

2.12 WATTLES



Figure 2.28. Coconut fiber roll (Source: Natural Resources Conservation Service)

Overview

Description: A sediment velocity control device made of tubes of straw, rice straw, or coconut husk encased in an ultraviolet-degradable plastic netting or 100% burlap material. Wattles help stabilize slopes by breaking up the length of the slope or by slowing and spreading the overland flow of water.

Problem identification: Sloping disturbed areas requires multiple devices to divide the length of the slope into short sections and reduce flow quantity and velocity.

Design purpose: Provide devices that are biodegradable over time, but that reduce water flow velocities on slopes and allow for sedimentation to remain on the slopes while vegetation is being established.

Installation: Wattle locations should be established in the same manner as compost tubes, but are installed in shallow trenches (two to four in. deep). Excavated materials are placed on the upstream side of the wattle to initiate sediment collection. The wattles must be staked with wooden stakes and left in place during the establishment of vegetation on the slope. The size of the wattle should be determined using the Table 2.7.

Table 2.7. Recommended wattle spacing by slope

Slope	Spacing intervals (ft)	
	9" diameter	12" diameter
<4:1	20'	40'
2:1 to 4:1	15'	30'
2:1 or greater	10'	20'

Wattles can be used for inlet protection, but are better suited to slope work.

Maintenance/inspection: To enhance the retention capability of the wattle, sediment should be removed on a routine basis when the level of sedimentation reaches one-half the height of the exposed wattle. Damaged areas should be repaired immediately until the vegetation is established and growing through the material.

Design life: Varies with product selection (three to six months).

Estimated cost: Varies with the product selected.