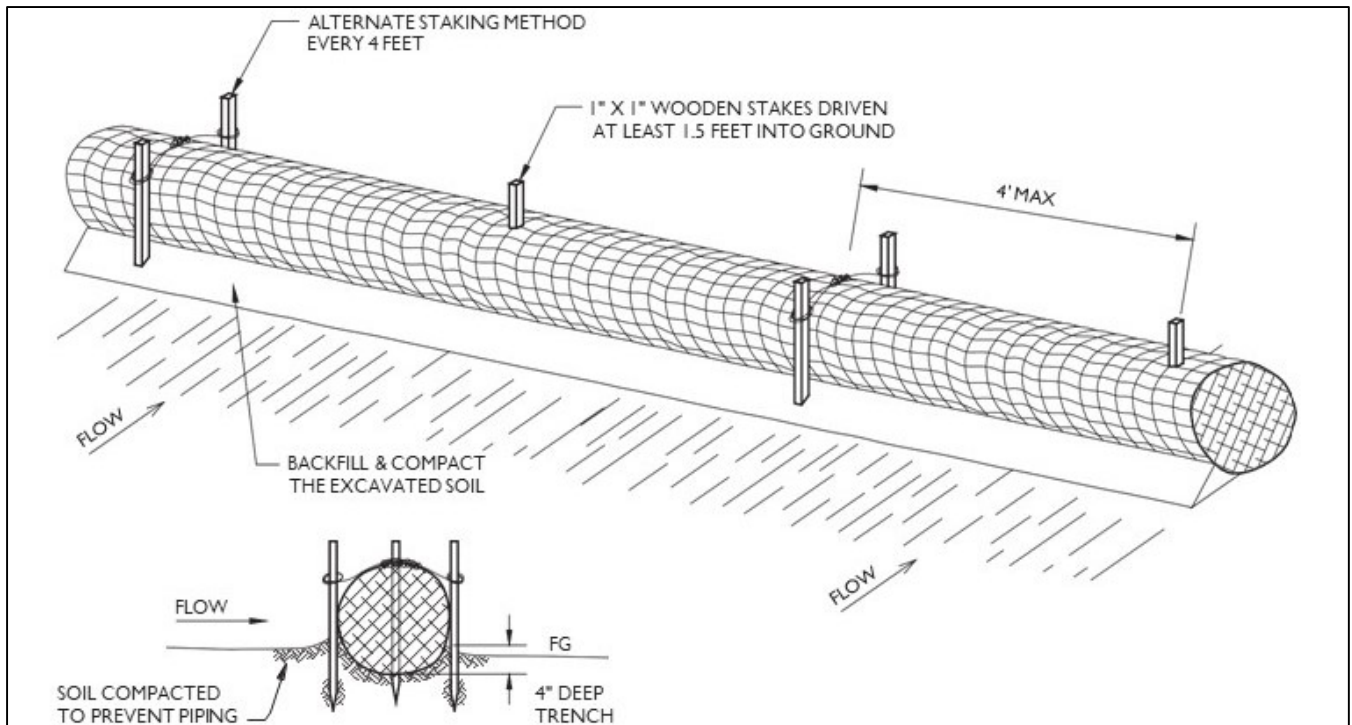


Typical Fiber Roll/Wattle Sediment Barrier



Introduction to Wattles:

- Straw wattles or fiber rolls are designed to slow down runoff, filter and trap sediment before the runoff gets into waterways. Straw wattles are porous and allow water to filter through fibers and trap sediment. Because they slow runoff they reduce sheet and rill erosion.
- Straw wattles may be used on slopes to shorten slope length. They are designed for short slopes or slopes flatter than 3:1 and low surface flows not to exceed 1 c.f.s. for small areas.
- It is important to know how much drainage area the most uphill wattle is receiving and accommodate for this drainage.

Wattle Installation:

1. Prepare smooth slope before the wattling procedure is started. Shallow gullies should be smoothed as work progresses.
2. Dig small trench across the slope on contour, to place rolls in. The trench should be deep enough to accommodate half the thickness of the roll. When the soil is loose and uncompacted, the trench should be deep enough to bury the roll 2/3 of its thickness because the ground will settle.
3. It is critical that rolls are installed perpendicular to water movement, parallel to slope contour. Start building trenches and install the rolls from the bottom of the slope and work up.
4. Lay the roll along the trenches fitting it snugly against the soil. Make sure no gaps exist between the soil and the wattle.
5. Use a straight bar to drive clean holes through the roll and into the soil. Drive the stake through prepared hole into soil. Leave only 1 or 2 inches of stake exposed above roll.
6. Install stakes at 4 feet max intervals.
7. Construct an earthen berm along the uphill side of the roll to force sheet flow into the roll and prevent water from piping into the trench.
8. When more than one roll is placed in a row, the rolls should overlap, one in front of the other, by at least 1 foot and staked securely to prevent piping.

Wattle spacing: 1,000/slope gradient or as project engineer dictates.

Example: @20% slope wattle spacing = $1,000/20=50$ feet

Napa County Resource Conservation District

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