

Construction and Demolition Debris Management

Targeted engagement on proposed
Guideline amendments

NOVEMBER 16, 2022

Background

Public concerns about storage/transfer/processing start-ups as well as groundwater impacts and fires prompted Departmental audits of approval holders and a public consultation in 2018 on C&D waste management.

The Department's current guidelines were developed in the 1990s and now require updating to bring them into line with recognized scientific advice for the protection of groundwater and prevention of fire.

Background

Regulation changes to *Solid Waste-Resource Management Regulations* and the *Activities Designation Regulations* will come into effect July 5, 2023, that will:

- ✓ ban treated wood from disposal at C&D facilities;
- ✓ require approvals for facilities that process, transfer and store C&D material.

C&D Guideline amendments

Current Guidelines outline minimum requirements for C&D debris management at facilities.

Updates to Guidelines are required to fully address groundwater and fire risks and so that stakeholders have clarity on compliance expectations with the treated wood ban.

Guidelines to be amended:

- ✓ Solid Waste Management Facility Guidelines for Construction and Demolition Debris Storage, Transfer, Process and Disposal;
- ✓ Solid Waste Management Facility Guidelines for Municipal Waste Transfer.

Purpose of today

- Share proposed amendments to the Guidelines.
- Share proposed requirements for how approval holders will meet compliance with the treated wood ban.
- Answer questions and prompt for feedback on timelines and the phasing-in of new Guidelines requirements.

Next step: Accepting written feedback until **Friday, December 9, 2022**

Proposed changes to Guidelines

Would
apply to
all facilities

1. C&D stockpile size limits to mirror National Fire Code

- ✓ **Addresses** Fire
- > **From current ECC Guidelines:** no current restrictions regarding stockpile size

Stockpiled Material		Max Base Area, m ²	Max Height of Storage, m	Clear Space Around each stockpile (m)	Clear space between stockpile(s) and building(s)
A)	Mixed C&D debris, dimensional <u>lumber</u> or brush piles	1 000	≤ 3	6	15
			>3 but ≤6	twice the height of storage to a max of 12	
B)	Wood Chips	15 000	18	9	15
C)	Pallets	1000	3	15	15

Would
apply to
C&D
disposal
sites

2. Soil to be applied as monthly cover

✓ **Addresses** Fire

> **From current ECC Guidelines:** Application of soil monthly was not required.

- Alternative cover still permitted in addition to monthly soil cover.
- Compacted soil cover to be applied at least once per month to a depth of 15cm.
- Approval holders to maintain a record of the quantity of soil used monthly.
- Treated wood is prohibited from use as cover material at the C&D Facility.

Would
apply to
C&D
disposal
sites

3. Final cap design parameters

- ✓ **Addresses** Fire & Groundwater
- > **From current ECC Guidelines:** No current specifications

Minimum design requirements:

- 300mm grading pad;
- 750mm low hydraulic conductivity layer of 10^{-6} cm/s;
- 300 mm vegetative layer of topsoil.

Would
apply to
all facilities

4. Water sampling requirements

✓ **Addresses** Water impacts

> **From current ECC Guidelines:** Does not reflect parameters at risk of leaching from C&D debris or being mobilized by leachate

- Schedule 1 updated to include expanded parameters for surface, groundwater and leachate.
- The hydrogeologic assessment to include a standardized Baseline Survey Report (BSR) of existing water supply wells.
- Sampling would occur quarterly; potential to move to semi-annual for groundwater after 2 years.
- Selected wells would be sampled on an annual basis for enhanced parameters.

Would
apply to
all facilities

5. Annual report changes

- ✓ **Addresses** Fire & Groundwater
- > **From current ECC Guidelines:** Does not require spatial and temporal analysis of groundwater sampling results

For inclusion in annual report to the Department:

- Current and historical groundwater and surface water quality including an analysis of spatial and temporal trends with comparison to applicable water quality objectives and historical (baseline) data in tabular format, as applicable.

Would apply to new or expanded C&D disposal facilities

6. Disposal cell design

✓ **Addresses** Groundwater

> **From current ECC Guidelines:** Currently 1 m of soil at 10^{-5} cm/s; no required separation between water table and bottom of liner.

The disposal cell shall have a minimum of 1 m of soil (or alternate) with a maximum hydraulic conductivity of 1×10^{-6} cm/sec.

The base of the liner shall be a minimum of 1 m above the maximum seasonal high elevation of the water table. Prior to construction, water table elevations must be measured over a one-year period by hydrogeological testing methods submitted for review and acceptance by the Department.

Would
apply to
new or
expanded
C&D
disposal
facilities

7. Leachate collection

- ✓ **Addresses** Groundwater
- > **From current ECC Guidelines:** Not currently required

Leachate collection layer situated immediately above the soil liner and constructed with:

- Layer with minimum hydraulic conductivity of 1×10^{-3} cm/sec;
- Slope allowing leachate to drain;
- Adequate protection to prevent clogging of the drainage layer.

Would apply to new or expanded facilities

8. Additional siting distances

✓ **Addresses** Groundwater

> **From current ECC Guidelines:** Current Guidelines include siting distances from adjacent roads, water courses and offsite buildings only.

Feature	Horizontal Distance (m)
A) Watercourse (top of bank) and Wetland (boundary) or marine water body	30
B) Property line of Facility (PID(s))	30
* C) Municipal drinking water supply	See section (5) below
D) Any off-site structure	90
* E) Any area zoned for residential, commercial, park, or recreational use.	360

(5) Outside municipal drinking water supply's Source Water Protection Area or boundary of provincial designated Protected Water Area.

Summary of proposed changes

Proposed amendments	Risks addressed		C&D debris facilities impacted
	fire	ground -water	
1. C&D stockpile size limits to mirror National Fire Code	✓		all facilities
2. Soil to be applied as monthly cover	✓		disposal sites
3. Final cap design parameters	✓	✓	disposal sites
4. Water sampling requirements		✓	all facilities
5. Annual report changes	✓	✓	all facilities
6. Disposal cell design		✓	disposal facilities that are new or expanding
7. Leachate collection		✓	disposal facilities that are new or expanding
8. Additional siting distances		✓	all new or expanded facilities

- Do you have any questions about the Guideline amendments as proposed?



Determining compliance with the treated wood C&D disposal ban

Definition

“treated wood” means chemically treated during manufacturing for the purpose of resisting decay

Year 1: starting July 5, 2023

Approval holders to establish an **educational program** for the treated wood ban, that includes but is not limited to:

- Educational material;
- Signage;
- Notice on the Approval Holder's webpage and/or other online platforms.

Year 2: starting July 5, 2024

Auditing protocol to be developed before July 5, 2024.

- Year 1 requirements continue
- Loads not permitted to arrive at the disposal cell if exceeding **20% of treated wood** by weight.
- Loads visually estimated to approach or surpass the compliance to be **sorted and/or redirected**.
- Physical **auditing** to measure compliance:
 - <5,000 tonnes/year = 2 audits/yr.
 - Equal or > 5,000 tonnes/yr = 4 audits/yr.
- **Records** must be kept for failed loads including how it was addressed.

Year 3: starting July 5, 2025

The acceptable percentage of treated wood could be changed from 20% in future years

- Year 1 and 2 requirements continue except with an increased frequency of physical **audits**:
 - <5,000 tonnes/year = 4 audits/yr;
 - Equal or > 5,000 tonnes/yr = 8 audits/yr.
- ECC inspection staff may require the **audits** of selected loads at any time.
- **Compliance and enforcement action** may be taken in response to treated wood disposal ban.

Thank you!

Feedback

We are accepting written feedback until December 9, 2022 via email to: swrm@novascotia.ca

Contact info for follow-up questions:

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- Do you have any questions about the proposed ban compliance level for treated wood at C&D disposal sites?

