



Best Practices in Wood Waste Recycling

Quality Specifications for Temporary Road Construction

Material: Wood Waste

Issue: Communication between wood waste processors and the end-users is critical to supplying them with products specific to their application. The characteristics and quality of temporary road surface materials made from recycled wood include: the species' characteristics, acceptable size distribution, geometry, and contamination levels. Failure to comply with wood waste specifications in this application could lead to performance problems and dissatisfied customers.

Best Practice: This Best Practice recommends that the processors of wood waste-derived road materials and their end-users agree on the quality requirements for the temporary roads. Although wood waste has limited applicability as a temporary road surface, the advantage is that the wood waste product would naturally decompose after the need for the road has passed, leaving an enriched soil for plant growth. Specifications for temporary road material varies from one end-user to another based on the following:

- Desired duration of the road
- Anticipated traffic levels
- Types of vehicles
- Underlying soils and other factors

Written specifications should be developed and made available to the end-users. Oftentimes, this written specification is an initial proposal used for discussion purposes until the local application requirements can be further defined. Below is a general specification example:

Wood Species

Most wood species are acceptable. Although, certain species might be preferred for their phytotoxic, growth-inhibiting, (e.g., species such as Cedar and Black Walnut) or decay-resistant characteristics (e.g., Cedar). These species might be considered only if the road was designed to last and inhibit plant growth. Species with large thorns (e.g., Locusts and Hawthorns) should be avoided where light vehicle and foot traffic might be common.

Size Distribution

Length: 2 to 6 inches (50 to 150 mm)

Thickness: <0.5 inches (12 mm)

Fines <1/8 inches (3 mm), 2 - 5% maximum

Acceptable Geometry

A hogged or shredded material is preferred because of its ability to create a mat of interlocking pieces. This holds the materials together and forms a better and firmer surface. Stumps, brush, and similar materials are good sources for producing road materials because of their tendency to produce a stringy material when shredded.

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Maximum Allowable Contamination Levels

Rot	0 - 10%	Bark	1 - 10%
Dirt, rock, sand	0 - 15%	Metals	0%
Plywood	1 - 10%	Plastics	0 - 1%
Particleboard	1 - 10%	Painted wood	0 - 1%
Wood with laminates	1 - 10%	Treated wood	0 - 10%

Other non-wood materials: varies depending on the future disposition of the road.

Implementation: Assessing the potential market for temporary roads is one of the first steps in pursuing this application. Possible applications include access roads to landfills, logging roads, and other temporary operations. Once the existing or potential need for temporary roads has been identified, the end-users would need to understand the advantages of using wood waste derived products to meet their needs.

Benefits: Wood waste products provide a flexible material for road surfaces that are easy to install and easily “repaired” or reinforced through additional applications. The wood waste products would exist for a predictable amount of time and naturally degrade to become a beneficial soil-humus content for plant growth.

Application Site: Processing Facility.

Contact: For more information about this Best Practice, contact CWC (206) 443-7746, e-mail info@cw.org.

References:

1. Gillis, Terry. Recovery 1, Inc. Tacoma, WA
2. Hlavka, Rick. Green Solutions. South Prairie, WA.
3. Smith, David C. CE/Western Engineering, Inc. Albany, OR.

Issue Date / Update: March 1997