

The Dirt on Excess Soil – A Review of Provincial Laws and Guidelines

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Overview

- **Introduction**
- **British Columbia**
- **Alberta**
- **Manitoba**
- **Quebec**
- **New Brunswick**
- **Ontario**
- **Key Takeaways**
- **Questions**

What is Excess Soil?

- **What is excess soil?**

- differs by province
- excavated soil that is removed from the source site (i.e., Ontario)

- **How is it regulated?**

- provincially, varies across Canada

BRITISH COLUMBIA



B.C. – Contaminated Soil Laws

- **Contaminated soil is governed by the *Contaminated Sites Regulation* under the *Environmental Management Act***
 - Contaminated Soil Relocation Agreements when contaminant concentration exceeds standards
- **Proposed amendments to the legislation**
 - distinction between soils and waste soils
 - removal of Contaminated Soil Relocation Agreements
- **Disposal of soil at sea**

ALBERTA



Alberta – Contaminated Soil Laws and Guidance

- **Governed by the *Waste Control Regulation* under the *Environmental Protection and Enhancement Act***
- **Guidance applicable to excess soil**
 - Disposal of Excess Soil Material from Roadways
 - Soil and Groundwater Remediation
 - Contaminated Sites Management and Policy Framework, and
 - Soil Remediation Guidelines

MANITOBA

Manitoba – Contaminated Soil Laws and Guidance

- **Governed by the *Contaminated Sites Remediation Regulation* and *Contaminated Sites Remediation Act***
- **Treatment and Disposal of Petroleum Contaminated Soil Guideline**
- **Criteria for Acceptance of Contaminated Soil at Waste Disposal Grounds**
 - based on the CCME Canadian Environmental Quality Guidelines and the Canada Wide Standards for Petroleum Hydrocarbons in Soil

QUEBEC

Quebec – Contaminated Soil Laws

- **Contaminated soil in Quebec is subject to three regulations under the *Environment Quality Act***
 - Land Protection and Rehabilitation Regulation
 - Regulation respecting the burial of contaminated soils
 - Regulation respecting contaminated soil storage and contaminated soil transfer stations
- **Contravention of the legislation can result in administrative penalties, fines and imprisonment**

NEW BRUNSWICK

New Brunswick – Guidance

- **Guideline for the Management of Contaminated Sites**
 - Contaminated Sites Management process
- **Some overlap with provincial acts and regulations**
 - *Water Quality Regulation*
 - *Petroleum Product Storage and Handling Regulation*
 - *Clean Environment Act*
 - *Watercourse Alteration Regulation*

ONTARIO

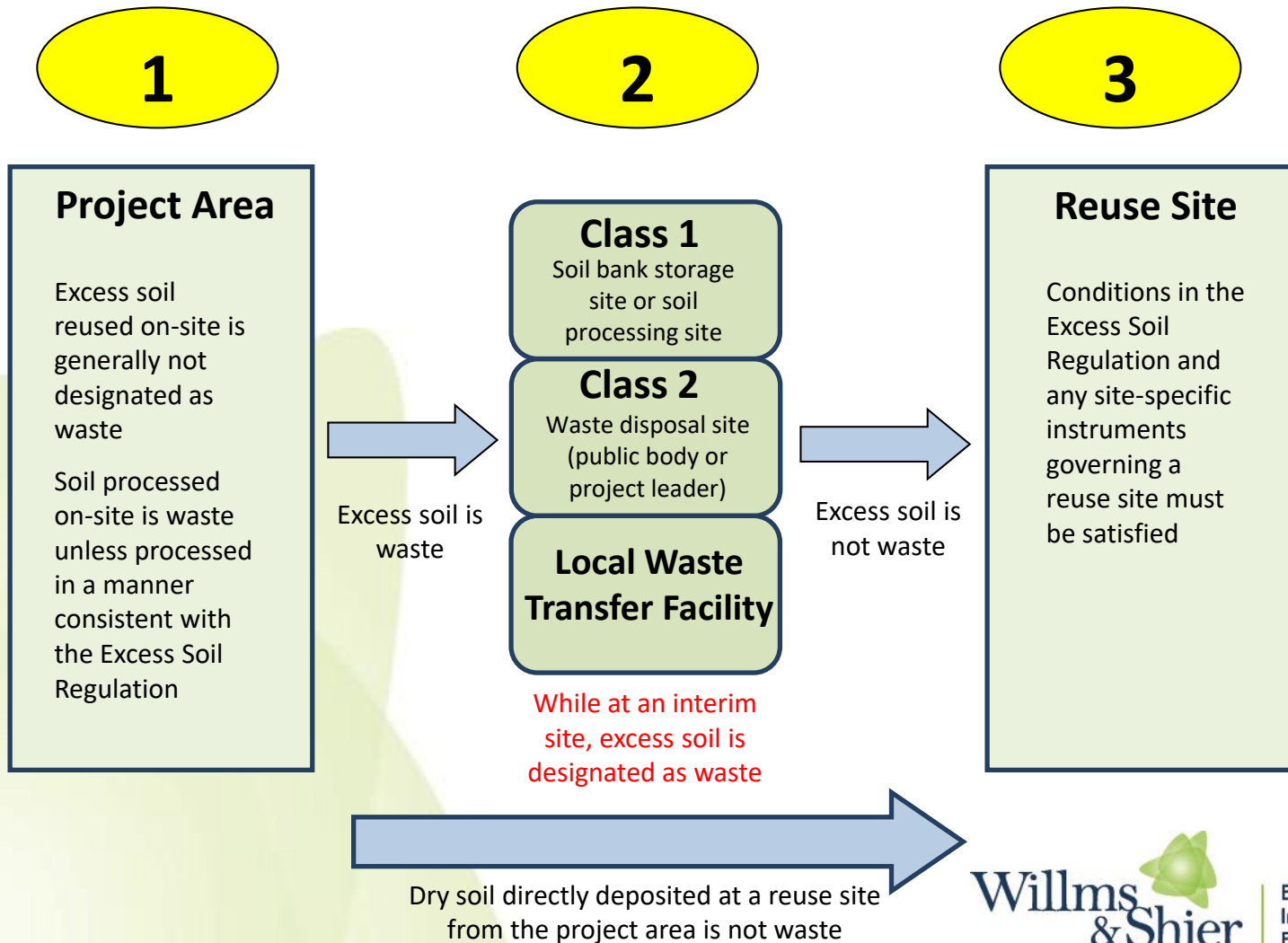
Ontario – Excess Soil Laws and Guidance

- **O. Reg. 406/19: On-Site and Excess Soil Management Regulation (“Excess Soil Reg.”)**
- **Amendments to O. Reg. 153/04 (RSC)**
- **Amendments to Reg. 347 and O. Reg. 351/12 (Waste Management)**
- **Rules for Soil Management and Excess Soil Quality Standards (“Soil Rules”)**
- **Beneficial Reuse Assessment Tool**
- **Rationale Document for Reuse of Excess Soil at Reuse Sites (Guidance)**

Ontario – What is Excess Soil?

- **Excess soil is soil excavated and removed from the “project area”**
- **Excess soil is designated as “waste” unless it meets the requirements set out in the Excess Soil Regulation and Soil Rules**
- **Excess Soil Reg. incorporates by reference**
 - the Soil Rules, which contain specific rules and excess soil quality standards for excess soil management
 - the new Beneficial Reuse Assessment Tool (“BRAT”) to develop site-specific excess soil quality standards

Ontario – When is Excess Soil Waste?



Liquid soil is subject to different requirements

Excess Soil Management: View from QP

- Responsibility placed on Qualified Persons (QPs) under the Regulation and Rules. Focus on the planning and characterization with documentation at the front end of the project.
- **Trigger:** Projects generating 2,000 m³ or more in an urban settlement area, must file a notice on a future Excess Soil Registry (after Jan. 1/22). Planning Activities apply.
- **Trigger:** Assessment of Past Uses or an Enhanced-Investigation Property identifies Contaminants of Potential Concern. Planning Activities must be completed, regardless of the volume generated.

**Enhanced-Investigation Properties
are industrial uses, garages, bulk
liquid dispensers, dry-cleaners**

Excess Soil Management: View from QP

- **Trigger:** For reuse projects accepting $<350 \text{ m}^3$, the existing O. Reg. 153/04 Standards (Tables 1 to 9) apply.

For reuse projects accepting $>350 \text{ m}^3$, the Excess Soil Reuse Standards (Tables 2.1 to 9.1) or Site-Specific Derived Standards (BRAT or full RA) apply.

- **Excess Soil Planning Activities** are required, prior to excavation. These include:
 - Assessment of Past Uses (similar to a Phase I ESA);
 - Sampling and Analyses Plan (when sampling required);
 - Soil Characterization Report (similar to a Phase II ESA); and
 - Excess Soil Destination Report (assess all applicable locations).

These documents are to be prepared by, or under the supervision of, a Qualified Person, with a declaration statement and signature.

Excess Soil Management: View from QP

- **Sampling Based on the Volume of Soil:**

in-situ:

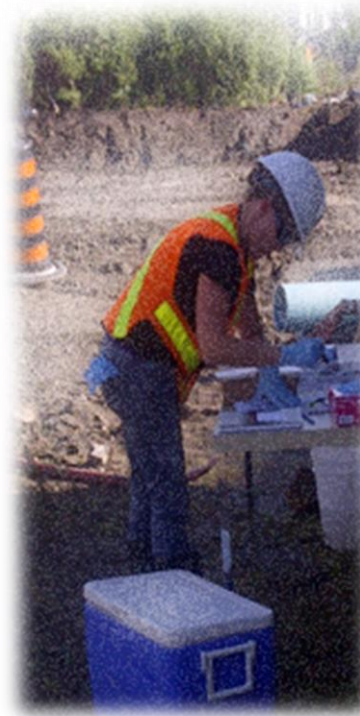
- 3 samples for first 600 m³
- After 600 m³, one per 200 m³
- After 10,000 m³, one per 450 m³
- After 40,000 m³, one per 2,000 m³

Stockpiles:

- **Table 2**, Schedule E, O. Reg.153/04

- **Where Necessary, Minimum Analyses is:**

- pH,
- ICP Metals & Hydrides,
- EC & SAR (salt related),
- Petroleum Hydrocarbons (BTEX and F1-F4),
- Leachate Analyses (SPLP or TCLP) on 10% of total samples.
 - Plus, any other Contaminants of Potential Concern.



Sampling Stockpiles	
Sample Size Based on Stockpile	
Volume (m ³)	Number of Samples
<130	3
130 - 220	4
220 - 320	5
320 - 430	6
430 - 550	7
550 - 670	8
670 - 800	9
800 - 950	10
950 - 1100	11
1100 - 1250	12
1250 - 1400	13
1400 - 1550	14
1550 - 1700	15
1700 - 1850	16
1850 - 2050	17
2050 - 2200	18
2200 - 2350	19
2350 - 2500	20
2500 - 2700	21
2700 - 2900	22
2900 - 3100	23
3100 - 3300	24
3300 - 3500	25
3500 - 3700	26
3700 - 3900	27
3900 - 4100	28
4100 - 4300	29
4300 - 4500	30
4500 - 4700	31
4700 - 5000	32
>5000	32 + (volume - 5000)/300

Excess Soil Management: View from QP



Infrastructure Projects:

- Public highways, transit lines and railways;
- Gas and oil pipelines;
- Sewage collection and water distribution systems;
- Stormwater management systems (ponds have own rules);
- Electricity transmission systems;
- Telecommunication lines, facilities, broadcast towers;
- Bridges, interchanges, stations and other structures, and right-of-ways supporting items above.

Exemptions:

- Soil movement from one infrastructure project for reuse at another infrastructure project with the same owner.
- Class 2 Management Sites, owned by public-body or project leader can operate sites for temporary storage without an ECA.
- Emergency repairs, no planning activities needed.
- No 10,000 m³ limit for storage.
- No registry requirements.

Ontario – Who May be Liable?

- **Broad definition of “project leader” in the Excess Soil Regulation can result in far-reaching liability**
 - persons who are “ultimately responsible” for decisions relating to project planning and implementation will be subject to the Project Leader’s obligations when managing excess soil
 - developers and possibly contractors may be “ultimately responsible”
 - future case law may help to determine who may be “ultimately responsible”
- **Liability concerns**
 - no liability closure provision
 - Project Leaders must demonstrate they were duly diligent if charged

Ontario – Can Excess Soil be Landfilled?

- **On January 1, 2025, landfilling excess soil will be prohibited unless**
 - the excess soil supports the operation of the landfill
 - a QP declares that it would be “unsafe” to finally place the excess soil at a reuse site, or
 - the excess soil exceeds Table 2.1 of the excess soil quality standards (under the Soil Rules)
- **Same laws applicable to waste apply to excess soil being landfilled rather than beneficially re-used**

Key Takeaways

What does it all mean?

- Early Planning, Full Characterization, Proper Documentation
- Team work and Communication at all levels of the Project
- Responsible Management of Materials ... by the Project Leader
- **Note:** Every situation should be evaluated, there are many nuances



Key Takeaways

- **Management of excess soil can be complicated**
- **British Columbia, Ontario and Quebec have comprehensive legislation in place that is most specific to excess soil**
- **Other provinces may follow suit**

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