Reuse Rules and Waste Designation Clarification - Excess soil reuse standards and waste designation, processing and storage rules, verbal hauling requirements	January 1, 2021
 Excess Soil Reuse Planning Requirements For larger or riskier generating projects (with some exceptions) Assessment of past uses, and if required sampling and characterization Destination assessment report Tracking and registration Hard copy or electronic hauling record Larger reuse site registration and procedures 	January 1, 2023
Restriction on the deposit of clean soil at landfill sites	January 1, 2025

Rules for Excess Soil Reuse

- Excavated soil or crushed rock becomes excess soil upon leaving a project area.
- Generally, soil and crushed rock staying in the project area can be reused.
- The rules for reuse of excess soil are found in <u>sections 3, 4 and 5</u> of the regulation, which then refer to other key sections of the regulation and both parts of the <u>Rules</u> <u>for Soil Management and Excess Soil Quality Standards</u>.
- In order to be reused and not designated as waste, excess soil being reused at another site must meet <u>all of these conditions</u>:
 - 1. The excess soil is directly transported to a reuse site from a project area, a Class 1 soil management site or Class 2 soil management site, or local waste transfer facility
 - 2. The owner or operator of the reuse site has agreed in writing to deposit the excess soil at the reuse site
 - 3. There is a beneficial use for that excess soil and the quality and quantity of excess soil being taken to that site are consistent with the beneficial use
 - 4. The excess soil is dry soil and remains dry soil until it is finally placed at the reuse site, or, if it is liquid soil, a site-specific instrument authorizes the excess soil to be deposited at the reuse site
- These criteria are intended to ensure that the excess soil will be reused at the reuse site for a beneficial purpose and that the quality and quantity of the excess soil to be deposited at the reuse site for final placement are appropriate for that purpose

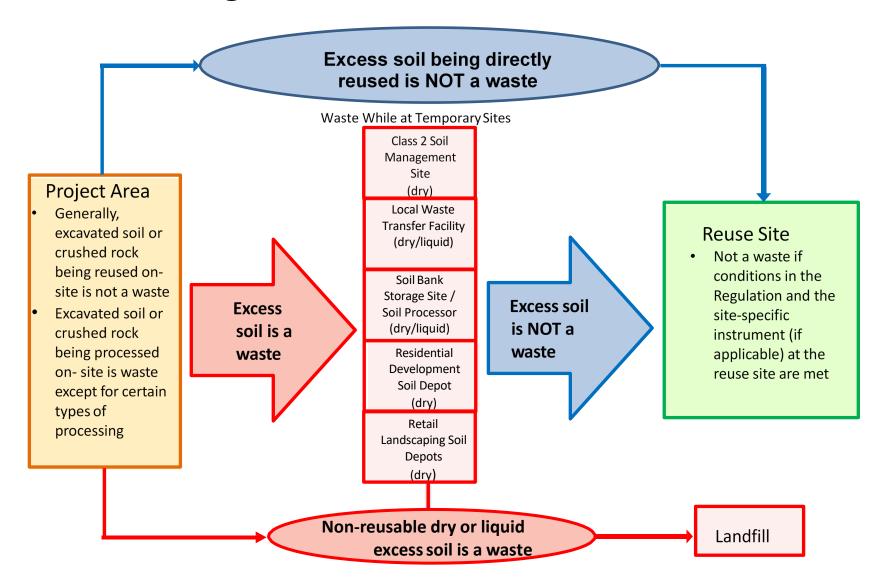


Reuse Within the Project Area

- Excavated soil or crushed rock from the project area that is reused within the project
 area is not excess soil and is not designated waste. This allows these materials to be
 readily reused on-site and they are exempt from the excess soil reuse rules in the
 regulation, including the excess soil quality standards.
- Maximizing on-site reuse should be considered during the design of a project to avoid requirements that may apply to excess soil leaving a project area.
- If soil or crushed rock is excavated at the project area and temporarily stored at an interim site or in a vehicle off-site, then returned to the project area for reuse, it would not be subject to the requirements in sections 3, 4 and 5 of the regulation (the reuse criteria).
- While the excess soil reuse rules do not apply to excavated soil or crushed rock reused on-site, being familiar with them may prevent adverse effects.
- As well, if soil or crushed rock that is excavated within a project area is determined to be a hazardous waste within the meaning of Regulation 347, the requirements of that regulation must be followed, and this regulation does not apply.



Waste Designation Flowchart





Key Definitions

Excess Soil: soil, crushed rock, or soil mixed with rock or crushed rock, that has been excavated as part of a project and removed from the project area for the project

Liquid soil: soil that has a slump of more than 150 millimetres using the Test Method for the Determination of "Liquid Waste" (slump test) set out in Schedule 9 to Regulation 347

Reuse site: a site at which excess soil is used for a beneficial purpose and does not include a waste disposal site

Beneficial Purpose: the use of excess soil in an undertaking that requires additional soil in order to complete that undertaking. Examples of beneficial purposes include backfill or raising the grade for a planned development. Simple disposal or stockpiling of excess soil is not a beneficial purpose. Often a site-specific instrument would relate to the beneficial purpose, giving permission for soil management for a specified undertaking;



Key Definitions

Infrastructure: all physical structures, facilities and corridors relating to:

- (a) public highways
- (b) transit lines and railways
- (c) gas and oil pipelines
- (d) sewage collection systems and water distribution systems
- (e) stormwater management systems
- (f) electricity transmission and distribution systems
- (g) telecommunications lines and facilities, including broadcasting towers
- (h) bridges, interchanges, stations and other structures, above and below ground, that are required for the construction, operation or use of the items listed in clauses
- (a) to (g), or
- (i) rights of way required in respect of existing or proposed infrastructure listed in clauses (a) to (h)



- The reuse site owner or operator confirms the quality and quantity of excess soil necessary for the intended beneficial use as part of an undertaking at the reuse site.
- The applicable excess soil quality for a reuse site may be:
 - a generic excess soil quality standard
 - site-specific standard, or
 - instrument-specified standard
- A reuse site owner or operator also has the discretion to set more stringent standards than the regulation requires.
- As part of consenting to receive excess soil from a project area, the reuse site owner or operator should confirm the quality and quantity required, and any other relevant soil characteristics (such as geotechnical) of the soil they are agreeing to receive.



- Reuse sites governed by a site-specific instrument:
 - the quality and/or quantity of excess soil appropriate for the beneficial purpose in an undertaking at that reuse site, and other performance and operational requirements, may be set by a site-specific instrument (e.g., municipal fill by-law, Aggregate Resource Act licence) and, if so, the rules specified by the site-specific instrument apply.
 - Typically, for excess soil quality, this could be a specific table of standards referenced in the instrument. If the instrument is not specific, such as generically referring to ministry requirements or "inert fill", then going forward the applicable generic tables for the reuse site under the regulation will apply.
 - If the site-specific instrument is silent on excess soil quality or quantity matters, then the rules in the regulation apply, including the applicable standards and rules in the <u>Rules for Soil Management and Excess Soil</u> Quality Standards.



- Reuse sites not governed by a site-specific instrument:
 - If an applicable instrument does not exist or address excess soil quality or quantity, then the rules set out in <u>section 5</u> of the regulation must be met.
 - This includes ensuring the excess soil meets the applicable excess soil quality standards for that reuse site as set out in Part II: Excess Soil Quality Standards. These standards, in part, depend on the type of property use at the reuse site (such as agricultural, residential, etc.). This could also include the development of site-specific standards through the Beneficial Reuse Assessment Tool (BRAT).
 - Section 5 of the regulation also requires ensuring that no more excess soil is brought to the reuse site than is necessary for the beneficial purpose.
 - Depending on site characteristics, there may also be specific rules that apply to the final placement of the excess soil at that reuse site.



Both the quality and quantity of the excess soil that is moving need to be considered

Generic Excess Soil Quality Standards

- 2 volumes small volume (up to 350m³, same as O. Reg. 153/04 for coarse textured soil) and volume independent
- Based on land use category, similar to O. Reg. 153/04
- o Includes generic leachate screening level tables and ceiling value tables

Site-Specific Excess Soil Quality Standards

- Site specific standards can also be developed by a QP using the Beneficial Reuse Assessment Tool (BRAT) or a risk assessment (RA).
- It is required that site-specific standards and any associated risk management measures or site use characteristics be specified in an applicable site-specific instrument for all uses of risk assessment and any uses of the BRAT that rely upon specified site use characteristics (except for an infrastructure project).

Reuse Rules for Specific Circumstances

- Rules for specific circumstances (e.g., crop land, environmentally sensitive sites, local background concentrations)
- Rules for specific types of soil (e.g., soil with salt, soil mixed with compost)
- There are also general soil storage rules which apply to all sites.



Excess Soil Quality Standards

Table Description	Small Volume O. Reg. 153/04 (up to 350 m³)	Volume Independent (350 m³+)
Full Depth, Background	Table 1	Table 1
Full Depth, Potable	Table 2	Table 2.1
Full Depth, Non-Potable	Table 3	Table 3.1
Stratified, Potable	Table 4	Table 4.1
Stratified, Non-Potable	Table 5	Table 5.1
Full Depth, Shallow Soil, Potable	Table 6	Table 6.1
Full Depth, Shallow Soil, Non-Potable	Table 7	Table 7.1
Full Depth, Within 30 m of a Water Body, Potable	Table 8	Table 8.1
Full Depth, Within 30 m of a Water body, Non-Potable	Table 9	Table 9.1



Reuse rules for specific circumstances

Environmentally Sensitive Areas

 Excess soil shall only be placed within an environmentally sensitive area if the excess soil meets Table 1 of the excess soil quality standards and the results of any required leachate analysis meets Table 1 of the leachate screening levels

Soil for Growing Crops and Pasture

- Excess soil shall only be finally placed for the beneficial purpose of growing crops or pasture if the following criteria are met
 - 1) No excess soil will be placed on top of existing topsoil unless the excess soil is topsoil; and
 - 2) The excess soil meets Table 1 of the excess soil quality standards and the results of any required leachate analysis meets Table 1 of the leachate screening levels, unless the excess soil is finally placed at a depth that is below 1.5 metres from the surface



Reuse rules for specific circumstances

Local background concentrations

- An excess soil quality standard is deemed to be met if a QP demonstrates
 that the excess soil contains a parameter that is naturally occurring at the
 reuse site, and not seen as an exceedance of the naturally occurring range of
 concentrations typically at the site
- Documented evidence of the naturally occurring concentrations must be provided to the reuse site owner/operator



Reuse rules for specific circumstances

Reuse of Salt Impacted Soils

- Soil that is impacted with salt due to salting for vehicle and pedestrian safety, can be reused if the following criteria are met:
 - If soil is finally placed in an area where salting is expected e.g., future parking lot, future road; or
 - At an industrial/commercial property where non-potable standards apply; or
 - At least 1.5 meters below the surface
- Despite the above, salt impacted soil cannot be reused in any of the following circumstances:
 - Within 30 meters of a waterbody
 - Within 100 meters of a potable well / an area intended for future potable well
 - Where crops / pasture activities are occurring / planned (unless the soil is placed 1.5 m or greater below the soil surface)

If salt impacted soil is brought to a reuse site, the **reuse site must be notified** that the soil is salt-impacted and the project leader/operator of the project area must communicate any relevant risks. If any sampling of the soil has taken place prior, these **sampling results must be provided** to the reuse site owner or operator.



Reuse rules for specific circumstances

Other reuse rules for specific types of soil and reuse sites are also outlined within the Rules document, and include:

- Excess soil blended with compost
- Reuse of dewatered or solidified soil
- Excess soil with pH levels outside of acceptable range
- Rules for using stratified tables (Tables 4, 4.1, 5, and 5.1) at a reuse site



Requirements for Larger Reuse Sites

- The following requirements come back into effect on January 1, 2023
- Reuse sites accepting at least 10,000m³ of excess soil for an undertaking will be required to:
 - file a notice on the public Registry
 - develop and implement procedures to track and inspect each load of excess soil being received
- For existing reuse sites, this requirement only applies if they accept more than 10,000m³ after January 1st, 2023
- These requirements also don't apply to reuse sites that are part of an undertaking related to an infrastructure project
- These additional requirements will help to ensure that these reuse sites are receiving soil that meets the appropriate reuse conditions and that the storage of excess soil for final placement in respect of an undertaking at the reuse site does not cause an adverse effect



Requirements for Larger Reuse Sites

- For undertakings that receive more than 10,000m³ of excess soil, the owner or operator of the reuse site must file a notice in the online, public registry developed and implemented by the <u>Resource Productivity and Recovery Authority</u> (RPRA).
 RPRA's website contains information on how to file a notice in the Registry.
- This notice provides public transparency and assists with the ministry's compliance
 activities. It also enables others such as project leaders that generate excess soil, to
 be aware of larger, longer-term reuse sites to enable matching and reuse of excess
 soil from project areas. The notice must include prescribed information such as:
 - a description of the reuse site
 - the undertaking at that site
 - the amount and quality of excess soil needed
 - other key information on the site's operation
- Within 30 days of the final load of excess soil being received, the notice on the registry must be updated with information such as the total amount of excess soil received and the date the final load was received.



Requirements for Larger Reuse Sites

Procedures for deposit of excess soil:

- Larger reuse sites must put in place procedures to account for every load of excess soil being deposited at the reuse site for final placement and to ensure that the storage of excess soil does not cause any adverse effects.
- The procedures are intended to help ensure that excess soil received is appropriate for the beneficial use and will not become waste. The procedures should include:
 - identification of the site where the excess soil is coming from
 - collection of relevant reports related to the excess soil (e.g., soil characterization reports, hauling records)
 - inspection procedures to assess the excess soil as it is received (e.g., visual signs of contamination, litter, etc.)



Storing Excess Soil at Reuse Sites

- Excess soil can be stored or stockpiled at a reuse site for up to two years after it is received for final placement at the reuse site
- This period can be extended for an additional five years with written permission from a Director of the ministry.
- Where the excess soil is to be used at a reuse site for an undertaking related to infrastructure, the time limit for storing excess soil at the site is not limited to two years, but equals the time required to complete the undertaking
- The two-year restriction also does not apply to undertakings at sites governed by a site-specific instrument
- Excess soil must be stored in accordance with the storage rules provided in the Rules document, or a site-specific instrument can set different rules.

Note:

- The ministry is currently proposing to amend the Excess Soil Regulation, including an amendment to allow larger storage piles at project areas, reuse sites, and other sites.
 Other rules would continue to apply, e.g., prevent adverse effects.
- The <u>Environmental Registry posting</u> period was Nov. 3-Dec. 3, 2022. A decision on this proposal is expected before the end of the year, for a Jan 1, 2023 in-effect date.



Interactions with Project Leaders, QPs and Excess Soil Haulers

For the regulation to be efficiently implemented, information exchange between some parties is necessary. This applies to reuse site owners and operators in several ways:

- Reuse site operators must provide a written confirmation to project leaders,
 confirming that they agree to take excess soil from the project area. This helps
 ensure that the reuse site only receives the amount and type of excess soil it
 required. It is also a clear way for a reuse site owner/operator to communicate or
 confirm the quality of excess soil applicable to the reuse site
- Reuse sites may request excess soil assessment information from the project leader, or conduct additional testing, to help confirm the soil quality they may receive
- All haulers of excess soil will be required to carry a hauling record as of January 1st, 2023. A copy of the hauling record must be given to the owner/operator of the reuse site, and the owner/operator of the reuse site will have to acknowledge in the hauling record that the excess soil was deposited at their site. The record may also be of value to a reuse site owner/operator to help confirm where the excess soil came from



Best Management Practices











Best Practices

- Involvement of Qualified Persons (QP) at the reuse site
 - Reuse sites generally are not required by the regulation to involve a QP, unless the BRAT or a RA is used to develop site-specific standards
 - However, the owner/operator of a reuse site should consider retaining the services of a QP to help ensure excess soil management planning meets requirements and best practices
 - The QP can assess the current site conditions of soil and ground water at the reuse site and also confirm the appropriate quality of excess soil to be received, giving thought to the reuse site conditions and future use of the property
 - They can also develop required procedures for receiving excess soil at a reuse site and can develop complete fill management plans. This is particularly advisable for reuse sites receiving larger amounts of excess soil or sites receiving excess soil from many different project areas



Best Practices - Continued

Site specific instruments

- Reuse site owners and operators should proactively undertake the due diligence necessary to determine what site-specific instruments, such as a municipal fill permit, may be required for an undertaking and before excess soil may be placed on their lands.
- These instruments may include requirements related to the location, depth, quality and/or quantity of excess soil appropriate for the proposed beneficial purpose and undertaking on the reuse site.

Engaging communities

- Local landowners, community groups, Indigenous communities and others may have concerns regarding excess soil management
- Owners/operators of larger reuse sites, sites handling riskier excess soil and sites where the activities will be occurring over a longer period of time, can assess early in the planning process potential anticipated concerns by affected parties and determine what engagement might be helpful
- Where applicable, this could be done in conjunction with communication activities required for a site-specific instrument or other approvals that the reuse sites may need, such as those required for the purpose of zoning or permitting under municipal by-laws



Best Practices - Continued

Fill management plans

- The owner or operator of a large reuse site should consider preparing a fill management plan, which assesses site conditions, determines appropriate fill quality for the site, and details fill management procedures for the planned undertaking.
- A QP could be hired to complete and implement such a plan. Such plans may be required through municipal by-laws.
- The fill management plan may be a useful tool to integrate all regulatory requirements, and may include:
 - Copies of any documentations related to municipal or conservation authority licenses/permits
 - Identification of the appropriate types/quality of soil to be received at the site
 - Site plans and grading plans
 - Protocols for incoming excess soil (inspections, contingency measures, recordkeeping)
 - Audit sampling protocols
 - Soil placement and segregation protocol to identify where excess soil has been placed at the reuse site, for assessment if required

Best Practices - Continued

- Requesting sampling and conducting confirmatory sampling of excess soil received
 - Some larger and riskier project areas that generate excess soil are required to conduct assessments and sampling and analysis under the regulation, while other project areas do not have this requirement. However, they may still conduct some due diligence assessment and sampling, to confirm the excess soil meets the applicable excess soil quality standards as required by the regulation
 - Reuse sites may want to request an assessment of past uses and/or sampling results before giving written consent to receive excess soil
 - Some reuse sites, especially larger ones, may also consider undertaking auditing/confirmatory sampling of excess soil being received. Auditing may be reduced if excess soil is confirmed to be from locations with little or no likelihood of contamination. An assessment of past uses or a phase one environmental assessment from the project area(s) can help to assess this





What are the requirements for excess soil going to pits and quarries?

- The Aggregate Resources Act (ARA) applies to all pits and quarries on Crown land and designated private land in Ontario. In undesignated private land areas, pits and quarries may be governed by the local municipal by-laws.
- While the regulation does not apply to aggregate that is excavated from pits or quarries, it does apply to the reuse of imported excess soil at a pit or quarry for a beneficial purpose, e.g., rehabilitation of the site when the resource is depleted.
- Generally, site plans, licenses or permits under the ARA provide the authorization for the importation of fill at these sites, and when those conditions define more stringent excess soil quality standards, they take precedence over the Excess Soil Regulation.
- In April 2022, O. Reg. 244/97 under the ARA was amended to, among other things, require that the site plan, licence or permit for a pit or quarry must authorize the importation of excess soil to a pit or quarry for which an ARA license or permit was issued. Other key amendments require sections of the Soil Rules to be followed, and that excess soil placed below the water table must meet Table 1 of the Excess Soil Standards.
- Unlicensed sites may be regulated through municipal by-laws.
- If authorized by MNRF, the BRAT may be used to develop site-specific standards.

What rules apply to smaller reuse sites receiving less than 10,000m³ of excess soil?

- General soil reuse rules apply to all reuse sites, including the criteria used to determine whether soil is designated as a waste. All reuse sites including small reuse sites need to:
 - only receive excess soil for a beneficial purpose
 - consent in writing to receive excess soil from a project area
 - ensure that the excess soil received is of appropriate quality for the beneficial purpose and that the amount of excess soil received aligns with the beneficial purpose
 - only receive dry soil, unless a site-specific instrument authorizes receipt of liquid soil
 - follow soil storage rules before excess soil is finally placed
 - retain copies of all records generated in the excess soil movement and management activities undertaken for a period of seven years, with the exception of the hauling records which should be retained for two years
- The regulation does not affect the need for other approvals or permits that may be required by a municipality, conservation authority or other public body.



What is the difference between depositing excess soil at reuse sites, versus at landfills or Class 1 soil management sites?

- Landfill sites and Class 1 soil management sites are waste disposal sites
- Disposal of excess soil at a landfill is not considered beneficial reuse under this regulation, and excess soil deposited at a Class 1 soil management site is not intended to stay there permanently. These sites also require waste Environmental Compliance Approvals (ECAs)
- Reuse sites are not a waste disposal site, have a beneficial reuse for excess soil as part of an undertaking, and generally do not require waste ECAs



What are the requirements for using the BRAT's six site use characteristics?

- BRAT provides the ability to quickly and easily generate site-specific standards using the same model that is used to derive the tables of generic excess soil quality standards
- There are six site use characteristics included in the BRAT that a QP may utilize:
 - Shallow soil cap barrier
 - Fill/hard cap barrier
 - Building with storage garage
 - Building prohibition
 - Building with no first store residential, parkland or institutional use
 - Building with minimum first storey ceiling height requirement
- Use of these six site use characteristics to adjust applicable exposure pathways should be used only if they reflect existing or planned permissible uses, and must be approved and documented in a site-specific instrument (this does not apply to final placement of soil for an infrastructure undertaking)



Does any documentation need to be submitted to the ministry, specifically where the BRAT was utilized to develop site-specific standards?

- For the BRAT, the qualified person retained to develop site-specific standards shall ensure that a copy of each of the following is given to the ministry in accordance with the Soil Rules:
 - A declaration attesting to the accuracy of the information and the assumptions provided as inputs for the BRAT
 - The output worksheet generated when using the BRAT
- There are generally no approvals required from the ministry for the use of the BRAT.
- Note: Pursuant to amendments O. Reg. 244/97 under the ARA, the BRAT can be used for pits and quarries licensed under the ARA in areas above the water table but not on Crown land. The rules to provide a declaration and output worksheet to MECP still apply.



Health Break



Open Discussion, Additional Question and Answer Period



Additional Resources



Additional Resources

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

- Ontario Government Excess Soil Page: 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: <u>rpra.ca/excess-soil-registry</u>
- 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 Person Community of Ontario (QPCO): <u>QPCO Qualified Persons Community of Ontario</u>
- 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): https://ero.ontario.ca/notice/019-2551



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THANK YOU!

