

Wood Chip Berms as Pre-Filters

Purpose: To pre-filter and trap sediment before reaching sediment barriers (silt fences)

Description: A triangular-shaped application of wood chips placed just upslope of sediment barriers.

Discussion: The pre-filter berm will trap most of the sediment that often clogs the pores of the sediment barrier. The pre-filter berm also spreads out the flow of sediment on slopes, thus reducing the point of concentration (the lowest point) normally observed on sediment barriers installed on sloping terrain.

Large piles of freshly chipped wood residue have demonstrated spontaneous combustion. If you note smoke or vapors emitting from the pile, spread the pile out and allow it to cool off. Once installed near the sediment barrier, the small cross-section of wood chips should not exhibit this problem. With deterioration, some natural dark organic stain may be observed just downslope. This is color, not particles.

Dimensions: Build to suit site conditions using locally chipped wood residue after timber has been removed. Offset the berm a six inches in front of the sediment barrier to prevent sloughing materials from contacting the barrier.

Effectiveness: The effectiveness of the filter decreases with time as the pores become filled with sediment. Sediment-filtering will depend upon chip packing density. Too dense causes the pre-filter berm to act as a dam rather than a filter. A lightly-packed berm may allow large volumes of sediment to pass through. Active organic surfaces will trap many fine particles and colloids that do not respond to gravity.

Closure: When the site is stabilized and other temporary BMPs are removed, the chip berm can be left to decompose slowly or regraded into the existing terrain.

