4-Short Term Non-living Soil Protection

Temporary Erosion Control Blanket (ECB)

Definition
A manufactured blanket composed of biodegradable / photodegradable natural or polymer fibers and/or filaments that have been mechanically, structurally or chemically bound together to form a continuous matrix.

Purpose
To provide temporary surface protection to newly seeded and/or disturbed soils to absorb raindrop impact and to reduce sheet and rill erosion and to enhance the establishment of vegetation.

Applicability
- On disturbed soils where slopes are 2:1 or flatter.
- Where wind and traffic generated air flow may dislodge standard, unarmored mulches.
- May be used as a substitute for Temporary Soil Protection.
- May be used as a substitute for Mulch for Seed.

Planning Considerations
When considering the use of ECB keep in mind the blanket’s capability to conform to ground surface irregularities. If the blanket is not capable of developing a continuous contact with the soil then it must be applied to a fine graded surface. Some blankets will soften and when wetted reconfom to the ground. Also, when the ground is frozen, proper anchoring can be difficult, if not impossible.

Care must be taken to choose the type of blanket which is most appropriate for the specific need of the project. With the abundance of erosion control blankets available, it is impossible to cover all of the advantages, disadvantages and specifications of all manufactured blankets. There is no substitute for a thorough understanding of the manufacturer’s instructions and recommendations in conjunction with a site visit by the erosion and sedimentation plan designer prior to and during installation to verify a product’s appropriateness.

The success of temporary erosion control blankets is dependent upon strict adherence to the manufacturer’s installation recommendations. As such, a final inspection should be planned to ensure that the lap joints are secure, all edges are properly anchored and all staking/stapling patterns follow the manufacturer’s recommendations.

Specifications

Materials
Temporary erosion control blankets shall be composed of fibers and/or filaments that:
- are biodegradable or photodegradable within two years but without substantial degradation over the period of intended usage (five months maximum);
- are mechanically, structurally or chemically bound together to form a continuous matrix of even thickness and distribution that resist raindrop splash and when used with seedings allows vegetation to penetrate the blanket;
- are of sufficient structural strength to withstand stretching or movement by wind or water when installed in accordance with the manufacturer’s recommendations;
- are free of any substance toxic to plant growth and unprotected human skin or which interferes with seed germination;
- contain no contaminants that pollute the air or waters of the State when properly applied; and
provide either 80%-95% soil coverage when used as a substitute for **Mulch for Seed** or 100% initial soil coverage when used as a substitute for **Temporary Soil Protection** measure.

Materials shall be selected as appropriate for the specific site conditions in accordance with manufacturer's recommendations. Use of any particular temporary erosion control blanket should be supported by manufacturer's test data that confirms the blanket meets these material specifications and will provide the short term erosion control capabilities necessary for the specific project.

**Site Preparation and Installation**
(see Figure ECB-I)
Prepare the surface, remove protruding objects and install temporary erosion control blankets in accordance with the manufacturer's recommendations. Ensure that the orientation and anchoring of the blanket is appropriate for the site.

The blanket can be laid over areas where spring grass seedlings have been inserted into the soil. Where landscape plantings are planned, lay the blanket first and then plant through the blanket in accordance with Landscape Planting measure.

Inspect the installation to ensure that all lap joints are secure, all edges are properly anchored and all staking or stapling patterns follow manufacturer's recommendations.

**Maintenance**
Inspect temporary erosion control blankets at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for failures. Blanket failure has occurred when (1) soils and/or seed have washed away from beneath the blanket and the soil surface can be expected to continue to erode at an accelerated rate, and/or (2) the blanket has become dislodged from the soil surface or is torn.

If washouts or breakouts occur, re-install the blanket after regrading and re-seeding, ensuring that blanket installation still meets design specifications. When repetitive failures occur at the same location, review conditions and limitations for use and determine if diversions, stone check dams or other measures are needed to reduce failure rate.

Repair any dislodged or failed blankets immediately.

When used as a substitute for **Mulch for Seed**, continue to inspect as required by the seeding measure. When used as a substitute for **Temporary Soil Protection**, continue to inspect until it is replaced by other erosion control measures or until work resumes.