

Erosion Blankets

What are Erosion Blankets?

Erosion control blankets/matting are lightweight synthetic or organic mats (netting or blankets) that come in rolls. They are rolled out and staked down to the soil surface. Erosion blankets provide short-term soil stability while vegetation is established in areas of high erosion risk. They also protect soils and conserve moisture. Erosion blankets can be expensive but are effective when installed correctly.

In ecologically sensitive areas, like riparian areas, biodegradable matting is highly recommended. Some matting products contain plastics that persist and can create entrapment hazards for small animals.

Jute and coir are two examples of 100% biodegradable erosion matting.

- Jute typically has a more open weave and can be used on terrestrial environments.
- Coir is heavier and comes in a variety of weaves or “weights.” Coir matting is often used in areas where flowing water (on stream banks, benches, and drainage ditches) creates greater shear stress on the matting.

Where should they be used?

Erosion blankets/matting are most appropriate in ecologically sensitive areas with:

- A high burn severity characterized by high tree mortality and absence of leaf/needle litter
- Steep slopes
- High debris flow risk

Erosion blankets are used on slopes (jute) and in channels with flowing water (coir) where mulches will not stay in place (**Photo 1**). They aid in soil retention and protect slopes during seed and vegetation establishment when installed correctly (**Figure 1 on back page**). Erosion blankets are often installed in combination with seeding, hydroseeding, or native tree and shrub planting, though they can be used as a temporary erosion control treatment.



Photo 1. Erosion blanket example

Resources

The Pure Water Partners (PWP) program is working to place mulch in riparian areas and other priority areas as part of an integrated approach to erosion management on private properties impacted by the Holiday Farm Fire. If you are interested in assistance with erosion control and riparian restoration, please sign up for a PWP site assessment by visiting www.purewaterpartners.org

Jute supplies and materials may be severely limited due to unprecedented demand associated with the 2020 wildfires in Western Oregon.

Figure 1. Slope and Channel Matting

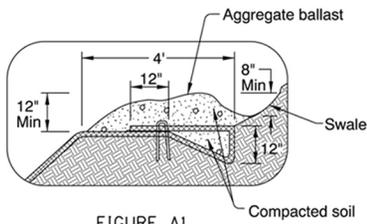


FIGURE A1

TOP OF BANK ANCHOR TRENCH, H>3' AND TERMINAL SLOPE

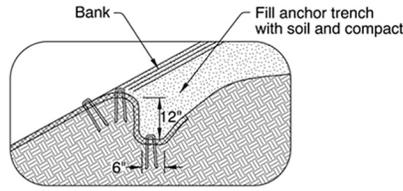


FIGURE A2

TOP OF BANK ANCHOR TRENCH, H<3'

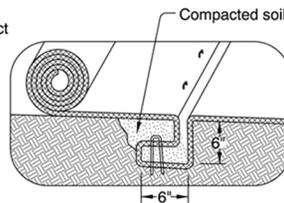


FIGURE A3

CHANNEL CHECK SLOT

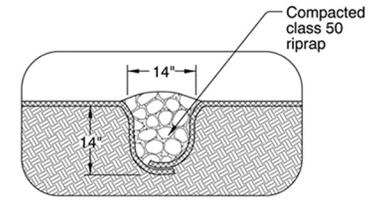


FIGURE A4

CHANNEL CHECK SLOT WITH ROCK BACKFILL

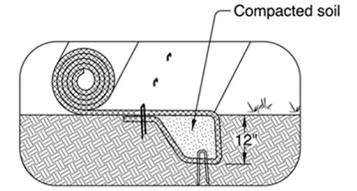
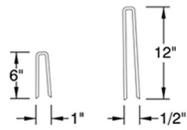
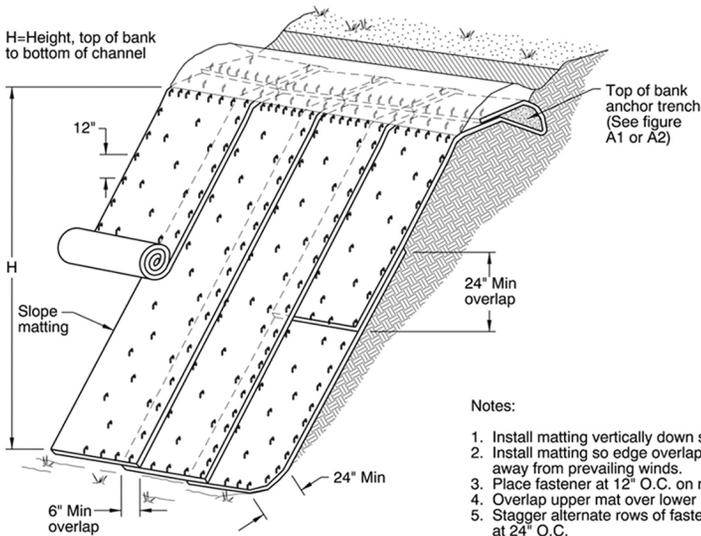


FIGURE A5

INITIAL CHANNEL ANCHOR TRENCH



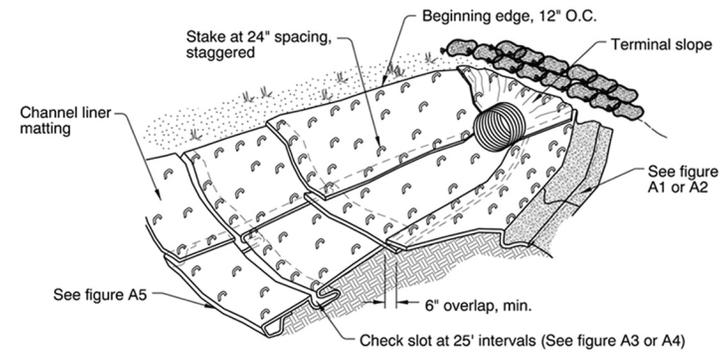
STAPLES



SLOPE ISOMETRIC VIEW

Notes:

1. Install matting vertically down slope
2. Install matting so edge overlaps are shingled away from prevailing winds.
3. Place fastener at 12" O.C. on matting edges
4. Overlap upper mat over lower mat, and fasten.
5. Stagger alternate rows of fasteners placed at 24" O.C.
6. Extend mat 24" beyond toe of slope; Fold mat back under 4" and fasten.



CHANNEL ISOMETRIC VIEW

Notes:

1. Install channel liner matting, in the direction of water flow. Anchor upstream end of mat with check slot for culvert outfalls, place mat under pipe 12" minimum upstream from pipe outlet.
2. Construct check slots across channel bottom at 25' spacing and at the end of each mat (Fig. A3 or A4).
3. Overlap side channel liner matting edges 6" over the center channel liner matting and fasten edges 12" O.C. Continue overlap and stapling pattern for each additional side channel liner mat.
4. Lap upstream matting end 12" over beginning edge of downstream matting. Fasten 12" O.C.
5. Anchor top edge of side channel matting in trench and fasten 12" O.C. (Fig. A2).
6. Fasten matting interior at 24" O.C. with staggered spacing.
7. Construct initial anchor trench at downstream end of matting and terminal slope anchor at upstream end.

CALC. BOOK NO. N/A	BASELINE REPORT DATE 01-JAN-2013
<p>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>	NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications
	OREGON STANDARD DRAWINGS
	SLOPE AND CHANNEL MATTING
	2015
DATE	REVISION DESCRIPTION

RD10055

RD1055