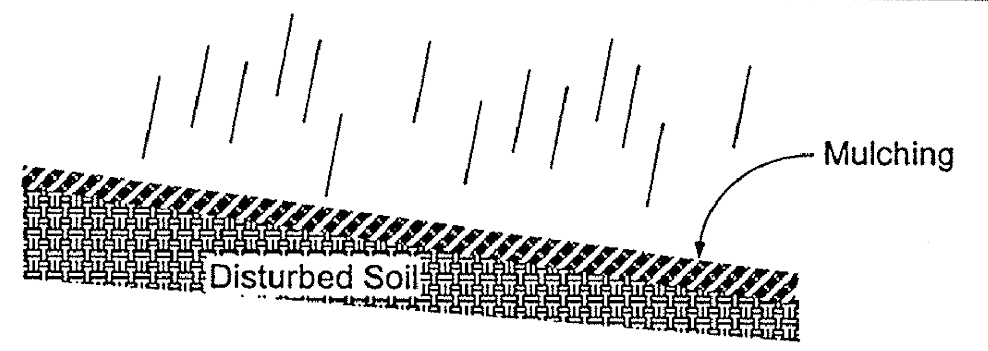


### Mulching



**DESCRIPTION**  
Mulching is the application of a layer of chopped straw, hay or other material which is spread uniformly over barren areas to reduce the effects of erosion from rainfall. Types of mulch include organic materials, straw, wood chips, bark or other fibers. Mulch also comes in prepackaged forms, using straw, hay or other material with organic and inorganic binding systems.

**PRIMARY USE**  
Mulch is used to temporarily and/or permanently stabilize clear or freshly seeded areas. It protects the soil from erosion and moisture loss by lessening the effects of wind, water, and sunlight. It also decreases the velocity of sheet flow, thereby reducing the volume of sediment-laden water flow leaving the mulched area.

**APPLICATIONS**  
Mulch may be used on any construction-related disturbed area for surface protection including:  

- Freshly seeded or planted areas,
- Areas at risk due to the time period being unsuitable for growing vegetation,
- Areas that are not conducive to seeding or planting.

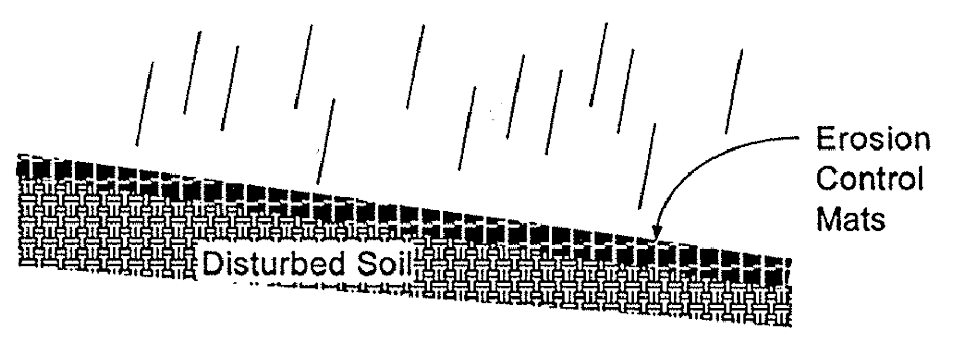
**DESIGN CRITERIA**  
Mulch may be used by itself or in combination with netting or other anchors to promote soil stabilization.

Several manufacturers provide an organic mulch with an attached netting to simplify installation. Installation should adhere to manufacturer's specifications and requirements.

- Choice of mulch depends largely on slope, climate, and soil type in addition to availability of different materials. Straw and hay are the recommended choices due to their availability and biodegradability. Mulch should be applied in an even and uniform manner where concentrated water flow is negligible.

<b>Applications</b>
Perimeter Control
Slope Protection
Sediment Trapping
Channel Protection
Temporary Stabilization
Permanent Stabilization
Waste Management
Housekeeping Practices
<b>Targeted Constituents</b>
<input checked="" type="radio"/> Sediment <input type="radio"/> Nutrients <input type="radio"/> Toxic Materials <input type="radio"/> Oil & Grease <input type="radio"/> Floatable Materials <input type="radio"/> Other Construction Wastes
<b>Implementation Requirements</b>
<input checked="" type="radio"/> Capital Costs <input type="radio"/> Maintenance <input type="radio"/> Training <input type="radio"/> Suitability for Slopes >5%
<b>Legend</b>
<input checked="" type="radio"/> Significant Impact <input type="radio"/> Medium Impact <input type="radio"/> Low Impact <input type="radio"/> Unknown or Questionable Impact
<b>BMP</b>
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### Erosion Control Mats



**DESCRIPTION**  
An erosion control mat (ECM) is a geomembrane or biodegradable fabric placed over disturbed areas to limit the effects of erosion due to rainfall impact and runoff across barren soil. Erosion control mats are manufactured by a wide variety of vendors addressing a wide variety of conditions such as vegetation establishment, protection from heavy rainfall, and high velocity flow. Types of matting include organic (jute, straw) and synthetic (plastic and glass fiber) materials.

**PRIMARY USE**  
Mats can provide both temporary and/or permanent stabilization for disturbed soil or barren areas. It is used for difficult to stabilize areas such as steep slopes, temporary or permanent drainage swales, embankments or high traffic (pedestrian) areas. Some mats are reusable, reducing the initial cost of the installation.

**APPLICATIONS**  
Mats can be used on any construction-related disturbed area, but are particularly effective for erosion control of fine grained soils, and on short, steep slopes (such as stream banks) where erosion is high and growth of vegetation is slow.

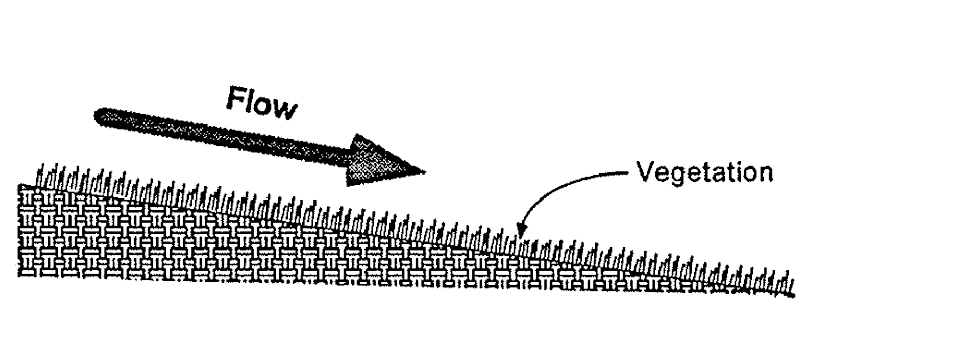
**DESIGN CRITERIA**  
A mat may be used by itself or in combination with netting or other anchors to promote soil stabilization. Choice of matting depends largely on slope, climate, soil type, and durability. Mats are usually installed according to the manufacturer's recommended guidelines. After appropriate installation, the matting should be checked for: uniform contact with the soil; security of the lap joints; and flushness of the staples with the ground.

Manufacturers information will verify acceptable applications for a particular product.

**LIMITATIONS**  
Although matting is highly effective in controlling erosion, it may be less cost-effective than other BMPs for erosion control and it may require a

<b>Applications</b>
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<input type="radio"/> Sediment <input type="radio"/> Nutrients <input type="radio"/> Toxic Materials <input type="radio"/> Oil & Grease <input type="radio"/> Floatable Materials <input type="radio"/> Other Construction Wastes
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<input checked="" type="radio"/> Capital Costs <input type="radio"/> Maintenance <input type="radio"/> Training <input type="radio"/> Suitability for Slopes >5%
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### Vegetation



**DESCRIPTION**  
Vegetation, as a Best Management Practice, is the sowing of annual grasses, small grains or legumes to provide interim and permanent vegetative stabilization for disturbed areas. Unless otherwise specified, Bermuda Grass is to be used for permanent seeding. Temporary stabilization may be achieved during winter by seeding with Rye Grass.

**PRIMARY USE**  
Vegetation is used as a temporary or permanent stabilization technique for areas disturbed by construction but not protected by pavement, building or other structures. As a temporary control, vegetation is used to stabilize stockpiles and barren areas which are inactive for long periods of time. As a permanent control, grasses and other vegetation provide good protection for the soil along with some filtering for overland runoff. Subjected to acceptable runoff velocities, vegetation can provide a good method of permanent storm water management as well as a visual amenity to the site.

Other BMPs may be required to assist in the establishment of vegetation. These other techniques include erosion control matting, swales and dikes to direct flow around newly seeded areas and proper grading to limit runoff velocities during construction.

**APPLICATIONS**  
Vegetative techniques can and should apply to every construction project with few exceptions. Vegetation effectively reduces erosion in swales, stock piles, berms, mild to medium slopes and along roadways. Vegetative strips can provide some protection when used as a perimeter control for utility and site development construction.

In many cases, the initial cost of temporary seeding may be high compared to tarps or covers for stockpiles or other barren areas subject to erosion yet inactive. This initial cost should be weighed with the amount of time the area is to remain inactive, since maintenance cost for vegetated areas is much less than most structural controls.

<b>Applications</b>
Perimeter Control
Slope Protection
Sediment Trapping
Channel Protection
Temporary Stabilization
Permanent Stabilization
Waste Management
Housekeeping Practices
<b>Targeted Constituents</b>
<input checked="" type="radio"/> Sediment <input type="radio"/> Nutrients <input type="radio"/> Toxic Materials <input type="radio"/> Oil & Grease <input type="radio"/> Floatable Materials <input type="radio"/> Other Construction Wastes
<b>Implementation Requirements</b>
<input checked="" type="radio"/> Capital Costs <input type="radio"/> Maintenance <input type="radio"/> Training <input type="radio"/> Suitability for Slopes >5%
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<input checked="" type="radio"/> Significant Impact <input type="radio"/> Medium Impact <input type="radio"/> Low Impact <input type="radio"/> Unknown or Questionable Impact
<b>BMP</b>
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Department of Public Works

### Mulching

- Application of straw or hay mulch should be approximately 2 tons dry per acre spread uniformly across the disturbed area. Other material should be applied such that 25% of the soil is visible through the mulch.
- For areas using straw mulch and the slope is greater than 3-5%, anchoring of the mulch with a Krimper Tool is required.

**LIMITATIONS**  
Mulches are subject to removal by wind or water under severe climatic conditions. Mulches lower the soil temperature which may result in longer seed germination periods.

**MAINTENANCE REQUIREMENTS**  
Mulched areas must be inspected on a weekly basis, and after significant (>0.5 inch) rainfall, for thin or bare spots caused by natural decomposition or weather related events. Mulch in high traffic areas should be replaced on a regular basis to maintain uniform protection.

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### Erosion Control Mats

contractor with considerable mat installation experience for installation.

**MAINTENANCE REQUIREMENTS**  
Matted areas must be inspected on a weekly basis, and after significant (>0.5 inch) rainfall, for bare spots caused by weather related events. Missing or loosened matting must be replaced or re-anchored.

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### Vegetation

**DESIGN CRITERIA**  
*Surface Preparation*

- Interim or final grading must be completed prior to seeding, minimizing all steep slopes.
- Install all necessary erosion structures such as dikes, swales, diversions, etc., prior to seeding.
- Groove or furrow slopes steeper than 3:1 on the contour line before seeding.
- Provide 4-6 inches of topsoil over unsuitable soils.
- Seed-bed should be well pulverized, loose and uniform.

*Plant Selection, Fertilization and Seeding*

- Use only high quality, USDA certified seed.
- For permanent vegetative cover during the period from March to August (inclusive) use hulled Bermuda Grass applied at 10 - 12 pounds per acre.
- For permanent vegetative cover during the period from September to February (inclusive) use unhulled Bermuda Grass applied at 15 - 20 pounds per acre.
- For temporary stabilization on disturbed areas or stockpiles, use Rye Grass seed applied at 40 - 50 pounds per acre.
- Fertilizer shall be applied according to the manufacturer's recommendation with proper spreader equipment. Typical application rate for 10-10-10 grade fertilizer is 700-1000 pounds per acre. DO NOT OVER APPLY FERTILIZER.
- If hydro-seeding is used, do not mix seed and fertilizer more than 30 minutes before application.
- Evenly apply seed using cyclone seeder, seed drill, cultipacker or hydroseeder.
- Provide adequate water to aid in establishment of vegetation.
- Use appropriate mulching techniques where necessary.

**LIMITATIONS**  
Vegetation is not appropriate for areas subjected to heavy pedestrian or vehicular traffic. As a temporary technique, vegetation may be costly when compared to other techniques. Vegetation is not appropriate for rock, gravel or coarse grained soils unless 4 to 6 inches of topsoil is applied.

**MAINTENANCE REQUIREMENTS**  
Protect newly seeded areas from excessive runoff and traffic until vegetation is established (mulching may be necessary). A watering and fertilizing schedule will be required as part of the SWPPP to assist in the establishment of the vegetation.

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STANDARD PLAN NO. 903-01	DATED FEBRUARY 25, 2008	SHEET NO. 1 OF 11
<b>STORM WATER POLLUTION PREVENTION PLAN BEST MANAGEMENT PRACTICES</b>		
ENGINEERING DIVISION DEPARTMENT OF PUBLIC WORKS CITY OF BATON ROUGE & PARISH OF EAST BATON ROUGE		
DESIGNED G. CHENG	DRAWN G. VANNICE	CHECKED G. CHENG
		APPROVED B. HARMON

DATE	DESCRIPTION	BY
	REVISIONS	