SWPPP Cut Sheet:

Filtrexx® Storm Water Blanket

Runoff Reduction & Vegetation Technology

PURPOSE & DESCRIPTION

Filtrexx® Storm water blankets are a **storm water runoff reduction** and **permanent vegetation establishment** practice used on post-construction soil surfaces. Storm water blankets are intended for application and use where:

- land disturbing activities have ceased,
- permanent vegetation is required,
- reduction of pollutant loading in storm runoff is required,
- runoff volume reduction from contributing watershed is necessary,
- reduction in the size of storm water collection or bio-retention ponds, and rain gardens is necessary.

Storm water blankets are designed to act like a sponge for rain water and non-concentrated storm runoff. By holding large volumes of water at and across the land surface, Storm water blankets increase the infiltration and evapotransporation of water from rainfall and storm runoff. These processes aid the cycling of water by recharging ground water and atmospheric water vapor. By increasing the land surface roughness, Storm water blankets slow the rate of sheet runoff, allowing it to more readily infiltrate the soil surface. Storm water blankets are also specifically designed to allow for permanent and sustained vegetation growth.

APPLICATION

Filtrexx® Storm water blankets are surface applied at a depth of 2 in (50mm). Storm water blankets are used where reduction of storm water runoff and/or permanent vegetation is required or will improve the design and function of the landscape. Storm water blankets are generally applied after land disturbing activities have ceased and where sheet runoff may exist under storm conditions. Storm water blankets should NOT be used in areas of concentrated storm water flow. Storm water blankets should not be used on slopes greater than 2:1 without the use of additional stabilizers or support practices. Filtrexx® Slope interruption may be seeded and used with Storm water blankets to slow runoff velocity and the potential for soil erosion.

Storm water blankets are designed to absorb water. For every 1% of organic matter, the Storm water blanket will hold approximately 5,500 gal (21 cubic m) of water per acre inch (103 cubic m) (Breedlove, 2006). Storm water blankets are typically 25% organic matter by wet weight and 50% organic matter by dry weight. Alternatively, Storm water blankets typically hold approximately 1.6 oz (45 g) of water per 3.6 oz (100 g) of Storm water blanket (dry weight); 1 gal (0.004 cubic m) of water per 20 lbs (9 kg) of Storm water blanket (dry wt) or per 30 lbs (14 kg) of Storm water blankets (wet wt). This equates to approximately 40 gal (0.15 cubic m) of water per cubic yard (0.76 cubic m) of Storm water blanket and

5,400 gal (722 cubic ft, 20 cubic m) of water per acre inch (0.01 ha meter, 103 cubic m) of Storm water blanket, and 10,800 gal (1444 cubic ft, 41 cubic m) of water for a 2 in (50mm) Storm water blanket; An acre inch (0.01 ha meter) of Storm water blanket requires approximately 135 cubic yards (103 cubic meters) of material. Although most specification and design manuals include fertilizer recommendations or requirements for permanent vegetation establishment, mineral nutrients from fertilizers may not be preferable where vegetation sustainability and water quality are a concern. Storm water blankets provide organic nutrients, which: are slow release, provide plant micronutrients, and are less likely to be transported in storm runoff to receiving waters – which can reduce pollution and eutrophication of waterways.

INSTALLATION

1. Storm water blankets used for storm runoff reduction and permanent vegetation establish ment shall meet Filtrexx® Storm water blanket Specifications and use Filtrexx® GrowingMedia™.
2. Contractor is required to be a Filtrexx® Certi fied™ Installer as determined by Filtrexx® International, LLC (440-926-2607 or visit website at www.filtrexx.com). Certification shall be considered current if appropriate identification is shown during time of bid or at time of application (current list can be found at www.filtrexx.com). Look for the Filtrexx® Certified™ Installer Seal.
3. Storm water blankets will be placed at locations indicated on plans as directed by the Engineer.
2. Land or soil surface shall be roughened prior to application of Storm water blankets.
4. Storm water blankets shall be applied to 100% of the land surface area where storm water reduction and permanent vegetation is required. No native soil shall be visible in or through the Storm water blanket.
5. Storm water blankets shall be applied at a minimum depth of 2 in (50mm) or at a rate of 270 cubic yards/ac (513 cubic m/ha).
6. Seed shall be thoroughly mixed with the GrowingMedia™ prior to application or surface applied to GrowingMedia™ at time of application.
7. Storm water blankets shall not be installed in areas of concentrated storm runoff flow, including channels and ditches.
8. Storm water blankets shall be installed > 10 ft (3m) over and beyond the slope shoulder and/ or into existing vegetation to ensure runoff does not undercut blanket.
9. Storm water blankets installed on slopes: greater than or equal to 4:1 shall be tracked; greater than 2:1 shall be tracked and use other support practices.

INSPECTION AND MAINTENANCE

Routine inspection should be conducted within 24 hrs of a runoff event or as designated by the regulating authority. If rilling occurs or vegetation does not establish, the area of application should be reapplied with a Storm water blanket. If failure continues, the use of runoff diversion devices, slope interruption devices, erosion control support practices, soil stabilizers, turf reinforcement mats, or hard armoring practices should be considered. Storm water blankets should be inspected until permanent vegetation is established. Permanent vegetation practices should always be inspected for noxious or invasive weeds.

1. The Contractor shall maintain the Storm water blanket in a functional condition and it shall be routinely inspected until vegetation is established.
2. Storm water blankets shall be maintained until a minimum of 70% uniform cover of the applied area has been vegetated or as required by the jurisdictional agency.
3. Storm water blankets may require regular irrigation during hot and dry weather, or arid and semi-arid climates to ensure permanent vegetation establishment.
4. Where a Storm water blanket fails, rilling occurs, or vegetation does not establish the Contractor will repair or provide an approved and functioning alternative.
5. If gullies form in Storm water blanket, the area shall be re-graded prior to reinstallation of Storm water blanket or approved alternative.
6. If Storm water blanket is damaged by runoff, installation of slope interruption devices across slope, or runoff diversion devices above Storm water blanket may be required.
7. No additional fertilizer or lime is required for vegetation establishment and maintenance.

Figure 1.1. Engineer Design Details for Storm Water Blanket.

FILTREXX®
STORM WATER BLANKET

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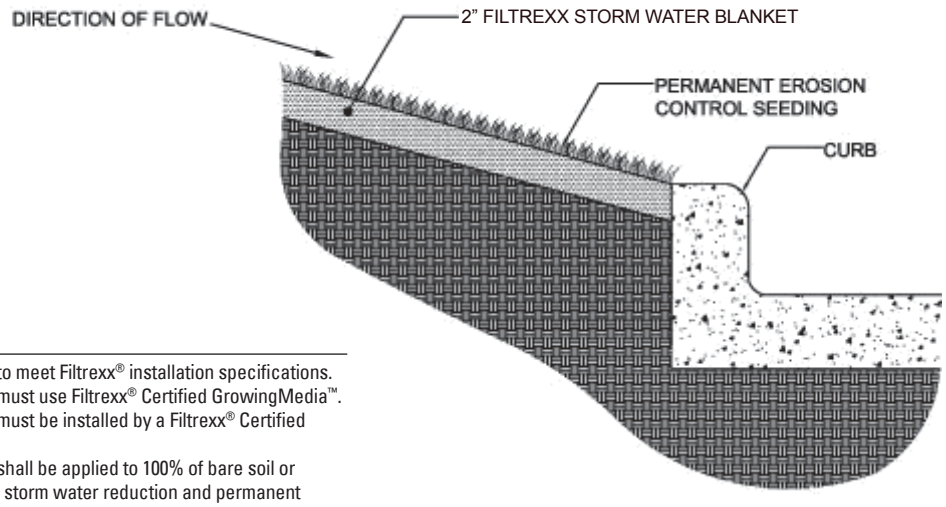

NOTES:

1. Storm water blanket to meet Filtrexx® installation specifications.
2. Storm water blanket must use Filtrexx® Certified GrowingMedia™.
3. Storm water blanket must be installed by a Filtrexx® Certified Installer.
4. Storm water blanket shall be applied to 100% of bare soil or area specified where storm water reduction and permanent vegetation is required.
5. Storm water blanket shall be installed at least 10 feet over the slope shoulder or into existing vegetation.
6. Storm water blanket will be placed at locations indicated on plans as directed by the Engineer.
7. Land or soil surface shall be roughened prior to application of Storm water blanket.
8. Storm water blanket shall be applied at a minimum depth of 2 in. or at a rate of 270 cubic yards/ac.
9. Seeds shall be throughly mixed with the Filtrexx® GrowingMedia™ prior to application or surface applied to Filtrexx® GrowingMedia™ at the time of application.
10. Storm water blanket shall not be installed in areas of concen trated storm runoff flow, including channels and ditches.
11. Storm water blanket installed on slopes greater than 4:1 shall be tracked; installation on slopes greater than 2:1 shall be tracked and use other support practices, such as Filtrexx® Lockdown™ Netting or Filtrexx® Tackifying agent.

Figure 1.2. Unit Hydrograph of a Storm Water Blanket Relative to a Bare Study Clay Loam for a 4in/hr 1 hr Storm Event.