

*Lesson 30: Erosion and  
Sediment Control Practices*

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Water Resources Engineering

# **Erosion and Sediment Control Measures**

Vegetation and Soil Stabilization

# *Compost Blanket*



A compost blanket is blown onto a yard. Compost is high in organic matter content, which absorbs the impact of raindrops, preventing the detachment of soil particles.

Compost and Grass Seed  
Johnston, IA

# *Mulching*



Apply vegetative residue, such as mulch, to protect soil surfaces from the impact of raindrops or the erosive forces of wind.

Straw mulch

# *Temporary Rolled Erosion Control*



Matting protects the disturbed slope from erosion until vegetative cover is established. Seeding is completed prior to installation.

Erosion Control Matting

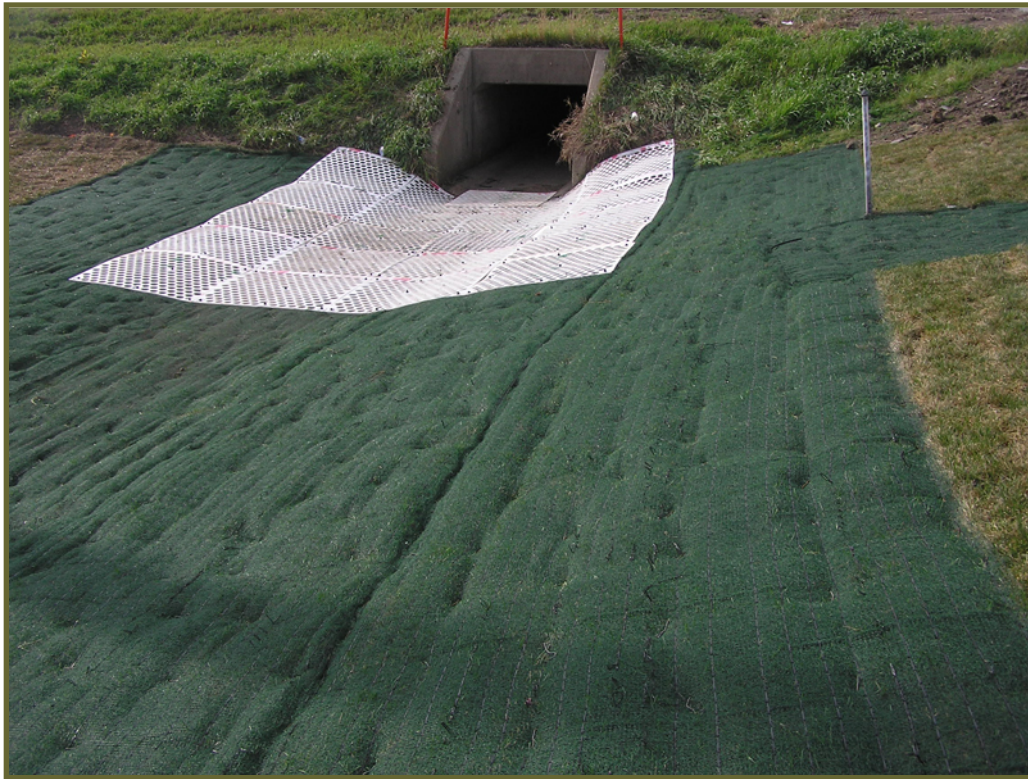
# *Temporary Seeding*



Temporary seeding is a means of growing a short-term (less than one-year) vegetative cover to stabilize disturbed areas in danger of erosion.

Temporary and permanent seeding at a construction site

# *Turf Reinforcement Mats*



Turf reinforcement mats are designed to impart immediate erosion protection, enhance vegetation establishment, and permanently reinforce vegetation during and after maturation.

TRM at culvert outlet

# **Erosion and Sediment Control Measures**

Structural



# *Check Dams*



The stone check dams along this ditch dissipate the velocity of flow as well as knocking down some sediment in the flow of the ditch.

Stone check dams with silt fencing  
for inlet protection

# *Temporary Check Dams*



Straw bales may be used as temporary check dams in low gradient situation provided they are properly staked in.

Straw bales placed at intervals  
along a swale

# *Level Spreader*



A level spreader is a low-cost method to convert small volumes of concentrated runoff into sheet flow and release it onto an area stabilized by existing vegetation.

Level spreaders prevents concentrated flows from eroding steep slopes

# *Flow Transition Mat*



Iowa School for the Deaf in Council Bluffs uses scourstop to prevent erosion where water flows into their rain garden. Scourstop has voids that allow vegetation to grow through.

Scourstop

# **Erosion and Sediment Control Measures**

Sediment

# *Inlet Protection*



Storm-sewer inlet

Geotextile fabric is installed beneath the grate of this storm sewer inlet. Runoff will receive one last filtering before moving off-site.

# *Sediment Basin*



Detain sediment laden runoff long enough to allow a majority of sediment to settle out

Sediment basin with impounded water ("wet pond") in Milwaukee, WI

# *Sediment Trap*



The stone spillway on the sediment trap not only provides a stable overflow structure but is also durable enough to hold back larger amounts of sediment.

Temporary impoundment to trap sediments



# *Silt Fencing*



Straw bales placed at intervals  
along a swale

A properly installed silt fence combined with temporary seeding will prevent sediment discharge from a site.